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REMOTE PARTICIPATION ONLY

REGIONAL ADVANCED MITIGATION PLANNING ADVISORY TASK GROUP

Monday, April 18, 2022
2:00 p.m. – 4:00 p.m.

To Attend and Participate on Your Computer:
<https://scag.zoom.us/j/92156366986>

To Attend and Participate by Phone:
Call-in Number: 1-669-900-6833
Meeting ID: 921 5636 6986

***Please see next page for detailed
instructions on how to participate in the meeting.***

PUBLIC ADVISORY

Given the declared state of emergency (pursuant to State of Emergency Proclamation dated March 4, 2020) and local public health directives imposing and recommending social distancing measures due to the threat of COVID-19, and pursuant to Government Code Section 54953(e)(1)(A), the meeting will be held telephonically and electronically.

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Maggie Aguilar at (213) 630-1420 or via email at aguilarm@scag.ca.gov. Agendas & Minutes are also available at: www.scag.ca.gov/committees.

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1. **In Writing:** Submit written comments via email to: scaggreenregion@scag.ca.gov by **5pm on Friday, April 15, 2022**. You are **not** required to submit public comments in writing or in advance of the meeting; this option is offered as a convenience should you desire not to provide comments in real time as described below.

All written comments received after 5pm on Friday, April 15, 2022 will be announced and included as part of the official record of the meeting.

2. **In Real Time:** If participating in real time via Zoom or phone, during the Public Comment Period (Matters Not on the Agenda) or at the time the item on the agenda for which you wish to speak is called, use the “raise hand” function on your computer or *9 by phone and wait for SCAG staff to announce your name/phone number. SCAG staff will unmute your line when it is your turn to speak. Limit oral comments to 3 minutes, or as otherwise directed by the presiding officer. For purpose of providing public comment for items listed on the Consent Calendar, please indicate that you wish to speak when the Consent Calendar is called; items listed on the Consent Calendar will be acted on with one motion and there will be no separate discussion of these items unless a member of the legislative body so requests, in which event, the item will be considered separately.

If unable to connect by Zoom or phone and you wish to make a comment, you may submit written comments via email to: scaggreenregion@scag.ca.gov.

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OUR MISSION

To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.

OUR VISION

Southern California’s Catalyst for a Brighter Future

OUR CORE VALUES

Be Open | Lead by Example | Make an Impact | Be Courageous



Instructions for Participating in the Meeting

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1. Click the following link: <https://scag.zoom.us/j/92156366986>
2. If Zoom is not already installed on your computer, click “Download & Run Zoom” on the launch page and press “Run” when prompted by your browser. If Zoom has previously been installed on your computer, please allow a few moments for the application to launch automatically.
3. Select “Join Audio via Computer.”
4. The virtual conference room will open. If you receive a message reading, “Please wait for the host to start this meeting,” simply remain in the room until the meeting begins.
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2. Enter the **Meeting ID: 921 5636 6986**, followed by #.
3. Indicate that you are a participant by pressing # to continue.
4. You will hear audio of the meeting in progress. Remain on the line if the meeting has not yet started.
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REGIONAL ADVANCED MITIGATION PLANNING – ADVISORY TASK GROUP

Regional Advance Mitigation Planning – Advisory Task Group *Members – April 2022*

1. **Hon. Art Brown**
Buena Park, RC District 21
2. **Sup. Curt Hagman**
San Bernardino County
3. **Hon. Peggy Huang**
TCA Representative
4. **Hon. Clint Lorimore**
Eastvale, RC District 4
5. **Hon. David Pollock**
EEC Chair, Moorpark, RC District 46



REGIONAL ADVANCED MITIGATION PLANNING – ADVISORY TASK GROUP AGENDA

Southern California Association of Governments
Remote Participation Only
Monday, April 18, 2022
2:00 PM

The Regional Advance Mitigation Planning - Advisory Task Group may consider and act upon any of the items on the agenda regardless of whether they are listed as Information or Action items.

CALL TO ORDER AND PLEDGE OF ALLEGIANCE *(The Honorable Clint Lorimore, President)*

PUBLIC COMMENT PERIOD (Matters Not on the Agenda)

This is the time for persons to comment on any matter pertinent to SCAG's jurisdiction that is **not** listed on the agenda. Although the committee may briefly respond to statements or questions, under state law, matters presented under this item cannot be discussed or acted upon at this time. Public comment for items listed on the agenda will be taken separately as further described below.

General information for all public comments: Members of the public are encouraged, but not required, to submit written comments by sending an email to: scaggreenregion@scag.ca.gov by 5pm on Friday, April 15, 2022. Such comments will be transmitted to members of the legislative body and posted on SCAG's website prior to the meeting. Any writings or documents provided to a majority of the Regional Advance Mitigation Planning - Advisory Task Group regarding any item on this agenda (other than writings legally exempt from public disclosure) are available at the Office of the Clerk, located at 900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017 during normal business hours and/or by contacting the office by phone, (213) 630-1420, or email to aguilarm@scag.ca.gov. Written comments received after 5pm on Friday, April 15, 2022, will be announced and included as part of the official record of the meeting. Members of the public wishing to verbally address the Regional Advance Mitigation Planning - Advisory Task Group in real time during the meeting will be allowed up to a total of 3 minutes to speak on items on the agenda, with the presiding officer retaining discretion to adjust time limits as necessary to ensure efficient and orderly conduct of the meeting. The presiding officer has the discretion to equally reduce the time limit of all speakers based upon the number of comments received. If you desire to speak on an item listed on the agenda, please wait for the chair to call the item and then indicate your interest in offering public comment by either using the "raise hand" function on your computer or pressing *9 on your telephone. For purpose of providing public comment for items listed on the Consent Calendar (if there is a Consent Calendar), please indicate that you wish to speak when the Consent Calendar is called; items listed on the Consent Calendar will be acted upon with one motion and there will be no separate discussion of these items unless a member of the legislative body so requests, in which event, the item will be considered separately.



REGIONAL ADVANCED MITIGATION PLANNING – ADVISORY TASK GROUP AGENDA

REVIEW AND PRIORITIZE AGENDA ITEMS

CONSENT CALENDAR

Approval

1. Minutes of the Meeting – February 18, 2022

INFORMATION/DISCUSSION ITEM

2. RAMP Policy Framework & White Paper 75 Min.
(Kome Ajise, Executive Director; Sarah Jepson, Director of Planning and Programs; and Kimberly Clark, Program Manager II of Resource Conservation & Resilient Communities)

ADJOURNMENT



Southern California Association of Governments
Remote Participation Only
April 18, 2022

MINUTES OF THE MEETING
REGIONAL ADVANCED MITIGATION PLANNING –
ADVISORY TASK GROUP (RAMP-ATG)
FRIDAY, FEBRUARY 18, 2022

THE FOLLOWING MINUTES IS A SUMMARY OF ACTIONS TAKEN BY THE REGIONAL ADVANCED MITIGATION PLANNING - ADVISORY TASK GROUP (RAMP-ATG). A VIDEO AND AUDIO RECORDING OF THE ACTUAL MEETING IS AVAILABLE AT: <http://scag.iqm2.com/Citizens/>.

The Regional Advanced Mitigation Planning - Advisory Task Group (RAMP-ATG) of the Southern California Association of Governments (SCAG) held its meeting virtually (telephonically and electronically), given the declared state of emergency (pursuant to State of Emergency Proclamation dated March 4, 2020) and local public health directives imposing and recommending social distancing measures due to the threat of COVID-19, and pursuant to Government Code Section 54953(e)(1)(A). A quorum was present.

Members Present

Hon. Clint Lorimore, President, Chair	<i>Eastvale</i>	District 4
Hon. Sean Ashton, Chair, TC	<i>Downey</i>	District 25
Hon. Curt Hagman		San Bernardino County
Hon. Peggy Huang, Vice Chair, LCMC		TCA
Hon. David Pollock, Chair, EEC	<i>Moorpark</i>	District 46

Staff Present

- Darin Chidsey, Chief Operating Officer
- Sarah Jepson, Director of Planning
- Javiera Cartagena, Director of Government and Public Affairs
- Michael Houston, Chief Counsel, Director of Legal Services
- Maggie Aguilar, Clerk of the Board

CALL TO ORDER AND PLEDGE OF ALLEGIANCE

The Honorable Clint Lorimore called the meeting to order at 2:02 p.m. President Lorimore asked Supervisor Carmen Ramirez, Ventura County, to lead the Pledge of Allegiance.

Given the declared state of emergency (pursuant to State of Emergency Proclamation dated March 4, 2020) and local public health directives imposing and recommending social distancing measures due to the threat of COVID-19, and pursuant to Government Code Section 54953(e)(1)(A), President Lorimore announced the meeting was being held virtually (telephonically and electronically).

PUBLIC COMMENT PERIOD

President Lorimore opened the Public Comment Period and outlined instructions for public comments. He noted this was the time for persons to comment on any matter pertinent to SCAG's jurisdiction that were not listed on the agenda. President Lorimore reminded the public to submit comments via email to scagreenregion@scag.ca.gov.

The Clerk acknowledged that two letters had been received before the 5:00 p.m. deadline which had been posted on the website and transmitted to members. She also noted there were no written public comments received by email after the 5 p.m. deadline.

Rich Lambros, Southern California Leadership Council, expressed concerns over the Greenprint and recommended that this group be refocused to: 1) developing the white paper to provide policy direction on Greenprint; 2) make clear that the work will take longer than the tentative April deadline provided in the original work plan as it was pretty clear that there was a lot to be done here; and 3) see a true pause on the development the Greenprint until the policy work is complete.

Jack Edit urged this Advisory Task Group to adopt the innovative strategies and to begin implementing the Connect SoCal plan that advances climate smart and resilient cities. He noted that two of the tools to implement Connect SoCal were advanced mitigation and the Greenprint because they tie together all of the components to properly map out a plan for the future. He further noted that information in the proposed Greenprint can help inform planners how to create the blueprint for resilient landscapes and emphasized that SCAG should be advancing comprehensive regional planning tools, elevating the dialogue between all of the stakeholders, and focusing on new ways to approach how they grow, move, and play in Southern California.

Jon Switalski, Executive Director from Rebuild SoCal, expressed concern over the process and how this policy, overlaying 166 data sets over the entire region, will affect much needed critical infrastructure. He stated that this committee needed to take a step back, refocus and understand that this is not just a mere data tool and has serious implications, if done incorrectly. He expressed that this was public policy that needed to be debated thoroughly so that they can all understand what this will mean later down the road.

Chris Wilson, Los Angeles County Business Federation, thanked SCAG and this task force for continuing their commitment on pausing SoCal Greenprint until a fully vetted white paper is

produced, for their leadership, and for holding these meetings. However, he expressed concerned that they were in meeting number three of four and had yet to discuss any development of the Greenprint policy paper. He stated that BizFed and the business community urged concrete and detailed conversation on discussing the SoCal Greenprint and asked that no other policies be addressed until the Greenprint tool is addressed. He noted they were ready to assist in any way possible.

Sylvie Leduc, Amigos de Los Rios, stated their mission was to create an emerald necklace of national infrastructure which comprises a network of green spaces, parks, trails, green schools and other served areas throughout the Los Angeles Basin. She noted that because their work touches on so many topics relevant to SCAG's planning efforts, they were very interested in the creation of the Advanced Mitigation Program and Greenprint.

Jennifer Hernandez stated she agreed with Mr. Lambros and noted that this process was supposed to have started with a white paper on Greenprint that laid out both the process for developing a Greenprint and any process opportunities for shaping Greenprint. She stated that instead the staff response to Regional Councilmember Huang's letter was very clear that SCAG and its sole source consultant, The Nature Conservancy (TNC), handpick the Science Advisory Board, which decided what the best available science was. She noted that the legal opinion from SCAG's retained outside counsel, emphasized that the Greenprint by itself was not a problem under the California Environmental Quality Act (CEQA). However, she stated that the fact was that Greenprint can and will be weaponized because SCAG staff has determined that it is "best available scientific data."

Luis Portillo, President and CEO of the San Gabriel Valley Economic Partnership, stated that the concerns they were hearing with the Greenprint were in regard to its impact on housing development. He explained that the lack of housing in their cities was due in part to the fact that the state's environmental policies had been weaponized to stop housing. He further noted that the concern was that the Greenprint will add a new layer that's going to make it even harder for communities to build housing, and therefore make it hard for communities of color to own homes.

Paolo Perrone, Trust Republic Land, stated they were a 50-year-old nonpartisan national nonprofit that protects land for people and builds parks and communities so that every American lives within a 10-minute walk of a park. He stated that regional advance mitigation was a decade's old tool that advances free market values and efficiencies. He indicated he was not really sure why there were some who didn't want to compile existing public data and strive for those free market efficiencies of regional advanced mitigation that has worked for example in San Diego as well as in other places. He expressed that it was about time that it came to the SCAG region so they can truly start making efficient processes.

Francis Appiah, Senior Government Planner at Caltrans District 7 in Los Angeles and Ventura, stated that Caltrans was also looking into advanced mitigation, specifically for transportation projects. He noted that Caltrans already had a regional advanced mitigation needs assessment document, which they would share with SCAG. He encouraged establishing advanced mitigation for the region as a whole and for SCAG to look into establishing the advanced mitigation and Connect SoCal. He stated that if Caltrans was looking at it in a transportation form, he believed that SCAG could do it to.

Seeing no public comment speakers, President Lorimore closed the Public Comment Period.

Regional Councilmember Peggy Huang, TCA, asked that they move ahead with the presentation for item number 4, however, in light of all the comments, she asked that they take some time to review the policy framework. She asked President Lorimore if he would consider having a meeting on item number 4, so they have an opportunity to read, digest and take in the comments that had been made.

President Lorimore restated Regional Councilmember Huang's request to ensure it was clear.

Regional Councilmember Curt Hagman, San Bernardino County, stated he had the same concerns as Regional Councilmember Huang and further noted that they had several meetings and had yet to look at the white paper.

Ruben Duran, Board Counsel stated that it made sense for them to proceed with the agenda based on Regional Councilmember Huang's comments and if it turned out that the committee felt like it needed more time, then that could certainly take place at an adjourned meeting or another scheduled meeting.

Darin Chidsey, Chief Operating Officer, stated staff appreciated the comments by the members and the hope from staff was to get into that policy discussion. He stated that the item on the policy framework was listed last, but the intention was to have some early discussion, get some feedback, and then have a broader conversation with the committee about the types of outreach and other inputs they would need before reconvening the committee to have a more substantive and preferably action discussion on what that policy framework might look like. He stated that they understood that this would take some time.

Regional Councilmember Hagman asked what staff's expectation was on bringing this back to the Regional Council.

Sarah Jepson, Director of Planning, stated that the first item on the agenda included updates and she was going to go through the schedule. She indicated that staff was actually going to propose some changes to the schedule to give them a little more time as was asked in their last meeting.

She informed the members that they were putting the policy framework out there to help orient them to what was in that policy. She noted that they anticipated focusing the full meeting in March to having more discussion and to provide the members feedback on the policy. She reported that an extra meeting would be set up in April for the Committee to review a revised policy framework and make some recommendations to the Energy and Environment Committee (EEC) and Regional Council.

Regional Councilmember Hagman stated he appreciated the fact that staff was seeing that they were not going to get this done by March. He noted they wanted to make sure this was done correctly.

REVIEW AND PRIORITIZE AGENDA ITEMS

There was no prioritization of agenda items.

CONSENT CALENDAR

1. Minutes of the Meeting – January 28, 2022

President Lorimore opened the Public Comment Period.

Seeing no public comment speakers, President Lorimore closed the Public Comment Period.

A MOTION was made (Hagman) to approve the Consent Calendar, Item 1. Motion was SECONDED (Pollock) and passed by the following votes:

AYES: Ashton, Hagman, Huang, Lorimore, and Pollock (5)

NOES: None (0)

ABSTAIN: None (0)

INFORMATION/DISCUSSION ITEM

2. SCAG Staff Update

President Lorimore opened the Public Comment Period.

Seeing no public comment speakers, President Lorimore closed the Public Comment Period.

Ms. Jepson reported that the goal and purpose of this committee per direction from the Regional Council was to establish a policy framework for regional advanced mitigation in the SCAG region and to ensure the SoCal Greenprint is aligned with related objectives. She stated this would be accomplished during the current pause on the Greenprint implementation and in establishing this policy framework, this group would also advise on a white paper on regional advanced mitigation planning, which was a research document that supports SCAG in developing a policy framework for both RAMP and to guide the Greenprint. She provided a couple updates on where they were in moving forward with the guidance and the work of the committee and pointed out where they were in the timeline and the schedule. She noted that during this meeting there were going to have an overview presentation from Caltrans staff on the state's RAMP to understand larger scale advanced mitigation program efforts that are delivering transportation infrastructure and protecting habitats. She noted that as staff had shared at the last meeting, they looked at some of the county level efforts related to advance mitigation and thought having this broader context was important in shaping and defining SCAG's role in supporting advanced mitigation. She further noted that at this meeting they would have a presentation on the draft regional advanced mitigation policy framework. She stated this was just an orientation to that draft policy and they looked forward to doing additional outreach and engagement and then coming back to the committee to have more discussion on it at the next meeting. She explained that they heard this committee and what staff tried to reflect in the themes that are in the policy was the need for transparency, for local control, for a bottoms up, not a top-down approach, and to make sure it's clear that SCAG is working at being a resource to support regional advanced mitigation planning and not adding any additional regulation. She further stated they envisioned four meetings of this RAMP-ATG, but as noted, they would like to suggest an additional meeting so that the March meeting can be focused on the policy discussion that they will be reviewing at this meeting. She indicated that with this new schedule they were proposing, the hope was to have the final meeting of this committee sometime in April which would give them time to get robust input on this policy framework, to do outreach, and to be able to report back the findings of that outreach so that they can have revised products that the committee can consider forwarding to the Regional Council. She noted that after this committee makes its recommendation, they would bring those forward to the EEC and the Regional Council to make sure that there is clear policy direction moving forward for how they advance on RAMP and develop the Greenprint tool to support RAMP.

Ms. Jepson also reported that in addition to these meetings they were also continuing to do outreach with key stakeholders to get feedback on both the policy framework and the Greenprint project. She stated they heard from Regional Councilmember Huang who had suggested they reach out to the Toll roads agency (TCA) and reported that they had a very productive conversation with them the day before. She stated they were looking forward to figuring out better ways to integrate their feedback and to engage them in the process. She also reported that they had a meeting set up to talk to the Los Angeles County Department of Regional Planning and were also working to set up a joint meeting of the Greenprint Project Strategic Advisory Committee and Science Methods

Advisory Committee to get feedback on both the policy framework as well as the proposed datasets to be included in the tool, which they were asked to do as part of the direction as they move forward with the Greenprint. She stated that they also anticipate laying out a fuller process for getting feedback on this draft RAMP policy framework and would be engaging their Technical Working Group and the Natural and Farmlands Conservation Regional Planning Working Group, who's shown interest in this framework. She stated that as they get feedback, staff would bring it back to this Committee.

Regional Councilmember Hagman brought up the Greenprint Science Strategic Advisors meeting on March 9 and asked if staff could explain the criteria for how the data sets that go on the proposed data layers are brought about.

Ms. Jepson stated that the Greenprint Science and Strategic Advisors meeting on March 9 would be open and available to the public as they understood that there had been some concern that there was not enough engagement in these conversations. She asked Kimberly Clark, Program Manager II of Resource Conservation and Resilient Communities, to provide additional information on the Science Strategic Advisors meeting.

Ms. Clark stated that with respect to how the science advisors were selected they pulled from universities around the region experts on biology, climate science, and conservation science. She stated they also pulled from partner agencies and nonprofit organizations. She explained that the meeting of the scientific and strategic advisors committee, would take a look at the revised data layer list which they would cover in the discussion of the RAMP policy framework. She indicated that the scientific and strategic advisors meeting, would also take a look at the policy framework and provide feedback on that. She expressed that overall, their aim was to fulfill the PEIR mitigation measures, which require that they use the best scientifically available data and also get to the data needs of municipalities, County Transportation Commission's (CTC), conservation organizations and researchers.

Regional Councilmember Hagman asked who picked these partners because there was no business industry and was one sided. With respect to the data layers, he stated they had never discussed what it takes to become a data layer.

With respect to how the scientific advisors and the strategic advisors were chosen, which does include representatives from the building industry, other stakeholders, and primary users that staff had identified for the Greenprint, Ms. Clark referred the members to the October 7 agenda package that was included in the RAMP-ATG agenda package from the last meeting. She indicated that there was an attachment that specifically identified how these advisors were selected and also how their feedback helps to inform the data layers that are proposed for inclusion in the Greenprint.

Regional Councilmember Hagman stated he was not trying to be critical. He expressed concern for not having the chance to look at the mechanics of the white paper and moving forward with data layers.

Ms. Clark stated that as far as the criteria for selection of layers in the SoCal Greenprint, their requirement was to get to the user needs and those needs specifically being from municipalities, CTCs, conservation organizations and researchers as identified in the PEIR mitigation measure. She highlighted that in the draft RAMP policy framework that would be discussed at this meeting, staff would go over a number of important data elements that she thought would address his questions as far as data selection criteria, data parameters, data governance, and data maintenance. She stated that after they have the discussion on Item 4, which was meant to be preliminary and to seek feedback on the draft document, it would provide answers on some of the questions he had raised.

Regional Councilmember Peggy Huang stated that in terms of stakeholder engagement, she was a bit concerned that SCAG had not done any outreach to the very people that had spoken at this meeting, like building, labor, and the Business Council. She questioned Ms. Clark's comment regarding user needs, specifically for municipalities, CTCs, conservation organizations, and researchers as identified in the PEIR mitigation measure, and stated that the Greenprint and the data sets were not only going to be used by CTCs. She indicated that page one of Item 4 on the agenda stated that this was going to be used to help in the building of housing units, water, energy, and transportation. She expressed concern that they were only talking about transportation and asked about the other stakeholders that would be using these datasets. She stated that the reason why she asked staff to look at TCA was because TCA had a mitigation bank, and they had been working with Orange County, Irvine Company, and the water district on an advanced mitigation project. She stated that the upcoming stakeholder engagement needed to include outreach to these groups because if they don't then this document is not going to be taken seriously and a lot of people will be complaining about it.

Ms. Jepson stated that they understood the interest in getting more stakeholder engagement and eyes on the policy direction for advanced mitigation that guides the development of the Greenprint. She indicated that now that they have the draft document out there and in place, hopefully it makes it easier to get more direct feedback from the stakeholders who have concerns. She stated they would make sure to develop a robust outreach plan on how to get the word out that they have this draft framework and look forward to engaging with any stakeholders who want to provide feedback.

Regional Councilmember Peggy Huang stated there was confusion around the draft document on the RAMP and a white paper on Greenprint and asked staff to be clear about it.

Ms. Jepson stated that the white paper that staff had been asked to produce, as part of the mitigation measure and directed by the Regional Council as part of consideration by this committee, was a white paper that's on regional advanced mitigation planning. She indicated that the white paper is an important research tool that gives them the background information that helps to shape the RAMP policy framework document, which they would discuss at this meeting. She stated that the white paper was research, engagement they have done with the CTCs and others, to better understand the current state of RAMP in the region. She noted that this background on what RAMP is and how it sets up the roles and responsibilities, how its funded, and all that research is in the white paper that then helps with the development of a policy that defines SCAG's goals for advancing regional advance mitigation within the region. She stated that one of the roles as outlined in the policy framework is to support the data needs of local agencies and partners who are trying to put programs forward. She explained that once they get into the policy and talk about the data needs, this would be when the Greenprint comes into play. To reiterate, she stated that the white paper is on RAMP, it's research, it helps to inform the policy that they are working with the committee to develop, and then within that policy for regional advanced mitigation, the committee is also giving staff direction on what tools should be put into place to support regional advanced mitigation. She stated that one of those tools that they are working on is the Greenprint, and the committee's guidance on the process staff should go through in creating that tool as well as stakeholder engagement all fits within the policy framework that will be outlined at this meeting.

Regional Councilmember Peggy Huang appreciated the clarification and noted that based on Ms. Jepson's comments, they should toss out Greenprint because they did not have a policy. She recalled public comment from a previous Regional Council meeting where someone said that it's putting the cart before the horse and based on the clarification that was provided it seem to her that they had definitely been putting the cart before the horse. She advocated for working on the policy.

3. Overview of Caltrans Advance Mitigation Program

President Lorimore opened the Public Comment Period.

Jennifer Hernandez stated that as a Californian she was extremely excited about the probable infusion of a significant amount of infrastructure funding to the region. She applauded Caltrans for having done work on how to mitigate those projects in advance of needing to sign the dotted line on how much money they need because the whole point was to know your mitigation costs so that you don't underestimate and run into problems later in completing the projects that the public is expecting. She stated this was example of why Greenprint as proposed was flawed because as they heard from supporters of Greenprint, their hope is to turn some of these transportation projects as

approved by the Regional Council in the RTP into wildlife corridors instead of transportation projects. She stated there was a disconnect between SCAG, the Caltrans version of its RAMP and Greenprint. She expressed that she would hate to see this region just dissolve into bickering with CEQA lawsuits instead of actually getting the funds to build already approved by the Regional Council transportation projects.

Seeing no public comment speakers, President Lorimore closed the Public Comment Period.

Ms. Jepson introduced Melinda Molnar, Chief of Biological Science and Innovation at Caltrans, who manages the advanced mitigation system at Caltrans and would be providing an overview of Caltrans Advanced Mitigation Program.

Melinda Molnar provided an overview on the background of the advanced mitigation program at Caltrans, an overview of their planning process, and shared a little bit about the progress to-date. She noted that their advanced mitigation program is about planning and aggregating mitigation prior to project needs, and the goals of the advanced mitigation programs were to improve project delivery and also to improve ecological environmental outcomes at the landscape scale. She stated that instead of mitigating independently for seven projects in the same geographic area that would need similar resources, they tried to combine all of that mitigation into one higher value ecological environmental unit at the landscape scale. She noted that advanced mitigation was different in that very early on before the project is programmed it identifies compensatory mitigation needs, then they scope advanced mitigation projects, not for the approval of the future transportation projects, but just for the mitigation needs of those projects, and then landscape scale mitigation for aggregated transportation project impacts. She explained that in 2017, SB 1 created their current advanced mitigation program at Caltrans and established the advanced mitigation revolving fund account, which was \$30 million deposited into their advanced mitigation account over four years for a total of \$120 million. She noted that it also restricts the use of State Highway Operations and Program Projects (SHOPP) and State Transportation Improvement Program (STIP) projects. It also allows their partners to take advantage of the planning process as well as the project proposal and implementation process through coordination with their districts. She emphasized that the program goals were to 1) accelerate transportation project delivery, 2) improve environmental outcomes, 3) enhance coordination with all stakeholders, resource agency partners, and the public industry, where everyone can attend their public meetings, review the public documents, and contribute to the outcome of the original advanced mitigations needs assessment, and 4) ensure that the program account is self-sustaining. She explained how the program funding worked and noted that they used the funds (\$120 million) to allocate advanced mitigation projects, which then create or acquire mitigation credits, then transportation projects use program mitigation and reimburse the account for mitigation it provides, and then the account is replenished, and they can propose the next round of mitigation projects.

Ms. Molnar also provided a brief overview of the program which included reporting requirements as follows: biennial report to the state legislature, disclosure to the California Transportation Commission on advanced mitigation transportation activities, and biennial reporting by the California Department of Fish and Wildlife (CDFW) to the state legislature. Her presentation also highlighted authorized expenditures from the account which include: purchasing credits from existing conservation banks, mitigation banks, and in-lieu fee programs; establishing new conservation banks, and in-lieu fee programs; paying mitigation fees or other mitigation costs to existing Natural Community Conservation Plans and/or Habitat Conservation Plans (NCCPs/HCPs); preparing or funding the preparation of Regional Conservation Assessments or Regional Conservation Investment Strategies with mitigation credit agreements; and when the above are not feasible, other mitigation activities can be performed, with restrictions. As noted in her presentation the restrictions include that 1) the Caltrans Director must determine if the expenditure justification will likely accelerate the delivery of the specific transportation projects; 2) if program activities occur within the areas of NCCPs/HCPs, actions must be consistent with NCCPs/HCPs and requires the department to go through the NCCP/HCP if eligible to be a special participating entity; 3) for other activities, no more than 25 percent of account funds over a 4-year period may be allocated and there must be a Programmatic Mitigation Plan; and 4) Caltrans continues to meet requirements of CEQA and other environmental processes and permitting laws for all transportation projects and avoid and minimize before compensating mitigation.

Ms. Molnar also proceeded to provide a description of each advanced mitigation program step which 1) consisted of doing a statewide advanced mitigation needs assessment, that is a model for transportation over the next 10 years and noted that the model helps them figure out where their geographic area of interest is; 2) working with stakeholders to select that geographic area of interest and that includes their STIP partners; 3) doing the regional advance mitigation needs assessment document which is the early planning document in partnership with resource agencies, stakeholders and the public; 4) project scoping and initiation, in which districts and stakeholders can provide input for planning funding; and 5) getting Caltrans Director approval, which requires the director to make a determination that the project will likely accelerate the delivery of specific transportation projects.

With respect to advance mitigation program funding, Ms. Molnar reported that to date, Caltrans had two projects that had been approved for funding for just a over two and a half million dollars and that they also had two current project proposals that were under evaluation for almost that same amount. She noted that one of the pathways SB 1 outlined in creating the Advanced Mitigation Program was the use of funds for Regional Conservation Investment Strategies (RCIS). She stated that Caltrans supports the development RCIS's and are currently waiting for CDFW's Mitigation Credit Agreement guidelines and fee schedule. She also noted that Caltrans also participates in the technical advisory committees for four RCIS's: Santa Clara County RCIS, East Bay RCIS, Yolo RCIS, and Mid-Sacramento Valley RCIS. Additionally, they participate in the steering

committees for the Monterey and Santa Cruz counties RCIS's and serve on the steering committee for the annual RCIS symposium. She stated that what they have learned from their pilot program is that maximizing the state and federal requirements that can be satisfied, can go a long way with getting approval from their management and the types of values that they would like to see from these projects for future transportation projects. She noted that it also helps to accelerate project delivery by meeting those requirements for projects.

Ms. Molnar proceeded to display an example of the geographic area of interest throughout the state and where the 12 Caltrans districts have focused their geographic areas for their planning documents. She also displayed an outline on the status of all of their districts and where they are in the steps for advanced mitigation planning. She also highlighted projects from: 1) District 8 (San Bernardino), the Advance Mitigation Mojave Desert Project, which the District was currently working with the division of procurement and contracts to prepare requests for proposals; 2) District 6 (Fresno), the Advance Mitigation Aquatic Resources and Desert Species Credits, which the Caltrans Director had approved funding and funding allocation and the District was beginning project delivery; and 3) District 5 (San Luis Obispo, the Advance Mitigation Aquatic Resources Central Coast region, which had the project proposal approved and the District was drafting the project implementation document. A copy of the presentation slides are available on SCAG's website: <https://scag.ca.gov/sites/main/files/file-attachments/rampatg021822fullpacket.pdf?1644885743>.

Lastly, she reported that one of the items that they continuously work on is how to better align their program with opportunities and resource agency requirements as it relates to interagency alignment needs. She stated that the bank enabling instruments (BEI) have been an ongoing item for them and noted that the Army Corps of Engineers posted a recent amendment to the BEI template that allows for the pre-permit bulk credit purchases and so they were working with the Army Corps of Engineers to amend the new templates for additional concerns. She indicated the existing banks would also need to amend their BEIs to allow for the pre-permit bulk credit purchases. She also reported that the Coastal Commission Banking Alignment does not currently recognize the published BEI template and bank establishment process, and so they have been working with the California Coastal Commission to prepare mitigation guidance that's specific to Caltrans' advanced mitigation program. With respect to the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB), she noted that they needed do a bit more to align a little bit better in the bank establishment process. She noted that the SWRCB was developing an internal steering committee and charter for integrating that bank establishment. Additionally, she stated AB 1282 was aligning how Caltrans does business in accordance with CDFW and other state agencies.

Regional Councilmember Hagman asked if Caltrans had any experience working with other things besides transportation.

Ms. Molnar stated that Caltrans did not have experience outside of transportation.

Regional Councilmember Hagman stated all the examples brought to the committee so far had been regional transportation and they were considering something much larger. He stated he also served as the President SBCTA and thanked Ms. Molnar for the work they were doing within his area. He stated that as they do a project in partnership with Caltrans, sometimes they get funding or sometimes Caltrans does it or sometimes they do it, and asked if those considerations were part of that partnership already, or was their own regional transportation doing their own environmental RAMP process.

Ms. Molnar stated yes that they may have additional process that they are working on, but during the RAMNA document process they do reach out to the regional transportation agencies, and they also have quarterly meetings with them where they can identify STIP projects that they'd like them to include in their RAMNA for potential credits to be created specifically for those good projects.

Regional Councilmember Hagman stated that Ms. Molnar mentioned their steering committee, that kind of helps guide where they put resources and select projects, and they were doing this in advance to hopefully speed up the process of their projects. He asked who made the selection for the steering committee and what kind of people they have on them. Ms. Molnar stated it was the deputies of their headquarters programs and that all the directors of the 12 districts got a vote.

Regional Councilmember Hagman stated that it was basically internal and asked if Caltrans used external third-party groups, advocating on their committee to select things. Ms. Molnar stated they did not for the steering committee, the project, or directors committee, but did during the planning process.

Regional Councilmember Hagman asked if they made those decisions internally through Caltrans organization. Ms. Molnar stated this was correct.

Regional Councilmember Hagman asked what type of data sets Caltrans was currently using. He stated SCAG was currently working on a RAMP and the Greenprint which was data sets. He asked if Caltrans currently uses any bank of data sets in their decision-making process or with their environmental projects. Ms. Molnar stated that they do use datasets that have been outlined by all of the resource agencies that require compensatory mitigation and then they review the Pivot Table related to the specific compensatory mitigation. She noted that the proposals and the projects are specifically based on resources that require compensatory mitigation like threatened and endangered species.

Regional Councilmember Huang asked who manages these properties in the long term, are they

handed over to local transportation agencies, are they being managed by a conservancy group, and what kind of long-term funding source does Caltrans have to fund the mitigation.

Ms. Molnar stated that the current projects are credit purchases and so they are already managed by someone, and the bank creation would be under the same CDFW requirements for bank creations. She stated that if there was a purchased property for example that was to be managed by someone else like a state resource agency or others, there would be that endowment that would be required for creation of those credits. She indicated there were a lot of different pathways for long term management, but without getting more specific the costs are essentially banked into the credit.

Regional Councilmember Huang stated they were seeing the intersection of transportation and housing together and asked how much or do they reach out to the housing development as well as economic developers in the formation of their advanced mitigation.

Ms. Molnar stated that she did not think they outreached to housing developers at all, but as far as industry was concerned, they did get a lot of interest from mitigation bankers and speculators on mitigation banks.

Regional Councilmember Huang asked Ms. Molnar to state some of those groups who would be speculators and asked who they were.

Ms. Molnar stated they were people who already had developed mitigation banks and they were looking at trying to determine if some area has some need that they can take advantage of getting in early to purchase property.

Regional Councilmember Hagman stated that the examples that staff kept bring up of regional mitigation plans really had to do with regional transportation and a secure funding source that has been initiated to keep not only purchasing land, but also maintaining it. He stated he was looking for a way they transition this into infill projects in smaller cities and other things.

Ms. Jepson stated the initial policy direction for pursuing this work was the mitigation measure from their RTP/SCS and so they certainly wanted to be a resource for mitigating the impacts of the projects in their plan and also to help make sure those projects can move forward on a timely basis. She indicated that this was why they were seeing a lot of the examples being presented here and that the tools that were developed were really geared towards the projects in their plan. She stated that as they are putting this information together there was opportunities for others to use the data to support mitigation planning more broadly and noted that it was information that was out there.

Regional Councilmember Hagman stated that the majority of SCAG's membership was in highly

dense urbanized cities and what they were doing now was attaching that into their infill development and other requirements that the state was pushing onto it. He stated he was trying to see that translation and if they were going to basically discharge every project a fee, so they could buy off more vacant land somewhere and thought they could come out and say that, but he did not think this was the purpose.

President Lorimore sought clarification from Ms. Jepson regarding the fee.

Ms. Jepson stated no and that she thought that one of the things that they talked about that had been a little bit confusing in this process was that they were saying RAMP as if it was singular, a regional advanced mitigation program for the entire SCAG region. She stated they should put an "s" on it. She explained that they were aiming as a planning agency to support this practice of regional advanced mitigation, because it has benefits on both the transportation side as well as the conservation side, and as a regional planning agency they work to balance those two goals. She stated that this process and the policy guidance that they were going to review next was not set up for them to create one large regional program where they mitigate all the projects in the region and emphasized that this was not that.

Regional Councilmember Hagman asked if they were strictly supposed to look at just transportation projects.

President Lorimore acknowledge Board Counsel Duran who was raising his hand to speak and asked Regional Councilmember Hagman to hold his question.

Board Counsel Duran apologized for interrupting the flow of the conversation. He noted that he was seeing that there was some chat through the zoom app and respectfully requested that people refrain from placing comments in the chat.

Regional Councilmember Hagman stated that Ms. Jepson brought up that they were a regional planning agency. He indicated that as they make their regional transportation stuff this was going to help with the RAMPs in their entire region. He stated that those RAMPs are generally developed from local government on up and they at SCAG usually put those pieces of the puzzle together. He indicated that for transportation, he thought it became an easier conversation. He asked staff where this goes past transportation and where should they be looking to, to also add in other things besides the regional transportation goals that they do.

Ms. Jepson stated that everything they were putting together was a set of voluntary tools. She indicated that if there was data resources and information that they were putting together that supports advanced mitigation for major transportation projects, then it was probably useful information for people who were developing solar farms and water infrastructure as well. She

emphasized that what they were putting together was voluntary resources that people can decide to use or not use. She asked Ms. Clark if she wanted to add anything else in terms of how the tools are being designed.

Ms. Clark stated that one of their efforts was to really complement and supplement the existing advanced mitigation efforts that were happening in the region. She indicated that in their PEIR mitigation measure, specifically says the RAMP will be a supplemental initiative to regional conservation, mitigation things and other approaches by evaluating, advocating, and highlighting projects that support per capita vehicle miles traveled (VMT) reduction. She indicated that this was why the Greenprint tool, based on the direction of a Regional Council, needs to draw heavily from the feedback from municipalities and CTCs while aiming to target projects and support projects that have per capita VMT reduction.

Regional Councilmember Hagman stated that his biggest concern has always been from local government. He suggested a phased approach moving forward in which they have a process where the local government has the ability to say we want to opt in, or we want to opt out of this regional part. Otherwise, SCAG is basically giving them information that they may or may not want to have because he thought there was that big fear of this adds to the litigation and adds to different processes. He suggested maybe they start off with transportation and get everyone on the same page of RAMP transportation and then focus on the next large impact type projects for the region. He indicated this could be a policy discussion with the Regional Council.

President Lorimore asked Regional Councilmember Hagman if there was anything he wanted staff to clarify.

Regional Councilmember Hagman asked staff what their vision was as they had been working on this for a long time.

Mr. Chidsey stated that the next presentation will be very helpful to start the conversation about what the regional policy is, add some better understanding in terms of what staff's thoughts are as to how this might play out, how they might implement the mitigation measures, as well as work through the policy in this committee, and then how does that specifically relate to Greenprint. He suggested moving into the discussion of item 4 because he thought it would help the conversation and answer questions they were having.

President Lorimore indicated that they were moving on to item 4, Overview of the Draft Regional Advanced Mitigation Program Policy Framework, and that as discussed at the beginning of this meeting, they anticipated that they would receive the presentation upfront and discuss this in detail at another meeting. He indicated the committee would ask some questions after the presentation.

4. Overview of Draft Regional Advanced Mitigation Program Policy Framework

President Lorimore opened the Public Comment Period.

Rich Lambros stated he appreciated the write up. He expressed that the business community was concerned with this conflation, and it was getting a little confusing between the Greenprint and RAMP. He noted that the write up on RAMP, specifically page 47 of the packet, really helps them refocus on why they are engaged in all this and that there was an environmental benefit. He indicated that they work under the most stringent environmental review process in the country and getting through CEQA and navigating CEQA is difficult. He noted that the report points out it's costly and it's time consuming. He explained that when they hear the business community saying that they have concerns, it was not an objection to the potential environmental benefits. He stated it was them recognizing that any forward progress on this equation about project delivery has to start with understanding CEQA and accommodating solutions that work with CEQA. He noted that this has been their concern all along with Greenprint, that it's been allowed to go far down the path without serious discussion and consideration about the CEQA implications.

Melanie Schlotterbeck, Friends of Harbors, Beaches and Parks, offered their support for the policy paper and stated she had a few suggestions. She indicated that she thought it was really well written, thoughtful, and covers important topics and considerations for the future. She indicated that her ideas for improvement for the Background section included: 1) acknowledge that both a housing mandate and a conservation mandate exists simultaneously; 2) recognize that RAMPs help meet local, regional, state, and federal policies; 3) include that the science is clear on how to be successful with conservation planning; and 4) provide a list of permits that are streamlined in a RAMP for housing, energy or transportation projects, that each would have to go through a permit process individually instead of collectively, which includes 401 and 404 permits, individual or nationwide permits, a section seven or 10 consultation, string bed alteration agreements, wetland delineations, the CEQA checklist, etc. For the goal section, she suggested they: 1) incorporate wildlife corridor and connectivity as a goal; 2) commit to develop a science-based methodology with biological and non-biological criteria for evaluating projects, in other words, go beyond the science and determine what co-benefits exist; 3) define what the RAMP could include such as acquisition, restoration, management, climate mitigations, sea level rise protections, etc.; 4) complete a gap analysis of species coverage within existing RAMPs and conservation plans, answer what plans cover what species and what is missing; and 5) consider a RAMP pilot program for charismatic species such as monarch butterflies, cougars or Joshua trees, where those species may be outside of existing RAMPs. For the data Policies section, she suggested including that there are better ways to invest for mitigation requirements with more information. She indicated that data on equity, trade cover, gentrification and sea level rise are critical for understanding the big picture. For example, multi benefit outcomes that address the biodiversity crisis like species protection, and

also directly benefit people, like improving access and equity to nature, or protecting habitat that helps alleviate the drought by protecting water supply and the health of the aquifer.

Andy Henderson referred to the 12 points that were set forth in the preliminary draft policies related to the RAMP. He indicated that five through seven talks about the Greenprint, but specifically, policy number seven promises a timeline and process that will be established for periodically updating data sets in the Greenprint, to ensure continuous use of best available scientific data. He stated that he thought it was stunning that they were talking about putting in place a policy to vet the data sets as a future step, when it was really what the white paper was supposed to be. He indicated this described the process that should have been done in the first place before Greenprint was undertaken and the datasets were assembled.

Jennifer Hernandez stated she was a practitioner and every single day she woke up and dealt with anti-housing CEQA lawsuits. She indicated that Greenprint was about weaponizing CEQA and this was not a green effort and instead was an anti-people effort.

Seeing no public comment speakers, President Lorimore closed the Public Comment Period.

Ms. Clark provided an overview of the Draft Regional Advanced Mitigation Program Policy Framework. She indicated this was an initial discussion, and there would be subsequent opportunities for the next two meetings in this group to refine the policy framework. She reminded the committee that the Regional Council voted on October 7 to support the staff recommendation and continue the pause on implementation of the SoCal Greenprint, allowing further engagement with stakeholders to ensure the tool advances required PEIR mitigation measures and is aligned with regional policy objectives. She noted that during this pause on implementation, there were a number of ongoing steps underway as directed by the Regional Council, first of which was this Advisory Task Group, which would establish a policy framework and whitepaper for advance mitigation and second, at this meeting staff would be presenting the Draft Regional Advanced Mitigation Policy Framework and seeking initial feedback. She explained that this feedback will help to build policy guidance for the next Connect SoCal plan in 2024, and also advances the policies, strategies, and mitigation measures of the existing Connect SoCal plan and it's corresponding PEIR. Specifically, that the RAMP is part of 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. She also stated that RAMP can help support Connect SoCal's Goals 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. She further explained that the strategies in Connect SoCal call on the region to: 1) preserve, enhance, and restore regional wildlife connectivity; 2) reduce consumption of resource areas,

including agricultural land; 3) support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration; 4) promote more resource efficient development focused on conservation, recycling, and reclamation; and 5) identify ways to improve access to public park space. Additionally, she stated that the work of this group will specifically help to implement the Regional Council's unanimously adopted Climate Change Action Resolution from January 2021, which affirmed a climate change crisis in Southern California and committed SCAG to develop a Regional Advanced Mitigation Program as envisioned in Connect SoCal for regionally significant transportation projects to mitigate environmental impacts

With respect to addressing environmental impact in California, Ms. Clark indicated that discretionary projects in California were subject to the CEQA and environmental issues were addressed by avoiding impacts altogether, minimizing impacts by limiting the degree or magnitude of an action or its implementation, rectifying the impact and repairing, rehabilitating, or restoring the impacted environment, reducing or eliminating the impact over time by preservation or maintenance operations during the life of the action, or compensating for the impact by replacing or providing substitute resources or environment. She noted that in terms of advancing transportation infrastructure, the permitting process under federal and state legislation constitutes a major component of the project development and delivery process for transportation projects. She indicated that over \$3.3 billion is spent annually on compensatory mitigation under the Clean Water Act (CWA) and Endangered Species Act programs. For example, she indicated that California provides the option for Regional Advanced Mitigation; however, most projects occur in areas where RAMP is not available and as such, mitigation is pursued on a project-by-project basis where analysis is done in a piecemeal fashion, which regularly results in higher costs for the purchase and management of compensatory mitigation sites. She further noted that environmental review is most often conducted at the tail end of project development, which increases uncertainty since biological studies can sometimes identify impacts that were not foreseen, resulting in delayed project delivery and additional costs, especially in instances where 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. She indicated that that from an environmental perspective, this type of project-by-project review results in isolated islands of preserved habitat, which can be disconnected from natural systems, as well as missed opportunities for other benefits to the environment. On the other hand, she stated that Regional Advanced Mitigation starts with a science-based approach to understand the environmental factors of a comprehensive ecosystem and allows for potential environmental impacts to be identified at the early stages of project development. She explained that RAMP fosters multiple agency collaboration and cooperation, which can streamline the environmental review process and result in increased certainty in project deliver, reduced time in the environmental review process, reduced costs for compensatory mitigation investments, improved watershed and ecosystem health, as well as increased connectivity and conservation. Overall, RAMP

allows state and federal agencies to consider the environmental impacts and mitigation needs of multiple planned projects all at once and helps project applicants satisfy those mitigation requirements early in the project planning and environmental review process.

Ms. Clark also reported that to help inform SCAG's Regional Advanced Mitigation initiative, SCAG and TNC held interviews with each of the County Transportation Commissions in the SCAG region that focused on identifying how regional advanced mitigation would impact, supplement, or potentially complement existing advanced mitigation efforts in the region. She indicated that staff covered this at last meeting, but as a refresher, feedback from CTCs on the potential benefits of a Regional Advanced Mitigation Program, include the ability to address data gaps, and allow CTCs to provide comments on local land use, and facilitate data sharing; IT could also enhance cross-jurisdictional and cross-county collaboration; RAMP could also encourage continued collaboration between SCAG and CTCs to address mitigation project-by-project and at a county scale; and CTCs recommended that SCAG potentially arrange for incentives to spur advanced mitigation, and also provide solutions for reducing the impacts of projects. She noted that the CTCs also expressed concerns on establishing a RAMP, including the 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. She stated that suggestions included recognition that RAMP can be valuable across multiple sectors, including housing and not just transportation; a menu of mitigation options and approaches could be tailored for each county; a focus on water resources and engagement with water agencies should be considered, in addition to impacts on biological resources; and engagements with CTCs, partner agencies, and utility agencies should be transparent. She expressed that overall, there was an emphasis on preserving the integrity of established advance mitigation programs, and to ensure that any regional initiative is not one size fits all.

Ms. Clark indicated that considering the feedback, as well as input from other transportation and mitigation agencies, SCAG staff developed a Draft RAMP Policy Framework for the committee's review and guidance. She displayed the table of contents for the Framework, which included background on RAMP, the policy framework, as well as data needs and resources to support RAMP, and align the Greenprint with RAMP policy objectives. It also included a summary of established RAMPs in the SCAG Region. She also displayed the draft goals for RAMP from the Framework and noted they were preliminary. The goals were to expedite project delivery; improve predictability for project funding; examine potential environmental impacts at the early stages of project development, utilizing the SoCal Greenprint tool, to help expedite the CEQA process; reduce costs, risks, and permitting time for responsible development; improve and reinforce regulatory agency partnerships; balance future growth and economic development with conservation and resilience; and achieve meaningful, regional-scale conservation outcomes. Ms. Clark paused to take comments and feedback on these goals.

Regional Councilmember Huang reiterated her comments that this was all transportation. She expressed concern for their partners not being there from the beginning, which led to a lot of problems and the partners walking away. She asked that they bring those partners back to the table. She stated she wanted to hear from the people who have done this like Irvine Company in their housing development. She asked that they not be transportation focus and instead be inclusive. She expressed that she thought for the March meeting they should have the SoCal Leadership, the Building Industry Association (BIA), Irvine Company, as well as their partner water district to tell them how they did it with their mitigation program.

President Lorimore asked if there was a response from staff and if they were taking notes on the comments. Ms. Clark stated yes and thanked Regional Councilmember Huang for the feedback.

Regional Councilmember Hagman requested having the presentation in advance for future meetings.

He indicated that the first few pages of the draft policy kept mentioning regional transportation projects, infrastructure agencies, state and federal agencies, and CTCs, which those were the people they are in partnerships with and working together. However, he expressed concern for others that were not include as mentioned by Regional Councilmember Huang. He suggested documenting from beginning to end programs so they can see if they actually get the outcomes that they want and to see if they are working. He expressed that he would like see staff built this in. He also indicated that he wanted to make sure they had involvement from local government and to have the goals in place so they can decide what matches up for their city or county.

President Lorimore asked staff if they needed clarification on the comments. Ms. Clark thanked Regional Councilmember Hagman for the feedback and apologized that the slides were not shared until 5:00 p.m. the day before. She indicated that if there was any consolation, the slides had content from the policy framework, which was shared on Monday (February 14).

Regional Councilmember David Pollock, Moorpark, District 46, stated he was concerned as to why other people were not understanding and thought he would provide some clarity from his perspective. He indicated that everyone kept saying that this is only from a transportation perspective, and he realized that their transportation committee was their largest committee, but as the Chair of the EEC, he felt the need to remind them that they also had a Community, Housing Development Committee. He stated that together they put an SCS, which was an obligation they have to the state. He indicated this became their Connect SoCal and this was what was behind the RAMP in doing this. He noted that he also shared the same concern as the BIA regarding CEQA getting in the way of housing developments because they desperately needed housing, but this was the reason why he was actually supporting this. He emphasized that the purpose of the RAMP was to provide a relief valve so that they are making these needed mitigations in advance and not

having to do it project by project. He indicated that he hoped they were achieving a better understanding of what the real motive is behind this and how it will work.

President Lorimore asked staff if there was any response on the comments. Ms. Clark thanked Regional Councilmember Pollock for the feedback and noted the comments were recorded.

Regional Councilmember Huang asked what the next step was once the RAMP guideline is completed and accomplished and if SCAG will be using RAMP, the Greenprint tool, and data sets that they have talked about in the next RTP. She also asked whether or not they will be using the RAMP as a matrix, tool, or requirement when they are deciding on transportation, housing, or any projects that are coming before SCAG for all funding sources. She asked if they were going to use this in terms of how they award money for projects. Lastly, she noted that she did write a letter and appreciated staff responding to it. She asked if it could be part of the agenda for next time.

Ms. Jepson stated that they were in the process of updating the Connect SoCal plan and that as Ms. Clark had mentioned the policies and the current Connect SoCal support the concept of a RAMP. She indicated this was something they would consider as they update the plan and look for strategies that would support it. She explained that in terms of deciding projects, they were talking about data and tools and there was no policy guidance with a data set. She stated they were not using the Greenprint to evaluate projects that are part of the plan.

Regional Councilmember Huang stated that the question was whether or not they were going to use it as a consideration for funding.

Ms. Jepson stated no, and this was not something that they do. She further noted that this was not part of SCAG's policy, to use the Greenprint for this. She noted that what staff was outlining here was the goals for regional advanced mitigation and next they would talk about SCAG's role. She indicated that SCAG's role in no way suggests that their goal is to use this to prioritize projects.

Regional Councilmember Huang stated she wanted to make sure they understood this and that it was clear. She also asked if this RAMP was part of those strategies, that Ms. Jepson mentioned earlier, that was going to be used to support RTP.

Mr. Chidsey stated that with respect to the question on funding the answer was no, and that the goal was to expedite projects and that's what the work around RAMP was about. He stated that in terms of inclusion in the RTP, first and foremost, what's in the plan and what gets adopted is up to the board to decide. He stated that if this committee and the Regional Council, moves forward and adopts an advanced regional mitigation policy, then yes, that policy would make sense to be included, as part of the plan as they develop it. He further stated that one of the goals of what they

were trying to get to here was to get some consensus from this group and then back to Region Council on the policy.

Regional Councilmember Huang indicated that for clarification she wanted to make sure she was understanding and stated that if they take a policy to the Regional Council and they like it, then it would be part of the RTP for the next cycle, but if the Regional Council doesn't like it, then it would not be part of the next RTP cycle. Mr. Chidsey stated this was correct.

Regional Councilmember Huang stated this is why it was important that they get it right.

Ms. Clark explained that to implement these goals, SCAG's will: 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 VMT; 4) support long term management and stewardship of conserved properties; 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; 5) pursue partnerships and collaborative resource development with state agencies and other MPOs to leverage funding and align efforts beyond SCAG's jurisdictional boundaries; 6) 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 7) identify potential partnerships to foster the long-term maintenance of the SoCal Greenprint tool.

As previously mentioned, Ms. Clark reiterated that Regional Advanced Mitigation leans on a science-based approach to understand the potential impacts of projects on a comprehensive area. She also indicated that as noted by a recent study funded by the FHWA looking at regional advanced mitigation nation-wide, improved environmental information is needed on the front end of the project delivery process. Under the current process, state Department of Transportation's retrieve environmental data from a variety of sources and then assess environmental impacts and constraints. A central data clearinghouse could improve assessment processes and mitigation outcomes. She indicated that consistent with the PEIR mitigation measure, the SoCal Greenprint will assist with defining a RAMP, but more detailed biological studies would be required for any establishment of a Regional Advanced Mitigation Program in the SCAG region or elsewhere. Further, she clarified that data policies address the requirements for data inclusion in the SoCal Greenprint and that in fulfilling SCAG's role as a resource for data, 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; data included in the SoCal Greenprint tool will be publicly available, meaning that existing datasets are available online or can be accessed if requested and/or licensed; 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; and publicly available data to be made accessible through the SoCal Greenprint are not adopted by SCAG and are not an expression of regional policy.

Regional Councilmember Hagman indicated that he would like to see more input on page two regarding publicly accessible data sources. He suggested focusing on a process for what is considered a good data set and what is not. He also suggested having an appeal process where people can object.

Ms. Clark thanked Regional Councilmember Hagman for his feedback. She further reported that 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; 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; a timeline and process for periodically updating datasets will be established to ensure continuous use of the best available scientific data; that SCAG will seek feedback broadly on all proposed data layers for inclusion in the tool to identify, investigate, and address valid data security concerns; data elements will be regionally comprehensive to the extent feasible, and data depicted will not be altered from their original source; 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; SCAG will endeavor to increase the availability of civic data and information to reduce costs and increase the efficiency of public services; and SCAG will support development and use of data tools to increase opportunities for public engagement and advocacy to inform local and regional policy.

Under data Governance Standards, which will address how SCAG will convey the limitations of data usage, Ms. Clark reported that 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 "popup screen" displaying disclosure language and will require user acknowledgment of the data's limitations. Also, 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. She also explained that user guidelines address how data will be accessible, and specifically include requirements from the Connect SoCal PEIR Mitigation Measures, including that the SoCal Greenprint will be web-based and easily accessible and it 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.

With respect to data selection criteria, Ms. Clark explained that this element deals with how data is selected for inclusion in the SoCal Greenprint, which addresses the direction from Regional Council to establish a policy framework for advanced mitigation to ensure the Greenprint is aligned with policy objectives. She reported that SCAG staff will prioritize selection of data accessible through the tool by rigorously applying the foregoing data policies, governance standards, and user guidelines; SCAG staff will 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; SCAG staff will 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. Further, 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, as follows: Agriculture and Working Lands; Built Environment; Environmental Justice, Equity and Inclusion; Habitat and Biodiversity; Vulnerabilities and Resilience; Water Resources; and Context. She indicated that 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. Additionally, she indicated that a timeline and process for periodically updating data sets will be established to ensure continuous use of the best available scientific data.

With respect to data parameter requirements, Ms. Clark indicated that they address how the data in the SoCal Greenprint will be documented and how user limitations for each data set will be conveyed. She explained that 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 that SoCal Greenprint will feature a glossary and methods section that will provide full transparency to users on data elements featured. She noted that it will include 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 and a description of the methodology, reporting framework, and processing methods used to develop the data. Additionally, it will include the data creation date and anticipated update

schedules and geographic constraints identifying the geographic unit of accuracy for the dataset. She noted that 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. She indicated 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. Also, she described that 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), which includes: 1) identification information such as the originator, publication date, title, abstract, purpose, time period for content, currentness, progress, maintenance; data quality information that gets to attribute accuracy, completeness, positional accuracy; spatial data organization information the includes indirect spatial reference for locating data without using coordinates; and spatial reference information like geographic coordinate system, latitude and longitude. She further explained that entity and attribute information would also be included which is a detailed description of the dataset, overview of the description, and attribute domain values. She noted that distribution information would also be included such as the contact information for the individual or organization that distributes the data and a statement of liability assumed by the distributing individual organization. Lastly, she stated it would include metadata reference information like the date the metadata was written, contact information for the metadata author, metadata standards, metadata access constraints, and metadata use constraints.

Ms. Clark stated that in looking forward, SCAG will be discussing RAMP initiatives and connections to data at the subsequent meeting. She explained that while they seek the committee's guidance on developing the RAMP Policy Framework through April, they will be: engaging the Greenprint Science and Strategic Advisory Committee meeting in early March; will work to finalize the Draft Policy Framework in April, and will have an additional meeting of the RAMP-ATG in April to do so; staff will then finalize the list of data layers in May based on feedback from the strategic and scientific advisors, stakeholders like the Technical Working Group, and RAMP-ATG members; from June until August, staff will aim to complete the draft tool and conduct user testing, as directed by Regional Council; and in the Fall, staff will present the tool to Regional Council and the Energy and Environment Committee for consideration of public release.

President Lorimore stated that early on they had a question from Regional Councilmember Hagman, and it was suggested that this presentation would clarify those questions. He asked Regional Councilmember Hagman if he felt that this (the presentation) answered his question.

Regional Councilmember Hagman expressed that this is what he wished they had at meeting one. He indicated that he did have two concerns related to process. He stated there should be a balanced committee to review these data sets before they put them up. He indicated that building in a process before they sanction it and put it on the website, should be something they should

strive toward. He stated that the Regional Council should not have to vote on every data set and instead it should be a recommendation committee that is more balanced with not only environmental stakeholders, but also others. He expressed that he thought it was important for transparency. He stated that he knew they had a review process in this but indicated he would also like to see an appeal process in case either side has a conflict with another environmental group study. He also suggested holding back on the data layers until this process is established. He stated that a lot of people were advocating for building this white paper, building the process, and then launching the data layers.

President Lorimore asked if there was any response from staff.

Mr. Chidsey noted that this was actually the meat of the conversation that they were having. He indicated they had structured the previous meetings to try to bring everybody up to the same education level to what they were talking about. He appreciated the feedback and stated that staff would take it under consideration as they move forward. He emphasized that openness and transparency around the datasets was critical and that is why the datasets had been published on the website, so they would have to find a balance about how they make sure things are open and transparent.

Regional Councilmember Hagman suggested that in an effort to be transparent they consider an advisory group to vet the data before it is published.

Regional Councilmember Sean Ashton, Downey, District 25, echoed Regional Councilmember Hagman's comments and stated that in the spirit of transparency, he thought that whatever was reviewed at the March meeting (Science and Strategic Advisors meeting), that they have an opportunity to go through it too. He stated that they should also have members from the business community look at it too.

President Lorimore asked staff about Regional Councilmember Ashton's comments and also asked staff how they envisioned doing what was suggested.

Mr. Chidsey stated that he thought they certainly needed to have a good outline about how they were going to get input after this meeting and move forward. He indicated that in terms of some of the specifics about how the datasets move forward, he expressed that he thought this was certainly part of the policy and hoped to approach that at that policy level to get input on the parameters around that.

Regional Councilmember Huang addressed slide 19 of the presentation which stated that scientists providing vetting will be drawn principally from the organizations listed and asked who would be selecting them. She asked if it would be SCAG, their environmental committee or a third party. She

also asked what they are going to be using to vet datasets and what is considered acceptable. She indicated that she wanted to see these types of questions answered at the next meeting. She also suggested that when this is presented to the EEC that they really take the opportunity to look at this and then have staff come back with a recommendation to the Regional Council at a later date. She expressed that it was a disservice when it was presented on the same day.

President Lorimore stated there was some good feedback provided and noted there were a few questions by Regional Councilmember Huang, one regarding the scientist selection.

Mr. Chidsey stated that he thought Regional Councilmember had requested the information for the next meeting, but they could try to answer her question. He stated they understood that they were talking about the policy framework and the kind of mechanisms on how it might be implemented in terms of data selection and committee members.

Regional Councilmember Huang asked if staff could at least answer who was going to select the scientist, considering there was a meeting next month. She stated it would be helpful.

Ms. Clark referred members to Attachment G of the October 7 staff report which identifies the SoCal data vetting process and lists the scientific advisors as well as the strategic advisors. She noted that from the list of strategic advisors, they had participation from the BIA, Metropolitan Water District, California Public Utilities Commission, SBCTA, Clean Power Alliance, and the Los Angeles County Department of Regional Planning. She also stated that she could put a link in the chat if it was ok from a legal perspective.

Regional Councilmember Huang asked Ms. Clark if she was talking about the October 7, Regional Council meeting.

Ms. Clark confirmed and stated that it was also included in the agenda package from their last meeting. She stated that specifically Attachment G includes representatives from many of the California universities such as UCSB, UCLA, USC, San Diego State, CSULA, the UC Cooperative Extension in San Bernardino County, Los Angeles, and Orange County, and the Riverside Corona Resource Conservation District.

Regional Councilmember Huang asked Ms. Clark if the scientists were picked by a third party, TNC.

Ms. Clark stated that they got recommendations from TNC as a consultant for the Greenprint project and ultimately it was SCAG who made the decision.

Regional Councilmember Huang asked if it was based on their recommendation. Ms. Clark stated yes.

Regional Councilmember Huang asked if TNC did the vetting for SCAG. Ms. Clark stated it was SCAG's decision and TNC provided some recommendations.

Regional Councilmember Huang rephrased her question and stated that the TNC gave SCAG a list of names and asked Ms. Clark if they vetted the names or just accepted them. Ms. Clark stated they vetted them. Regional Councilmember Huang asked what criteria they used. Ms. Clark stated participating in or coming from regional universities, having an expertise in biology, conservation science, climate science and energy. Ms. Clark indicated it was not just regional universities, and that it also included their partner agencies and nonprofits.

Regional Councilmember Huang indicated that the BIA was part of this group, and stated she was not understanding why there were so many complaints, so she asked the BIA about this. She stated that the response they gave her was that they attended the meeting but didn't get to participate. She asked Ms. Clark what her response was to this.

Ms. Clark stated she had a different experience with the BIA and noted they had a specific dedicated session engaging with members of the BIA, called a rapid assessment session where it was just SCAG staff, TNC, and a few folks from BIA looking at their specific data needs and how the Greenprint tool can address those needs. She stated that one of the concerns that they heard, which she believed was addressed in their framework, was that SCAG would identify data layers that could be constraints on growth, and the data layers would specifically say that growth should not happen in certain places.

She noted that they took a look at their data and took a look at the way that their data was being presented and adjusted as such. She stated that they got meaningful feedback from those sessions. She also stated that another area of feedback that they received from an infill developer, was including sewer lines as part of their datasets, which was something that they had not conceived but with their feedback they were able to share that knowing where existing sewer infrastructure is, can help with development. She indicated that having the infrastructure already in place is really informative for project costs.

Regional Councilmember Huang stated that when Ms. Clark was saying they [BIA] were part of the conversation, that meant that the BIA was at the same time having conversation with the science advisors, but if they were having a separate dedicated session for the BIA, then they were not at the same session.

Ms. Clark stated that she did not mean to imply that they had separate meetings with the scientific and strategic advisors. She indicated that on most occasions, they [staff] convened the advisory committee all in all and then had both the scientific and strategic advisors getting an overview of the project and their information needs for that particular session. She also added that they [staff]

actually break them into breakout groups where they[staff] have the scientific advisors in one breakout session to solicit feedback, and they [staff] have the strategic advisors in one breakout session to solicit feedback. She stated that Regional Councilmember Huang's comments were noted, and it was something that they [staff] can think about for their next upcoming session.

Regional Councilmember Huang suggested chatting offline with Ms. Clark because she thought this was where the stakeholders were saying that they [stakeholders] were not part of that conversation.

Board Counsel Duran responded to Ms. Clark's inquiry and stated it would be acceptable to put a link in the chat but would suggest doing it sooner rather than later because the meeting would be ending soon and wanted to give people enough time to click on the link.

Ms. Clark just referred people to the previous agenda package for this Advisory Task Group, which had the full October 7 Regional Council agenda.

Regional Councilmember Hagman reiterated that at the beginning of the meeting they [the task group] had decided to make this into two segments and indicated there was a lot to digest at this meeting. He noted they [the task group] made great progress. He expressed concern for the datasets still being out there and the scientist doing things without policy direction from the Regional Council. He suggested putting a pause on this (the scientific advisors meeting) until they [the task group] can come back and talk about the governance piece and address how they want this information, what does it take to vet it, and who should be on that process to go through it.

Mr. Chidsey clarified that one the actions that was called for in the report in October was to convene the science advisory group with the strategic stakeholders. He stated they could postpone (the scientific advisory group meeting) until after this committee.

Regional Councilmember Hagman stated they [science advisors] could meet, but just not to publish anything. He indicated that the few data layers that were publish got very criticized.

Mr. Chidsey stated that he did not think anything had been published since that meeting.

Ms. Jepson stated that staff had heard their concerns about transparency, the process and for having a clear process about how people are assigned to the scientific advisory group. She stated they understood that they [staff] needed to do more engagement on this draft policy framework and thought they [staff] could focus their engagement over the next month on getting that feedback on the policy.

Regional Councilmember Hagman stated he was just concerned about process and that process was going to be key to this being widely accepted.

President Lorimore indicated that earlier in the meeting, they [the task group] discussed that there would be a presentation on this item with questions, and that they [the task group] would come back at a later meeting for further discussion. He stated that they had a lot of feedback and direction that was given, and asked if in the coming week, staff could send the committee the direction that was given to make sure that it incorporated into their next meeting. He also asked staff if they [staff] needed clarification.

Mr. Chidsey stated they got excellent feedback at this meeting and appreciated everybody's time.

President Lorimore indicated it would be great if they can get an email with the feedback and direction that was given so they can digest it prior to the next meeting.

Regional Councilmember Ashton stated he appreciated the meeting being moved up to allow enough time to discuss.

President Lorimore agreed with Regional Councilmember Ashton. He indicated they were going to meet as many times as they needed to.

ADJOURNMENT

There being no further business, President Lorimore adjourned the Regular Meeting of the Regional Advanced Mitigation Planning - Advisory Task Group at 5:34 p.m.

[MINUTES ARE UNOFFICIAL UNTIL APPROVED BY THE RAMP-ATG]

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AGENDA ITEM 2
REPORT

Southern California Association of Governments
Remote Participation Only
April 18, 2022

To: Regional Advance Mitigation Planning - Advisory Task Group

**EXECUTIVE DIRECTOR'S
APPROVAL**

From: Jason Greenspan, Manager of Sustainability
(213) 236-1859, greenspan@scag.ca.gov

Subject: RAMP Policy Framework & White Paper

RECOMMENDED ACTION:

Information Only – No Action Required

STRATEGIC PLAN:

This item supports the following Strategic Plan Goal 3: Be the foremost data information hub for the region.

EXECUTIVE SUMMARY:

As directed by the Regional Council on October 7, 2021, staff has been working with the Regional Advance Mitigation Planning Advisory Task Group (RAMP-ATG) to establish a white paper and policy framework for advance mitigation in the region to ensure the future Greenprint tool is aligned with policy objectives. SCAG staff shared the initial draft RAMP Policy Framework with the RAMP-ATG at their meeting on February 18, 2022, and have since been engaging with stakeholders to solicit feedback on the draft RAMP Policy Framework.

Staff has also been working to finalize the white paper, which was discussed with the RAMP-ATG in January alongside presentations from implementing agencies that were engaged in the white paper development. The white paper provides research and regional context to support broader policymaking around SCAG's goals, potential role and the data needed to support advanced mitigation. The white paper has been added as an Appendix to the RAMP Policy Framework for review and consideration of the RAMP-ATG.

Staff will provide a presentation to review the progress and anticipated next steps toward finalizing the RAMP Policy Development Framework; share steps taken to integrate the research from the white paper into the draft RAMP Policy Development Framework; and review and report on findings and revisions to the framework resulting from the stakeholder outreach process. The staff presentation will be brief to allow time for questions and conversation among the Advisory Task Group and to provide input to staff on any final revisions to the policy framework in advance

of the RAMP-ATG's anticipated action on April 26, 2022. A redlined version of the RAMP Policy Development Framework is attached for review.

Additionally, as shared in the January 28 RAMP-ATG meeting, a comprehensive repository of past Greenprint staff reports, presentations, public hearings, and meeting minutes dating back to 2018 on the SoCal Greenprint website, can be found at this link: <https://scag.ca.gov/qis-socal-greenprint/staff-reports-presentations-and-documents>. For further information, RAMP-ATG members are invited to refer to the Greenprint Newsletters, which are archived on the website at this link: <https://scag.ca.gov/pod/socal-greenprint-newsletter>.

BACKGROUND:

RAMP Policy Framework

On October 7, 2021, SCAG's Regional Council voted to continue the pause on implementation of the SoCal Greenprint to allow for further engagement with stakeholders to ensure the future tool will advance the policy direction and requirements of the mitigation measures in the Program Environmental Impact Report and related Addendum No. 1 for Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy.

During this pause, direction was provided for SCAG staff to develop a white paper and work with a five-member advisory task group of the Regional Council on establishing a policy framework for advance mitigation in the SCAG region to ensure the Greenprint is aligned with policy objectives. In November 2021, the RAMP-ATG was established and has convened three times since December 2021.

In response to Regional Council's direction, SCAG staff shared the draft RAMP Policy Framework with the RAMP-ATG on February 18. Following direction from the RAMP-ATG, SCAG has been engaging with stakeholders on the draft RAMP Policy Framework to seek feedback that will help shape the final version.

SCAG conducted outreach on the draft RAMP Policy Framework through stakeholder meetings, a public meeting of the RAMP-ATG, email campaigns, stakeholder group workshops, and a written comment period. Through that outreach, SCAG received twenty-nine (29) comments on the draft RAMP Policy Framework through: public comment at the last meeting of the RAMP-ATG, the Technical Working Group, stakeholder workshops for business consortiums and environmental sector groups, and written public comment. The outreach conducted and feedback received is summarized in further detail in Attachment 2 to this staff report.

A "redlined" revised draft of the RAMP Policy Framework intended to address feedback received is included as Attachment 3 to this report. In particular, in order to address feedback from members of the RAMP-ATG and stakeholders that there is a need for further dialogue on the "Data Needs &

Resources to Support RAMP” section of the draft RAMP Policy Framework, SCAG staff removed the *governance standards*, *user guidelines*, *selection criteria*, and *parameter requirements* sections. In lieu, a stakeholder-driven process is proposed in the updated RAMP Policy Framework to address these topics by December 31, 2022. The proposed process is intended to ensure that the SoCal Greenprint tool supports the needs of key user groups (e.g., infrastructure agencies and local jurisdictions) and involves stakeholders with mitigation needs and expertise. SCAG staff have also revised the draft RAMP Policy Framework to: (1) Clarify that SCAG’s role is to support local jurisdictions with existing and development of new RAMP initiatives across the region, rather than create a new singular regional RAMP; (2) Include additional goals for regional advance mitigation planning; and (3) Provide additional context on RAMP programs and related frameworks across the region and state.

RAMP White Paper

In response to Regional Council’s direction, SCAG staff has developed a draft white paper for regional advance mitigation planning to serve as a research tool identifying the benefits and challenges of RAMP as a regional strategy, ways to support existing programs, potential agencies’ roles, key questions, and information gaps. The draft outline of the white paper was presented at the January 28 meeting of the RAMP-ATG, and the full draft is attached to this report, as an Appendix to the draft RAMP Policy Framework. While much of background research and regional context found in the white paper was previewed at the RAMP-ATG and incorporated into the background sections of the policy framework, the final white paper provides a more in-depth review of RAMP and opportunities and challenges for advance mitigation planning in the SCAG region. The white paper also reviews potential roles for SCAG in supporting RAMP and provides terminology related to roles and responsibilities to improve clarity and ensure SCAG’s activities advance policymakers’ priorities. Based on discussions to date and the feedback received, SCAG staff is recommending SCAG’s role be focused on being an “information provider” and “convener and coordinator,” which is aligned with the goals presented in the draft RAMP Policy Framework. Other minor adjustments were made to the language in the RAMP Policy Framework to reflect the relationship between the white paper and the RAMP Policy Framework.

Next Steps

Based on the feedback provided by the RAMP-ATG, staff plans to update the Policy Framework and bring it back the RAMP-ATG as an action item on April 26, 2022. The RAMP-ATG’s recommendation is anticipated to be forwarded to the EEC in June 2022 for recommendation to the Regional Council in July 2022. Moving forward the RAMP Policy Framework, including enhanced sections anticipated by December 31, 2022, will provide clear policy direction to staff on activities to pursue to support RAMP, including ensuring the future Greenprint tool is aligned with policy objectives. To support this work, SCAG staff will request additional resources from the Regional Council in FY ‘23 to retain a consultant to facilitate the stakeholder-driven technical advisory committee and complete the work on the Greenprint tool to ensure continued progress toward fulfilling required mitigation



measures of Connect SoCal's Program Environmental Impact Report and to fully respond to the Board's direction on October 7, 2021.

FISCAL IMPACT:

This project is funded in SCAG's Fiscal Year 2021-2022 Overall Work Program under 290-4862.01 and 290-4862.02.

ATTACHMENT(S):

1. PowerPoint Presentation - RAMP Policy Framework & White Paper Presentation
2. Memo on Draft RAMP Policy Framework Outreach & Feedback
3. Redlined version of revised Draft RAMP Policy Framework

Meeting of the Regional Advance Mitigation Planning Advisory Task Group

Meeting # 4 - April 18, 2022

www.scag.ca.gov



Responsibilities of RAMP-ATG



Develop and recommend RAMP policy framework



Advise staff on RAMP white paper



Report findings to EEC and Regional Council

RAMP-ATG Schedule

MEETING #1 – DECEMBER 2021

- One hour kickoff meeting
- Introductions of ATG members and SCAG staff
- Discuss purpose of ATG and structure
- Review of the anticipated agendas and dates for next meetings

MEETING #2 – JANUARY 2022

- Presentation on existing regional advance mitigation programs from Orange County Transportation Authority and Western Riverside County Regional Conservation Authority
- Review feedback shared from interviews with county transportation commissions
- Review Connect SoCal's strategies, goals, and PEIR mitigation measures
- Provide feedback on the draft outline of the RAMP white paper

MEETING #3 – FEBRUARY 2022

- Presentation on existing regional advance mitigation program from Caltrans
- Develop recommendations on establishing a policy framework for advance mitigation, including guidance for aligning the SoCal Greenprint and its data layers with related policy objectives

MEETING #4 – APRIL 2022

- Discussion on draft policy framework for advance mitigation, including overview of outreach conducted, feedback received, and proposed changes
- Review draft RAMP white paper and provide feedback

MEETING #5 – APRIL 2022

- Finalize recommendations on policy framework for advance mitigation, for consideration at future Energy & Environment Committee and Regional Council meetings
- Finalize RAMP white paper

RAMP Policy Framework & White Paper

Regional Advance Mitigation Planning – Advisory Task Group – Meeting #4

Sarah Jepson, Director of Planning and Programs

Kim Clark, AICP, Program Manager II of Resource Conservation & Resilient Communities

April 18, 2022

www.scag.ca.gov



RAMP Policy Framework Process

Regional Council Action

- Continued the pause on implementation of the SoCal Greenprint, **allowing further engagement with stakeholders** to ensure the tool advances required PEIR mitigation measures and is aligned with regional policy objectives
- Staff to **develop white paper on RAMP**
- Work with advisory task group on **establishing a policy framework for RAMP**



Creation of RAMP-ATG

- Establish policy framework for regional advance mitigation** to ensure the SoCal Greenprint is aligned with related policy objectives
- Advise on white paper** for regional advance mitigation



Development of RAMP Policy Framework

- Draft RAMP Policy Paper presented at Feb. 18 meeting of RAMP-ATG
- Conduct stakeholder outreach and public comment period between Feb. 18 – Apr.
- Incorporate RAMP White Paper research**
- Present feedback and discussion at RAMP-ATG (today)**
- Incorporate feedback, finalize, adopt at next RAMP-ATG

RAMP-ATG Member Feedback on RAMP Policy Framework



OUTREACH

Engage development community + transportation partners



MEASURE OUTCOMES

Measure outcomes for the RAMP goals to help evaluate & guide the initiative



BENEFITS OF RAMP

Emphasize benefits of expediting projects at lower cost



ALIGNING POLICY

Consider RAMP Policy Framework with 2024 RTP/SCS



DATA

Clarify "publicly accessible" data & emphasize robust vetting



PROCESS

Greater clarity, transparency, and board oversight of the data vetting process; continue Greenprint pause until resolved

Outreach Conducted on RAMP Policy Framework

Date	Engagement	Number of Stakeholders Reached
February 17	Stakeholder meeting with Transportation Corridor Agencies	2 attendees
February 18	Public meeting of the RAMP-ATG	36 attendees
February 24	Stakeholder meeting with Angeles County Planning Department	1 attendee
March 2; March 9	Email outreach campaign	639 on distribution list
March 15	Draft RAMP Policy Framework posted to SCAG webpages	Publicly available
March 17	Meeting of the SCAG Technical Working Group	95 invitees; 22 attendees
March 17; March 23	Email outreach campaign	47 on distribution list
March 22	Stakeholder Workshop for Business Consortiums: Session 1	2 registrants; 1 attendee
March 22	Stakeholder Workshop for Environmental Sector: Session 1	5 registrants; 4 attendees
March 24	Stakeholder Workshop for Environmental Sector: Session 2	5 registrations; 5 attendees
March 25	Stakeholder Workshop for Business Consortiums: Session 2	17 registrants; 15 attendees
April 1	Deadline for written public comment on Draft RAMP Policy Framework	Publicly available
April 11	Stakeholder meeting with Ventura County	2 attendees

Stakeholder Feedback Received on RAMP Policy Framework

Date	Engagement	Number of Comments Received	Organizations Providing Comment
February 18	Public meeting of the RAMP-ATG	11 (verbal)	Amigos de los Rios; Caltrans; Friends of Harbors, Beaches and Parks; Holland & Knight; Los Angeles County Business Federation; Rebuild SoCal Partnership; San Gabriel Valley Economic Partnership; SoCal 350; Southern California Leadership Council; The Henderson Law Firm; Trust for Public Land
March 17	Meeting of the SCAG Technical Working Group	1 (verbal)	Orange County Transportation Authority
March 22	Stakeholder Workshop for Environmental Sector: Session 1	1 (verbal)	Friends of Harbors, Beaches and Parks
March 24	Stakeholder Workshop for Environmental Sector: Session 2	2 (verbal)	Endangered Habitats League; Friends of Harbors, Beaches and Parks
March 25	Stakeholder Workshop for Business Consortiums: Session 2	6 (verbal)	Associated General Contractors of California; Los Angeles County Business Federation; Orange County Business Council; Rebuild SoCal Partnership; Southern California Leadership Council; The Henderson Law Firm
April 1	Deadline for written public comment on Draft RAMP Policy Framework	8 (written)	Business and Construction Industry Coalition; Caltrans; Cities of Irvine and Mission Viejo (joint letter); City of Lancaster; Endangered Habitats League; Environmental Coalition; Friends of Harbors, Beaches and Parks; Tejon Ranch Company

Feedback Received on RAMP Policy Framework

- 6** General concerns related to the Greenprint, development process, CEQA implications of data proposed, potential impacts on housing & infrastructure development.
- 2** General support for Greenprint as a tool to support holistic, sustainable planning and growth.
- 5** Comments expressed support for RAMP and the Draft RAMP Policy Framework, some specific suggestions to consider.
- 1** Comment at Technical Working Group regarding the maintenance and currentness of certain data content.
- 6** Comments at the business consortium stakeholder workshops expressed concerns with the process and policy discussion but support for goals of the framework.
- 2** Environmental sector stakeholder workshops comments supportive of the policy framework and offered specific suggestions to consider.
- 4** Written comments offered general support for proposed RAMP policy framework, including data themes, datasets, and policies, and provided specific suggestions to improve the policy framework.
- 4** Written comments expressed concerns over the Greenprint, CEQA implications, and prescriptions/conflicts for local jurisdictions, and provided specific suggestions to improve the policy framework.

Attachment: PowerPoint Presentation - RAMP Policy Framework & White Paper Presentation (SCAG Staff Update)

DRAFT RAMP POLICY FRAMEWORK

Draft RAMP Policy Framework - Intro & Background

- Background
- Policy Framework for Advance Mitigation
- Regional Advance Mitigation Program & Advisory Task Group
- Regional Policy Foundation:
 - Connect SoCal Goals and PEIR Requirements
 - Connect SoCal Goals
 - Natural and Farm Lands Conservation and Climate Resolution 21-628-15
 - PEIR Mitigation Measures
- RAMP Opportunity & Challenge Areas

Draft RAMP Policy Framework - Goals for RAMP Initiative

Foster collaboration between programs across the region and support local implementing agencies to:

1. Facilitate infrastructure development and associated co-benefits, including but not limited to creating jobs, maximizing taxpayer funds, and supporting the building of housing;
2. Expedite project delivery;
3. Improve predictability for project funding;
4. Examine potential environmental impacts at the early stages of project development, utilizing the SoCal Greenprint tool, to help expedite the CEQA process;
5. Reduce costs, risks, and permitting time for responsible development;
6. Improve and reinforce regulatory agency partnerships;
7. Balance future growth and economic development with conservation and resilience; and
8. Achieve meaningful, regional-scale conservation outcomes and co-benefits, including but not limited to landscape and community resilience, emissions reduction, improved water and air quality, wildlife corridors and connectivity, and recreation opportunities.

Draft RAMP Policy Framework - SCAG's Role

Focus on being an “Information Provider” and “Convener & Coordinator” 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 support implementing agencies to establish or supplement regional conservation and mitigation banks and other approaches...that support reduction of per-capita vehicle miles traveled;
4. Support implementing agencies in the long term management and stewardship of conserved properties;
5. Initiate studies to assess gaps where programs do not exist, and ascertain best ways to collaborate with partner agencies and permitting entities to address those gaps, including by supporting implementation agencies in developing new or partnership efforts;

1

Draft RAMP Policy Framework - SCAG's Role (cont'd)

Focus on being an “Information Provider” and “Convener & Coordinator” to:

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 RAMPs 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;
8. Identify potential partnerships to foster the long-term maintenance of the SoCal Greenprint tool;
9. Use a science-based methodology to support implementing agencies’ development of RAMP initiatives across the region; and
10. Develop a process for monitoring and measuring outcomes from RAMP efforts.

1

Draft RAMP Policy Framework – Data Policies

To ensure that data provided through the Greenprint aligns with advanced mitigation opportunities and fulfillment of the Connect SoCal PEIR:

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;
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 included in the SoCal Greenprint tool must be created by a government agency, funded by a government agency, vetted by a government agency, used by a government agency, or developed in partnership with a government agency;
4. 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;
5. Publicly available data that is made accessible through the SoCal Greenprint are not adopted by SCAG and are not an expression of regional policy;
6. The SoCal Greenprint will utilize the best available scientific data, consistent with Connect SoCal's PEIR Mitigation Measure AMM AG-2 and SMM BIO-2, as outlined in approved governance standards;

Draft RAMP Policy Framework – Data Policies (cont'd)

To ensure that data provided through the Greenprint aligns with advanced mitigation opportunities and fulfillment of the Connect SoCal PEIR:

7. Governance standards shall include 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. Data elements will have geographic and thematic breadth necessary to support conservation assessments and consider co-benefits that support the broader goals of Connect SoCal, including consideration of the expressed local planning needs for data related to: agriculture and working lands; built environment; environmental justice, equity and inclusion; habitat and biodiversity; vulnerabilities and resilience; water resources; and context;
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.

Draft RAMP Policy Framework – Technical Advisory Committee



Continue dialogue and develop a stakeholder – driven process regarding the Data Needs & Resources to support RAMPs:

- Remove “Governance Standards,” “User Guidelines,” “Data Selection Criteria,” “Data Parameter Requirements”
- Develop these collaboratively with a technical advisory committee by 12/31/22 comprised of at least one staff representative from:
 - *Each county and city government*
 - *Each county transportation commission*
 - *Transportation Corridor Agencies*
 - *Caltrans*
- Seek input from the development community, non-governmental conservation groups, regional conservation agencies, researchers, and other stakeholders
- Meetings open to public
- Present to the EEC and Regional Council as an addendum to the RAMP policy framework

Attachment: PowerPoint Presentation - RAMP Policy Framework & White Paper Presentation (SCAG Staff Update)

Draft RAMP Policy Framework - White Paper as Appendix E



Regional Advance Mitigation Planning to Support Connect SoCal in the SCAG Region

Photo: San Bernardino County Transportation Agency Photo: Joshua J. Mendenhall

Photo: Transportation Corridor Agencies Photo: Orange County Transportation Authority

Photo: Western Riverside County Regional Conservation Authority

DRAFT White Paper Prepared for Southern California Association of Governments
By Liz O'Donoghue, The Nature Conservancy
April 13, 2022

Table of Contents

- Acknowledgements 4
- Executive Summary 5
- Regional Advance Mitigation Planning: An Overview 8
- Regional Advance Mitigation Planning (RAMP) 10
- RAMP Foundations and Tools 11
- Applicable regulations 12
 - Federal Laws and Regulations 12
 - State Laws and Regulations 12
- Advance Mitigation Frameworks, Strategies and Plans 13
- Habitat Conservation Plans/Natural Communities Conservation Plans 14
- Regional Conservation Investment Strategies 15
- Mitigation and Conservation Banks 16
- Programmatic Mitigation Plans 16
- In Lieu Fee Programs 17
- A Science-Based Integrated Planning Framework 17
- RAMP Planning Steps 17
- Science and Methods 21
 - Conservation Assessments 22
 - Co-benefits and Leveraged Opportunities 24
 - Infrastructure Assessments to estimate potential impacts 26
- Partners and Collaborators 28
 - Outreach conducted and feedback from partners and collaborators 28
- Scope, Scale and Models 30
 - Models 31
- Funding and Financing 35
 - Funding Frameworks 37
 - Potential Sources of Funding 38
- Authorities, Potential Roles and Responsibilities 40
 - Potential roles for SCAG in a RAMP initiative 40
 - Partner Roles 42
- Recommendations 42
 - Finalize the draft Regional Advanced Mitigation Program Policy Framework 42

2

Thank you!

scaggreenregion@scag.ca.gov

Draft RAMP Policy Framework Outreach & Feedback

Background

On October 7, 2021, SCAG’s Regional Council voted to continue the pause on implementation of the SoCal Greenprint. During this pause, direction was provided for SCAG staff to work with a five-member advisory task group of the Regional Council on establishing a policy framework for advance mitigation in the SCAG region to ensure the Greenprint is aligned with policy objectives.

As directed in the supplemental staff recommendation approved at the Regional Council meeting on October 7, the Regional Advance Mitigation Planning Advisory Task Group (RAMP-ATG) was established in November 2021 and has convened three times since December 2021.

At [the meeting of the RAMP-ATG on February 18, 2022](#), SCAG staff shared the [draft RAMP Policy Framework](#). Following direction from the RAMP-ATG, SCAG has been engaging with stakeholders on the draft RAMP Policy Framework to seek feedback that will help shape the final policy framework.

Summary of Outreach Conducted

Leading up to and following the February 18 meeting of the RAMP-ATG, SCAG posted the [draft RAMP Policy Framework](#) on both the RAMP-ATG and SoCal Greenprint webpages and conducted outreach through the channels detailed in the table below.

DATE	ENGAGEMENT	NUMBER OF STAKEHOLDERS REACHED
February 17, 2022	Stakeholder meeting with Transportation Corridor Agencies	2
February 18, 2022	Public meeting of the RAMP-ATG	36
February 24, 2022	Stakeholder meeting with Los Angeles County Planning Department	1
March 2, 2022; March 9, 2022	Email outreach to SoCal Greenprint Science & Strategic Advisory Committees, SoCal Greenprint Steering Committee, SoCal Greenprint Public Mailing List, SCAG Technical Working Group, SCAG Natural & Farm Lands Conservation Technical Working Group	639

March 15, 2022	Draft RAMP Policy Framework posted to RAMP-ATG and SoCal Greenprint webpages	N/A
March 17, 2022	Meeting of the SCAG Technical Working Group	22 (attended) 95 (invitees)
March 17, 2022; March 23, 2022	Email outreach to business consortiums and environmental stakeholder groups	25 (business consortiums) 22 (environmental groups)
March 22, 2022	Stakeholder Workshop for Business Consortiums: Session 1	2 (registrants) 1 (attendees)
March 22, 2022	Stakeholder Workshop for Environmental Sector: Session 1	5 (registrants) 4 (attendees)
March 24, 2022	Stakeholder Workshop for Environmental Sector: Session 2	5 (registrants) 5 (attendees)
March 25, 2022	Stakeholder Workshop for Business Consortiums: Session 2	17 (registrants) 15 (attendees)
April 1, 2022	Deadline for written comments	N/A
April 11, 2022	Stakeholder meeting with Ventura County	2

A list of all outreach conducted on the draft RAMP Policy Framework is included as **Appendix A**.

Summary of Feedback Received on Draft Policy Framework

SCAG received a total of twenty-nine (29) comments from twenty-one (21) different organizations/coalitions. A summary of the comments received is detailed in the table below.

DATE	ENGAGEMENT	NUMBER OF PUBLIC COMMENTS RECEIVED	ORGANIZATIONS PROVIDING COMMENT
February 18, 2022	Public meeting of the RAMP-ATG	11 (verbal)	<ul style="list-style-type: none"> • Amigos de los Rios • Caltrans • Friends of Harbors, Beaches, and Parks • Holland & Knight / Jennifer Hernandez • Los Angeles County Business Federation (BizFed) • Rebuild SoCal Partnership • San Gabriel Valley Economic Partnership • SoCal 350 • Southern California Leadership Council • The Henderson Law Firm

			<ul style="list-style-type: none"> Trust for Public Land
March 17, 2022	Meeting of the SCAG Technical Working Group	1 (verbal)	<ul style="list-style-type: none"> Orange County Transportation Authority
March 22, 2022	Stakeholder Workshop for Business Consortiums: Session 1	0	N/A
March 22, 2022	Stakeholder Workshop for Environmental Sector: Session 1	1 (verbal)	<ul style="list-style-type: none"> Friends of Harbors, Beaches, and Parks
March 24, 2022	Stakeholder Workshop for Environmental Sector: Session 2	2 (verbal)	<ul style="list-style-type: none"> Endangered Habitats League Friends of Harbors, Beaches, and Parks
March 25, 2022	Stakeholder Workshop for Business Consortiums: Session 2	6 (verbal)	<ul style="list-style-type: none"> Associated General Contractors of California Los Angeles County Business Federation (BizFed) Orange County Business Council Rebuild SoCal Partnership Southern California Leadership Council The Henderson Law Firm
April 1, 2022	Deadline for written comments	8 (written)	<ul style="list-style-type: none"> Business and Construction Industry Coalition Caltrans Cities of Irvine and Mission Viejo (joint letter) City of Lancaster Endangered Habitats League Environmental Coalition Friends of Harbors, Beaches, and Parks Tejon Ranch Company

Feedback from Members of the Advisory Task Group at the February 18 Meeting

Members of the RAMP-ATG provided feedback on the Draft RAMP Policy Framework that was presented during the last February 18 meeting. Feedback was focused on the “Goals for Regional Advance Mitigation” and “Data Policies” sections:

- Policy framework addresses many forms of development, not only transportation. Concern that outreach to partners in other sectors, specifically the development community, has not been done. All stakeholders need transparency and opportunity to actively participate;
- SCAG should include measuring outcomes for the RAMP goals (e.g., average time and expense of project before and after participation in RAMP) to see if goals are achieved. If goals are not being achieved, SCAG can reevaluate the program;
- Share expressed concern that CEQA can impede building much-needed housing, but CEQA challenges arise because the only way to get mitigation done is to do so on a project-by-project basis. RAMP provides the ability to do mitigation in a much smarter way that can help expedite projects;
- SCAG should consider next steps once the policy framework is adopted; particularly, how it will be used related to the next RTP/SCS;
- As elected officials who represent constituents, RAMP-ATG should have the opportunity to go through data layers to make sure the data is what we’d like to convey. Request for more information on what was used to identify which data to use;
- SCAG should establish a process for vetting data as well as an appeals process if stakeholders object to certain data; including, a balanced recommendation committee to review data sets and seek feedback on data layers, specifically including the business sector; possibly presenting to the Energy & Environment Committee; incorporating Regional Council or elected officials; pausing development and publishing of Greenprint layers until process and guiding policy is established. Vetting criteria could include those vetted by a different agency and consideration of what makes good data beyond being publicly accessible;
- Concern and question regarding who selected the Greenprint Science Advisors;
- Data used by government gives it credibility. Consider what SCAG uses to vet data from other organizations and what “accessible” means; and
- Suggest that the Energy & Environment Committee review data layers and develop recommendations before bringing to Regional Council.

Summary of Verbal Public Comment

SCAG received eleven (11) verbal public comments during the February 18 meeting of the RAMP-ATG. Six (6) comments were largely focused on general concerns related to the SoCal Greenprint, such as the Greenprint development process, CEQA implications of data proposed for use in the Greenprint, and the potential impacts on housing and infrastructure development.

Two (2) comments expressed general support for the Greenprint as a tool to support holistic, sustainable planning and growth. Additionally, five (5) comments expressed support for RAMP and the Draft RAMP Policy Framework, some of which included specific suggestions to consider:

- RAMP is a long-tested tool that creates market efficiencies;
- SCAG should acknowledge that housing and conservation mandates exist simultaneously;
- Highlight that RAMP can support local, regional, state, and federal policies;
- SCAG should include information about the science that supports successful conservation planning;
- Include information on the permits that can be streamlined under a RAMP;
- Include additional goals of promoting wildlife corridors and connectivity;
- SCAG should commit to develop a science-based methodology for evaluating projects.

Summary of Workshop Comment

SCAG received one (1) verbal comment on the Draft RAMP Policy Framework agenda item during the Technical Working Group (TWG) meeting on March 17 and cumulatively nine (9) verbal comments during the four stakeholder workshops held between March 22-25.

The comment received at the TWG meeting related to maintenance and currentness of certain data content.

Six (6) organizations provided comments at the workshops for business consortiums. Overall, feedback expressed concerns with the process and policy discussion but support for goals of the framework. Feedback included:

- **SCAG should address CEQA implications of labelling specific data resources as best available science**, and should make the process for establishing scientific review of proposed datasets more transparent;
- **SCAG should clarify the potential scale of a RAMP initiative** that helps to serve local governments, since experience shows that large mitigation programs can be problematic;
- **Local control must be emphasized**, since Greenprint datasets implicated in CEQA analysis can be prejudicial to maintenance and continuation of local governments' existing plans;
- RAMP-ATG was established to focus on the Greenprint. If the RAMP-ATG is to focus on RAMP, **Greenprint should be shelved until the RAMP is developed**;
- SCAG should adhere to the guidance of the RAMP-ATG to address Greenprint concerns, and **RAMP and Greenprint should be considered separately**;
- **No objection to the goals in the Draft RAMP Policy Framework**, as RAMP could be a tool to enable infrastructure and Greenprint could help enable a RAMP initiative.

Two (2) organizations provided comments at the workshops for environmental stakeholders. Overall, feedback was supportive of the draft policy framework (e.g., data policies and data selection criteria) and offered several specific suggestions to consider. Feedback included:

- **SCAG should identify gaps in existing advance mitigation programs**, as existing programs only cover what was endangered or sensitive at the time of creation, and there could be opportunities to expand to other species that now need mitigation in a geography with an already defined RAMP;

- Clarify in policy framework that a **SCAG RAMP is meant to complement existing programs and not supersede them**, and existing RAMP programs will stay intact and participation in a RAMP program is **entirely voluntary**;
- **Creation of a regionwide program allows for broader opportunities** by providing benefits such as more opportunities for mitigation across a broader geography and assistance to smaller jurisdictions/agencies/communities that may not have resources to look for mitigation or develop their own RAMP program;
- **Highlight the positive experiences transportation agencies have had using RAMPs in Southern California** (e.g., RCTC using the MSHCP, SANDAG's Transnet measure, OCTA). RCTC has documented quantitative improvements due to RAMP. Existing RAMPs have had good environmental outcomes, but also good outcomes for transportation agencies. SCAG should proceed.

Summary of Written Public Comment

SCAG received eight (8) written public comments via email between February 18 and April 1, the deadline noticed for public comment on the Draft RAMP Policy Framework. Feedback included:

- **Concerns that the Greenprint could be prescriptive and require cities and counties to comply with programs/policies that may not be locally-appropriate.** Concerns over potential CEQA implications of the Greenprint;
- Principles of RAMP should include: **facilitating housing and infrastructure benefits**; support for subregional RAMPs and **not a regionwide mitigation banking program**; respect for **primacy of local governments and agencies** for approving plans and projects and mitigating their impacts;
- **The focus of a RAMP should be only on agricultural lands and open space areas designated by jurisdictions**;
- The **RAMP approach to mitigation must not impede or frustrate the development of infrastructure, housing, and other developments** reflected in previously approved projects and plans;
- **Concerns that RAMP-ATG is focusing on development of RAMP and not Greenprint**;
- If RAMP policy proceeds, **SCAG should pause development of Greenprint until policy framework is completed** and remove all narrative and datasets regarding Greenprint from SCAG's webpage;
- Half of written comments offered **general support for proposed RAMP policy framework**, including data themes, datasets, and policies;
- Suggestion to add two additional goals: **incorporating wildlife corridors and connectivity and committing to develop a science-based methodology to evaluate projects**;
- **Acknowledge in the policy framework that participation in a RAMP is entirely voluntary.** A regionwide program allows participants to look across a wider geography to find mitigation locations and opportunities to participate beyond a transportation-focused RAMP beyond the purview of existing RAMPs;
- Include an additional Appendix **quantifying the types of permits and costs typical development and/or transportation projects would need that could be streamlined through a RAMP process**;

- **The data source list is appropriate** and baseline data is a cornerstone of a reliable, accurate, and relatable digital mapping tool.

All written comments received between February 18 and April 1 are included as **Appendix B**. A table of all comments received on the draft RAMP Policy Framework between February 18 and April 1 is included as **Appendix C**.

Summary of Proposed Changes to Draft RAMP Policy Framework

In the feedback that SCAG received through these public engagements, here are the proposed revisions to the DRAFT Policy Framework by section:

Background:

- Include section on relevant housing and land conservation goals, policies, and mandates for local jurisdictions (to be updated in next version);
- Emphasize that participation and utilization of RAMP is entirely voluntary;
- Add section on process for meeting required mitigation requirements for a project on a project-by-project basis, when projects are not utilizing a RAMP.

Goals:

- RAMP is to promote infrastructure development, create jobs, save taxpayer funds, and improve the CEQA process for projects;
- Include goal identifying types of conservation that RAMP can support, including wildlife corridor and connectivity, as well as other co-benefits of RAMP;
- Include importance of a science-based methodology to support RAMP initiatives in the region;
- Add goal of facilitating infrastructure benefits, including housing;
- Emphasize how RAMP can support local governments, and not interfere with local control;
- Add goal to monitor or measure outcomes from RAMP down the line;
- Add goal related to SCAG's role to help facilitate RAMP, not create a regional RAMP.

Policy Framework:

- Clarify that SCAG's role is not to develop a singular RAMP program or bank, that SCAG's RAMP initiative is meant to complement existing programs and not supersede them, and existing RAMP programs will stay intact and participation in a RAMP program is entirely voluntary;
- Respond to concern on CEQA implications for local jurisdictions of PEIR mitigation measure using terminology "best available science."

Data Needs & Resources to Support RAMP:

- Update data policies to include use of data created by government, vetted by government, used by government, or developed in partnership with government;

- Remove sections on governance standards, user guidelines, data selection criteria, and data parameter requirements; and
- Establish a stakeholder-driven process for developing governance standards, user guidelines, data selection criteria, and data parameter requirements.

Appendix:

- Add section on state RAMP efforts, including Caltrans' RAMNA process, and show the types of permits a project would be required to obtain if there were impacts to water resources, species, etc. and how the permits could be consolidated into one process under RAMP (to be updated in next version);
- Include a map with existing RAMP boundaries; and
- List the signatories to conservation plans in the Appendix to understand the diverse mix of participants that have realized benefits from RAMPs. Also, include scope and/or limits of the RAMPs in the Appendix for context (to be updated in next version).

Appendix A: List of outreach conducted on Draft RAMP Policy Framework

Name(s)	Organization(s) / Affiliation(s)	Sector	Method of Communication	Date of Outreach / Meeting
Valarie McFall; David Matza	Transportation Corridor Agencies	Transportation	Virtual meeting	2/17/2022
Thuy Hua	Los Angeles County Planning Department	Local Government	Virtual meeting	2/24/2022
N/A	SCAG Technical Working Group	Various	Email	3/2/2022
N/A	SCAG Natural and Farm Lands Working Group	Various	Email	3/2/2022
Martha Davis	California Water Data Consortium; Inland Empire Utilities Agency	Utility	Email	3/2/2022
Stuart Kirkham	Caltrans	Transportation	Email	3/2/2022
See Attachment G of the staff report for the October 7, 2021 Regional Council meeting	Greenprint Science & Strategic Advisory Committee	Various	Email	3/2/2022
N/A	Greenprint Steering Committee	Various	Email	3/2/2022
N/A	Greenprint Public Mailing List	Various	Email	3/2/2022
Richard Lambros	Southern California Leadership Council	Business/Developer	Email	3/17/2022; 3/23/2022
Tracy Hernandez	Los Angeles County Business Federation	Business/Developer	Email	3/17/2022; 3/23/2022
Chris Wilson	Los Angeles County Business Federation	Business/Developer	Email	3/17/2022; 3/23/2022
Jennifer Ward	Orange County Business Council	Business/Developer	Email	3/17/2022; 3/23/2022
Paul Granillo	Inland Empire Economic Partnership	Business/Developer	Email	3/17/2022; 3/23/2022
Maria Salinas	Los Angeles Area Chamber of Commerce	Business/Developer	Email	3/17/2022; 3/23/2022
Jon Switalski	Rebuild SoCal Partnership	Business/Developer	Email	3/17/2022; 3/23/2022
Ray Baca	Engineering Contractors' Association	Business/Developer	Email	3/17/2022; 3/23/2022
Bradley Kimball	Southern California Contractors Association	Business/Developer	Email	3/17/2022; 3/23/2022
General contact email; Luis Portillo	San Gabriel Valley Economic Partnership	Business/Developer	Email	3/17/2022; 3/23/2022
General contact email	Santa Clarita Valley Chamber of Commerce	Business/Developer	Email	3/17/2022; 3/23/2022
General contact email	Hispanic 100	Business/Developer	Email	3/17/2022; 3/23/2022
Jeremy Harris	Long Beach Area Chamber of Commerce	Business/Developer	Email	3/17/2022; 3/23/2022
Donna Duperron	Torrance Area Chamber of Commerce	Business/Developer	Email	3/17/2022; 3/23/2022
General contact email	Southern Orange County Economic Coalition	Business/Developer	Email	3/17/2022; 3/23/2022
General contact email	Ventura County Coalition of Labor, Agriculture and Business	Business/Developer	Email	3/17/2022; 3/23/2022
General contact email	Construction Industry Air Quality Coalition	Business/Developer	Email	3/17/2022; 3/23/2022
Timothy Jemal	NAIOP SoCAL Chapter	Business/Developer	Email	3/17/2022; 3/23/2022
Andrew W. Gregson	North Orange County Chamber of Commerce	Business/Developer	Email	3/17/2022; 3/23/2022
Jeff Montejano	Building Industry Association of Southern California	Business/Developer	Email	3/17/2022; 3/23/2022
Adam Wood	Building Industry Legal Defense Foundation	Business/Developer	Email	3/17/2022; 3/23/2022
General contact email; Mott Smith	Council of Infill Builders	Business/Developer	Email	3/17/2022; 3/23/2022
Jessica Yasukochi	Valley Industry and Commerce Association	Business/Developer	Email	3/17/2022; 3/23/2022
Melanie Schlotterbeck	Friends of Harbors, Beaches and Parks	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Bryn Lindblad	Climate Resolve	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Louis Mirante	CA YIMBY	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Leonora Camner	Abundant Housing LA	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Carter Rubin	Natural Resources Defense Council	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Tommy Newman	Everyone In	Environmental/Conservation	Email	3/17/2022; 3/23/2022
General contact email	The Climate Realty Project, Los Angeles Chapter	Environmental/Conservation	Email	3/17/2022; 3/23/2022
General contact email	League of Women Voters of Los Angeles County	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Anna Christensen	Puvungna Wetlands Protectors, Sierra Club's Los Cerritos Wetlands Task Force	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Susy Boyd	Mojave Desert Land Trust	Environmental/Conservation	Email	3/17/2022; 3/23/2022
General contact email	Peoples Collective for Environmental Justice	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Chistopher Chavez	Coalition for Clean Air	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Wendy Butts	LA Conservation Corps	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Matt Abularach-Macias	California League of Conservation Voters (now California Environmental Voters)	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Charles Thomas	Outward Bound Adventures	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Gayle Waite	Laguna Canyon Conservancy	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Nicole A. Johnson	Tataviam Land Conservancy	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Susan A. Phillips	Robert Redford Conservancy for Southern California (RCC for SoCal) Sustainability	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Stephanie Pincetl	UCLA Institute of the Environment and Sustainability	Environmental/Conservation	Email	3/17/2022; 3/23/2022
Larissa De La Cruz	City of Lancaster	Local Government	Email	3/24/2022
Lindell Marsh	Private Attorney	Environmental/Conservation	Email	3/23/2022
Ruby Kwan-Davis	California Department of Fish and Wildlife	State Government	Email	3/21/2022
Karen Newburn	Tejon Ranch Company	Business/Developer	Phone	3/21/2022
N/A	Technical Working Group	SCAG	Virtual meeting	3/17/2022
Abigail Convery	Ventura County	Local Government	Email	3/11/2022; 4/11/22
Gail Shiomoto-Lohr	City of Mission Viejo	Local Government	Email	3/1/2022
Marika Poynter	City of Irvine	Local Government	Email	3/1/2022
Thuy Hua	Los Angeles County Planning Department	Local Government	Meeting (virtual)	2/24/2022
Ben Stapleton; Julie Du Brown	US Green Building Council - LA	Business/Developer	Email	3/23/2021

Appendix B: Written comments received on Draft RAMP Policy Framework



Date: March 7, 2022

To: Kome Ajise, SCAG Executive Director

From: Oliver C. Chi, City of Irvine City Manager 
Dennis Wilberg, City of Mission Viejo City Manager 

Subject: SCAG Draft Greenprint Data Layers (July 2021 Revision):
Joint City Review Comments

The cities of Irvine and Mission Viejo have completed a joint review of SCAG’s draft Greenprint data layers, and respectfully offer our observations and recommendations for your consideration.

Our comments are provided in Attachment 1, and SCAG’s list of draft Greenprint data layers (July 2021 version) is provided as Attachment 2, for ease of reference. These comments are in addition to the prior comment letters our individual cities transmitted to SCAG on the Greenprint data layers.

We further recognize that several members of the Regional Council’s Greenprint Regional Advanced Mitigation (RAMP) Advisory Task Group have cautioned whether a discussion of the Greenprint layers at this time is premature, given that the RAMP Advisory Task Group has yet to establish any recommendations on the policy nature of the Greenprint program, and that a framework of a White Paper on regional mitigation is just commencing discussion.

Our two cities wholeheartedly agree that any discussion on the Greenprint data layers should be paused until the larger policy framework and White Paper on Greenprint and regional mitigation are first flushed out. What specific data layers should or should not be included in any Greenprint data layer list, is directly related to a thorough understanding and vetting and agreement of what Greenprint is, and what it is not.

Nonetheless, we felt it important that our comments be transmitted to SCAG and provided to the members of the SoCal Greenprint Science & Strategic Advisory Committee, in response to a SCAG notice of a March 9, 2022 meeting to discuss the draft Greenprint

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

data layer list. We have since learned that the March 9th meeting has been canceled, but hope that the early transmittal of these comments can assist your staff in understanding technical issues that we observed.

It is also important to frame our comments with the understanding that while we did ask some questions on the applicability of a specific database for Greenprint purposes, we reserve the opportunity to provide more detailed and further comments on applicability, once the larger Greenprint policy framework is vetted and agreed to. As such, our review largely focused on what one could call Quality Control (QC): the ability to access the data layer, any restrictions and limitations to the data access, and what the data is or is not, as examples. We hope, at minimum, that this initial sweep of comments on the draft data layers can be of use as the larger policy discussions proceed, and help to provide some thought as discussions are conducted, for example, on what constitutes “best available scientific data.”

Last, SCAG presentations and information on SoCal Greenprint, have made several references to a Greenprint program already in existence: the Bay Area Greenprint. With the SCAG staff expectation that Greenprint be applied to development projects, we believe it is important for SCAG to share how the Bay Area Greenprint has been used as a development project planning tool, and to share any successes and complications that Bay Area jurisdictions have encountered, in using the Bay Area Greenprint tool.

We thank you for the opportunity to provide a local government perspective on the SoCal Greenprint data layers. Further, should you wish to discuss these comments, please do not hesitate to reach out to Ms. Marika Poynter from the City of Irvine, and Ms. Gail Shiomoto-Lohr who serves as a consultant to the City of Mission Viejo, for a joint meeting opportunity.

Attachments:

1. Joint City of Irvine/City of Mission Viejo Greenprint Data Layers Comments
2. SCAG Draft Greenprint Data Layers: July 2021 Revision

cc: Mayor Wendy Bucknum, City of Mission Viejo and RC District 13
Councilmember Tammy Kim, City of Irvine and RC District 14
Councilmember Peggy Huang, SCAG Regional Advanced Mitigation (RAMP) Advisory Task Group, City of Yorba Linda
Mark Pulone, City of Yorba Linda City Manager
Pete Carmichael, City of Irvine Director of Community Development
Elaine Lister, City of Mission Viejo Director of Community Development
Nate Farnsworth, City of Yorba Linda Planning Manager
Marnie O’Brien Primmer, OCCOG Executive Director
Valarie McFall, TCA Deputy Chief Executive Officer
Justin Equina, OCCOG TAC Chair, City of Irvine
Ben Zdeba, OCCOG TAC Vice-Chair, City of Newport Beach
Warren Whiteaker, OCTA Principal Transportation Analyst

Adam Wood, Building Industry Association of Southern California, Orange County Chapter
Sarah Jepson, SCAG Planning Director
Jenna Hornstock, SCAG Deputy Planning Director
Jason Greenspan, SCAG Manager, Sustainable & Resilient Development
Marika Poynter, City of Irvine Principal Planner
Gail Shiomoto-Lohr, GSL Associates

SCAG SoCal Greenprint Proposed Data Layers for Inclusion: July 2021 Release
Review Comments from the City of Irvine and the City of Mission Viejo
March 1, 2022

Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
1	Must request the file to access important farmland map	Historical data on farmland conversion (2012-2014, and 2014-2016) is not available from California Department of Conservation website and must be requested. Most current data is 2018 data and also must be requested from Department of Conservation. Most current 2018 data is also already three years old. Raises a general policy question on how recent a dataset should be, to be considered in the Greenprint data layer, and a policy question on the frequency of dataset updates that should be expected, if the datasets are to be used by local government and the development community.
2	Identifies soil agricultural groundwater banking index – for Irvine it shows SAGBI where there is residential development – outdated	Soil Agriculture Groundwater Banking Index
3	Link goes to Williamson Act Program – report doesn't provide any detailed info	Williamson Act Contracts
4	Crop mapping – ARCGIS REST services directory – would need GIS experience; not user friendly	California Department of Water Resources: water use estimates for statewide and regional planning efforts.
5	Cannot locate the community garden link – what category does it fall under on the SCAG Green Region Initiative	SCAG website of community gardens in the SCAG region.
6	California Agricultural tour – site couldn't be reached.	U.C. Agriculture and National Resources website on farms, orchards, apiaries, creameries and wineries in the SCAG region.
7	If you go to dataset, 30 year mean data, link is broken – unless you have background in hydrology, not very useful/user friendly	
8	Soil data for entire US – no projects in SCAG region in SSR2, SSR8 – project only in Victorville	
9	Must submit email to receive data/maps – also need experience with GIS – you are submitting an order	

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Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
10	Ventura County – did not check since it’s not OC related	Ventura County Save Our Agricultural Areas Ordinance.
11	Light pollution map for the entire world	Unclear as to how this light pollution dataset is to be used by stakeholders in assessing development opportunities while respecting open space preservation. Relevance? Also, the website seems to factor in light pollution data and illustrate the data visually, but there does not seem to be any corresponding table of the actual data that was used for the visual representation, which would be important for transparency. Also, there seems to be a limitation on the smallest geography at which the data can be searched. For example, a search for Los Angeles, California does not bring up any information. Found data only at the U.S. geography level, which argues its applicability for regional Greenprint purposes.
12	BLM data – map (1 page)	California Energy Commission zones where renewable energy development is permitted.
13	Noise data – cannot download data – see the comments	See previous comments on this noise database generated by the U.S Bureau of Transportation Statistics, as submitted by the City of Mission Viejo on 8/13/2021 (Attachment 1-A).
14	Data is for entire US by census tract, unable to identify clearly the SCAG region	Database for Vehicle Miles Traveled by the U.S. Bureau of Transportation Statistics is for Year 2017 and Year 2009. Is this the most current dataset that is available, or does SCAG already have an alternate, updated dataset for the SCAG region and its counties? Also, while the database is quantified as to the Vehicles Miles Traveled and Vehicle Trips, by State (see https://www.bts.gov/statistical-products/surveys/vehicle-miles-traveled-and-vehicle-trips-state), data at the census tract level detail is very confusing for the layperson who may wish to access and use the smaller area, census tract level dataset. The census tract detail is provided through a downloaded cvs file (again, for Year 2017 as the most current dataset.) Said cvs file provides a geocode number for each census tract, but if one does not know/understand how the geocode classification system is organized, the raw file makes it difficult to know how to access the data efficiently for a specific census tract or set of census tracts that represent the project limits of a proposed transportation or development project.

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Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
		<p>Also, the inventory of census tract level data is based on the 2010 census tract boundaries, and raises a larger question on how to work with any of the Greenprint datasets, with some of the region’s census tract boundaries changed as a result of the 2020 Census. How does a user navigate census tract level data (which would be the dataset most useful for project-specific analysis), knowing that the 2010 census tract boundaries may have changed as a result of the 2020 Census effort?</p>
15	LA County	Los Angeles Public Works Sanitary Sewer System.
16	LA County	Los Angeles County Renewable Energy Ordinance.
17	National Land Cover Database – Western US – don’t see usefulness of this as a planner at this scale	<p>Data layer consists of a satellite-based, land cover and land cover change from 2001 to 2019 at two to three year intervals. The starting point geographies of the dataset are North America, Alaska, the U.S., and islands, based on 30x30 meter plots of land imagery. Data can be searched at the county level for the smallest geography, but mapping does not seem to be able to identify jurisdictional boundaries nor does it provide street names for the 2019 mapping layer, which would be essential to provide the user with any locational/geographic bearings of the data. Also, at the county level, data summarizes a percent net increase of developed area, net increase of impervious surface area, and the distribution of developed change by developed type and areas lost to development by land cover, in categories of wetlands, forests, agriculture. However, any analysis or data at a geography smaller than the county level does not seem to be accessible; therefore, not sure how the database could be used for any smaller, project-level analysis. 2/24/2022 Update: access to maps now seems to be restricted to users with ARCGIS software. Data can be accessed through a public, Interactive Viewer portal, but portal was very difficult to find:</p> <p>https://www.mrlc.gov/viewer/</p>

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Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
18	This just goes to the service area map – I don't see what information this provides	This site is essentially the website for the Orange County Sanitation District, and the only data that is available and accessible, is a static map of the Orange County jurisdictions that are provided wastewater services by the OC Sanitation District. It does not provide any detailed information such as the location of sewer lines, manholes, pump stations, reclamation plants and treatment plants, as seems to be inferred by the Greenprint database layers description. Perhaps there is another OCSD website link that provides such data, but the one listed in the 7/2021 database table only provides the OCSD service district map.
19	Riverside County	County of Riverside website for its eRED program (eligible Renewable Energy Development) program.
20	Imperial County	Salton Sea Authority website for renewable energy data from Imperial County, Riverside County, Federal and State.
21	San Bernardino Renewable Energy Element	Link to access the County of San Bernardino February 2019 General Plan Renewable Energy and Conservation Element.
22	2016 data – 2020 RTP/SCS	The Data Layer Name is called "Public Transit Lines," and the Greenprint data layers table identifies this site to include "Rail lines, Metrolink lines, (and) bus lines from 2016." This site, however, accesses the 2020 RTP/SCS Passenger Rail Technical Report. Its emphasis is passenger rail; as such, the report does not present information on <u>all</u> the region's bus lines, but instead, illustrates major, regional bus lines under planning consideration that have a service relationship to passenger rail station areas (such as Union Station). The description of the data layer should also be expanded to clarify that the dataset is the 2020 RTP/SCS Passenger Rail Technical Report, so that the reader knows in advance the nature of the data being accessed.

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Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
23	Public transit stops – 2020 transit chapter of RTP/SCS	The Data Layer Name is called “Public Transit Stops.” Similar to Data Layer #22 above, this site essentially accesses the 2020 RTP/SCS Transit Technical Report. However, the Greenprint data layers table identifies this layer as “Public Transit Stops” and says that it provides information on rail lines, Metrolink lines, and bus stops from 2016.” This report does <u>not</u> identify or illustrate the location of all public transit stops in the region, and should more accurately be described as a regional-level discussion of transit in the SCAG region, with an illustration of “major” transit stops. The data layer description should also explain that it defines and maps the region’s High Quality Transit Corridors and major transit stops for not only Existing Year 2016, but also for Future Year 2045.
24	Entitlement issue – documented in COI letter	This data layer states that it provides an inventory of the 2018 entitlement projects conveyed to SCAG by local jurisdictions. However, when accessing the website as listed in the database table -- “2018 Draft Regional Entitlements Database and Connect SoCal’s Process for Incorporating Entitlements: Frequently Asked Questions #1” --the database of the entitlements information just brings the user to the general SCAG Connect SoCal website. There is no access to the actual database of the entitlement projects. If such a table or excel spreadsheet exists, the website for said table/spreadsheet should be identified in the Greenprint data layers table under “Additional Information”.
25	Airport map from 2020 RTP – what info does this provide	
26	Ports from 2020 RTP/SCS – what info does this provide	
27	Ventura County	
28	Ventura County	

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Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
29	Liquefaction – earthquake zones of required investigation – people may need to understand labeling	Nice site; provides information at the parcel level (APN) for the entire state on earthquake fault, liquefaction or landslide zones, by typing in an address. California Department of Conservation data. However, the site could use some user interface information to allow the user instructions on how to begin to access the information. For example, one needs to click the Information Icon or Question icon to understand how to use the site. Also, there is no legend to understand the color variation on the parcels. What does blue versus grey versus orange mean? Also, if a parcel is on an earthquake fault zone, is the name of the fault is identified? Seems to be basic information that should be accessible.
30	Need GIS knowledge to access map services	Not sure if this site, which is also generated by the California Department of Conservation, is perhaps the source data for Dataset # 29 above?
31	Fire hazard severity map	Provides maps at the jurisdictional level of the State Fire Hazard Severity Zone Maps as well as an FHSZ viewer tool that can zoom in from the Statewide map. However, when accessing the local jurisdiction map from the site, the map seems to be static. Data seems to be parcel-based, but cannot zoom into any of the parcels from the jurisdiction map. Need to use the FHSZ viewer to zoom in for the entire state, but again, not clear if a specific parcel can be searched. Limited utility at a small geography.
32	Historic wildfire – need GIS experience zip file no maps – not user friendly	
33	Earthquake shaking potential – 2016	Need to have ARC GIS software to be able to get parcel level information on earthquake shaking potential. Without ARC GIS, one can search a specific address, but cannot access information about that parcel, nor can one click on any parcel adjacent or proximate to the searched address. No legend is provided to understand the colors on the parcel. Very limiting.
34	Historic landslides – not user friendly to access landslide info turn off the maps and report layer in the layer list	Beta site. Can access information by typing in an address. However, mapping could be served with a Legend to understand the significance (if any) of colors on a parcel. Site does not seem to be able to access data based on clicking on a certain parcel or area. Also, site seems to be limited in capability to zoom into the map, and when searching an address.

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35	Landslides – same maps as #32	<p>Same general California Department of Conservation website that has tabs for different categories of information: Landslides, Mineral Lands Classification, Tsunami Hazard Area, Borehole Database. It would be very helpful if the specific website for the subject topic be listed in the Greenprint dataset table, versus the general site, so the user can go directly to the needed information. Thus, for example, the website for Landslides would be:</p> <p>https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=bhdb</p> <p>versus the Additional Information link listed:</p> <p>https://maps.conservation.ca.gov/geologichazards/#datalist</p> <p>Also see comments on Dataset #29 on limitations, which would also apply to the Landslides information.</p>
36	Need GIS experience – not user friendly	See comment on Dataset 33, which would also apply to the Alquist-Priolo faults information that this site provides.
37	500 year floodplain maps from 2009 – no real guide on products available; you have to go through maps individually to figure them out	<p>Can enter an address at the following link:</p> <p>https://msc.fema.gov/portal/home</p> <p>and conduct a search, to see if a property is in a FEMA flood map. If you scroll down below the map, there is a legend that explains the FEMA zone designations. Might be more helpful to list the link above in the Greenprint Data Layer table, to be able to directly access the search feature through the “Map Service Center” versus the general website link that is currently provided in the Greenprint data layer list. Or provide both links to understand the general information that is available, then to direct user to the online mapping services.</p>

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38	100 year floodplain – doesn’t seem to be digital info available – not user friendly	Same map as #37; however, the designation of a 100-year floodplain is not listed or called out in the legend. If the 100-year floodplain corresponds to a specific FEMA zone, the Zone reference should be called out.
39	Sea level rise – interesting map, but no real guide on how to make it work – what do you get – no code	When typing in an address, the map seems to be static. Cannot zoom in or out from the searched address to visually see the sea level rise issue at the county or regional level. A bit limiting.
40	New study by The Nature Conservancy and California Coastal Conservancy – this is a study with opinions regarding sea level rise	<p>This is a posting on the State of California Coastal Conservancy website to be able to download a study on California sea level rise. Study date not immediately evident (no date listed on report), but study assesses impacts of sea level rise in three distinct geographic ecosystem areas of California: North Coast, Central Coast and South Coast, and identifies methods for assessing vulnerability to sea level rise. Data source is a static report; provides more of a statewide perspective/overview on sea level rise and conservation assessment, but does not in and of itself provide any tools to assess site or parcel-specific data. You have to dig in the report to find any mention of interactive maps, but the accuracy of the information is questionable. For example, page 77 of the study includes a note to Figure 5.1 (on page 76 of said study), on opportunities to conserve the State’s natural habitat and managed lands in the face of sea level rise. The note states that more detail can be observed by clicking a link to an interactive map. But when the user clicks the link:</p> <p>https://coastalresilience.org/CoastalAssessment</p> <p>the link states “No Results Found. The page you requested could not be found.”</p> <p>Ideally, any applicable links for more detailed data should be spelled out in the Greenprint database, with the narrative study then separately listed as background and context. That would, of course, require someone to review the entire report, click on all the links, and most importantly, verify if the links are working. Worth the time.</p>

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41	Same comment as data layer 40	See comment on Data Layer 40.
42	Page doesn't exist <i>Update: link works</i>	2016 report prepared for the California Department of Fish and Wildlife by UC Davis that assesses the vulnerability of the 29 natural vegetation community types and their respective degree of vulnerability to four alternate projected climates by end of century. 331-page report with a series of maps by macrogroup. However, all the maps are static and based on the entire state. Unsure how a user assessing a specific area or parcel will be able to use the information other than perhaps to obtain a background on the impacts of climate change on vegetation macrogroups.
43	Climate resilience in the Pacific Northwest – doesn't apply to SCAG region, why is this included as a relevant data layer	<p>Site provides links to interactive maps of what is termed the North Pacific Landscape Conservation Cooperative terrestrial resilience, stratified by land facet and ecoregion. However, in looking at the posted map on the Database and Gallery, accessible at:</p> <p>https://nplcc.databasin.org/galleries/e41a3ea84e78463bbf9f03ce2f8e9205</p> <p>it appears that while some of the maps cover ecosystems that extend into California, none of those seem to include the SCAG area? The most southerly area addressed, seems to be Central California.</p>
44	Union of Concerned Scientists – opinion report	2019 report: “Killer Heat in the United States: Climate Choices and the Future of Dangerously Hot Days” that provides links to download the full report, research article, and data by region, state, county and city. However, when trying to download the city and county data (as this would be the most applicable for use in a project specific assessment), the data seems to be limited to a listing of the number of days per year projected with a heat index above 90 degrees, 100 degrees, 105 degrees, for the midcentury and the late century, based on historical data, slow action, no action and rapid action. Would need to go back and forth between the report and the excel spreadsheets to link together the action scenarios against the projected heat days. Further, when going into the “city” excel spreadsheet, there are only 57 “cities” listed for the entire state of California, and perhaps a maximum of 5 areas that are located in the SCAG

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		region. And while the database calls them “cities,” it appears to cover much larger SMSA areas (e.g. Los Angeles-Long Beach-Anaheim) but for which the excel spreadsheet provides no explanation or clarifying notes or any mapping reference to illustrate the area of coverage. Thus, for use at a project level, the only data that is complete is at the county level where all of SCAG’s six counties are listed.
45	Same comment as proposed data layer 44	See comment 44 above.
46	Need to zip the file to access info	<p>U.S. Forest Service Wildland-Urban Interface: It appears that to use this geospatial database for mapping and analysis, you need to download the ArcGIS files and also have ESRI’s ArcGIS platform, to access the 1990 to 2010 wildland-urban interface of the conterminous United States.</p> <p>Also, the Greenprint Data Layer Table seems to suggest that the data that is available, is from 2010 to 2017. However, it is the year of publication that is 2017; the data itself covers the timeframe of 1990 to 2010. Is a 1990 to 2010 analysis year too outdated? How much would have changed from 2010 to 2022, and make this database applicable and relevant today?</p>
47	Wildfire risk – okay with layer	Mapping searchable by State, County and Community, and fire risk to homes can be compared against the state or the nation.
48	California Coastal Zone – okay with layer	Found the site to be awkward; more of a global illustration of the coastal zone for the entire state. Cannot easily determine whether there are any parcel identifier opportunities to know exactly where and how the coastal zone applies on a specific parcel of land. Also, when trying to access other layers (e.g., jurisdictional boundaries), the site transfers the user to a different URL (versus it being a layer in the coastal boundary zone) that does not carryover the coastal zone information.
49	Have to open the map separately using ArcGIS tab – otherwise link loads you to page where all districts are “blue” – no way to distinguish in color	The “blue” designation of the water districts is not transparent layer. As a result, a user cannot see the underlying street or jurisdictional boundaries to easily understand the geographical span of a specific water district and the user cannot isolate the location of one specific water district from another. Just see a lot of blue for the entire state.

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50	California protected lands – anyone can edit(?) – lands owned in fee and protected for open space purposes – otherwise okay	1) Requires a user to sign in and register to access the dataset. 2) Then allows you to go to two specific links to access the datasets on protected areas and conservation easements. Why not just provide the individual links directly to avoid these steps? https://data.cnra.ca.gov/dataset/california-protected-areas-database https://data.cnra.ca.gov/dataset/california-conservation-easement-database 3) Upon trying to access the links, requires a user to have ArcGIS or ability to use shapefiles. If you do not have GIS software, you cannot access these datasets.
51	National Land Cover – 2016 – zip file, not very user friendly, seems to require a lot of research to access data	This dataset covers the <u>entire</u> North America continent. And provides individual datasets on specific types of national land cover (exotic grass, urban imperviousness, etc). If there are specific maps that apply to the SCAG region, why not just go through the website data, find those specific datasets, and list the URLs in this matrix that apply strictly to the SCAG region? Also, once you find a specific dataset you are interested in (e.g. 2019 landcover), the site requires you to download the dataset, and it comes through as a zip file which then has more multiple zip files, and then more multiple zip files. I could not open the dataset.
52	Not OC related	Imperial County 2016 Land Use dataset.
53	Not OC related	Los Angeles County 2016 Land Use dataset.
54	All records are shaded blue – remember SCAG assigned land use designation for existing land sue with uniform categories that may not accurately reflect existing land use	SCAG’s Orange County 2016 land use dataset by parcel: 1) User needs to access SCAG’s master land use code designation table, to understand the numerical designation of any of the parcel’s land use codes. Is there a way to access the land use code information while concurrently viewing the map and parcel? Or does it require going separately into the master table that has 685,000 parcels listed? 2) Is entitlement data not a part of this dataset? Should it be? 3) Status of this layer when a 2019 dataset is developed? (2024 RTP/SCS)

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55	Not OC County	Riverside County 2016 Land Use dataset.
56	Not OC County	San Bernardino County 2016 Land Use dataset
57	Not OC County	Ventura County 2016 Land Use dataset.
58	Everything is shaded blue – same if opened in ArcGIS mapping tool	This is the database of the 2010 Census tracts, which has now been superseded by the 2020 Census tracts. <ol style="list-style-type: none"> 1) Will there be an accompanying 2020 Census tract data layer that is included? 2) If yes to (1), is there a need to retain the 2010 census tract information? 3) Attribute filter names need a corresponding table to understand what the filter represents (GEOID10? MTFCC10?) 4) Is there a way to have the jurisdictional boundaries as a layer to this file, to know which census tracts are in a specific city?
59	Green region initiative – low walkability in Irvine (?) based on what data (?) – ATP Cycle I adopted – how were scores derived for anything?	<ol style="list-style-type: none"> 1) Descriptive information in some of the cells is not all displayed, and there is not a way to click on the cell to view all the inputted information. 2) When viewing a specific city, and then clicking the column title (e.g. Energy@UR to see the more detailed information), it does not stay on the jurisdiction that one was looking at, and further, there does not seem to be a way to return back to the original table at the jurisdiction that the user was researching. Have to re-sort the table all over again. Very awkward interface; very frustrating. 3) Is there a legend that explains the column abbreviations? 4) What metrics were used to define a jurisdiction’s performance assessment (e.g., Mission Viejo having “moderate” park availability?)
60	Okay	California Assembly District boundaries as of 10/2017. With the December 2021 adoption of changes in congressional district boundaries, should this dataset be updated?
61	Okay	California Senate District boundaries as of 10/2017. With the December 2021 adoption of changes in congressional district boundaries, should this dataset be updated?

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62	Doesn't really seem to reflect Regional Council districts	SCAG Regional Council District map. Not correct. RC District 13 is supposed to include the cities of Laguna Hills, Laguna Woods, Lake Forest, Mission Viejo, and Rancho Santa Margarita. The map, however, does not seem to include all the entire cities of District 13, and also seems to include county unincorporated territory (Dove Canyon). Also, when one clicks on a specific district, it would be helpful if the names of the cities in the district are listed in the pop-up data window.
63	Sphere of influence – SCAG	There is no sphere of influence in Mission Viejo, so cannot determine accuracy of data.
64	Subregions	Map of the SCAG subregions.
65	Supervisor districts – extremely outdated: LA Co: Antonovich; OC: Moorlach, Norby, Nguyen, Campbell, Bates – completely out of date	Data of the county supervisor districts is from 2017. Brings up the larger question as to how often any of the datasets should be updated, and whether each of the “descriptions” of the dataset should consistently identify the year(s) of each dataset and update.
66	Okay	Dataset of air basins in SCAG region. Map is deceptive in that the South Coast Air Basin is represented over four adjacent areas. There should perhaps be one larger boundary line that shows the entirety of the South Coast Air Basin.
67	Okay	Supposed to be a map of Air Districts in SCAG region, but there is nothing on this map that shows the boundaries of the air districts. Perhaps is superseded and included in Dataset 66?
68	Okay	SCAG 2016 city and county unincorporated boundary area, as of 11-2018. Needs to be updated to include any additional boundary changes post 2018?
69	Congressional Districts – not up to date	2017 data update. See Comments in Dataset 60 and 61: With the December 2021 adoption of changes in congressional district boundaries, should this dataset be updated?
70	County boundary okay	County boundary map.
71	Not OC related	Zoning map for Imperial County
72	Not OC related	Zoning map for Los Angeles County

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

SCAG SoCal Greenprint Proposed Data Layers for Inclusion: July 2021 Release
Review Comments from the City of Irvine and the City of Mission Viejo
March 1, 2022

Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
73	Open in ArcGIS map – initial connector does not show data; * should add disclaimer these are SCAG’s interpreted land use categories; they may NOT have been vetted by individual jurisdictions; takes a long time to load (go to view full details)	Zoning map for Orange County. Need to have a way to have the numerical land use code legend (e.g., SCAGUID16: 0590621941) be easily accessible to the user (pop up reference table), without having to open the separate table that lists ALL the parcels in all the cities in said county. Awkward interface.
74	Not OC related	Zoning map for Riverside County.
75	Not OC related	Zoning map for San Bernardino County.
76	Not OC related	Zoning map for Ventura County.
77	Cal Enviro Screen 4.0: was there any notice of public review for version 4.0? Don’t remember SCAG notifying region of public review; COI has well documented concerns with CalEnviroScreen – only 47 public comments; SCAG commented, but didn’t really look out for member jurisdictions	CalEnviroScreen map. Also, this dataset is supposed to be the individual indicator maps, but the link identified is of the CalEnviroScreen map in general. Should perhaps include the separate URL to access the tabs for the separate indicators, such as ozone, PM2.5, etc.: https://oehha.ca.gov/calenviroscreen/indicators
78	Basic hub of comments	CalEnviroscreen website portal. Why not just combine with Dataset 77 rather than having two separate listings?
79	COI has documented issues with SB 535 data	SB 535 Disadvantaged Communities map. No SB 535 sites in Mission Viejo.
80	CA parks – zip files, need GIS knowledge – not user friendly; need to navigate some	Provides three options for accessing parks database: ESRI shapefile, ESRI file geodatabase, and Google KLM. If one does not have an ESRI license, one cannot access the ESRI datasets. Also could not open the Google KLM file.
81	Toxic release inventory facilities – may propose a threat; only identifies site, not any details of what constitutes toxic listing level of pollutant, are businesses removed? i.e. ITT Cannon LLC – last inspected 12/02/2019	Upon a review of this State website, there are no toxic-release sites identified Mission Viejo, but the accessible site data is incomplete. When one clicks on a site, the pop-up only confirms the jurisdiction in which the site is located, the name of the facility and the address. But the most important data: what is the toxin being released, is not listed, nor does there seem to be a link to obtain that missing data.

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82	Publicly accessible recreational land – back to CPAD website – have to sign up to get data	<p>California Protected Area Database: frustrating site.</p> <p>Once you sign up as to why you are accessing information, and try to “get data” through the following link:</p> <p>“You may download CPAD by following this link: https://data.cnra.ca.gov/dataset/california-protected-areas-database”</p> <p>the site requires you to download the dataset. The data comes through as a massive zip file, which then has more multiple zip files, and then more multiple zip files. Too difficult to even access the data, and it appears one needs to have GIS software to then open and access the data.</p> <p>Just found the ability to view the mapping tool without having to download the data, through MapCollaborator. Please include this link in the Greenprint table to allow a user to get access to the mapping tool (View CPAD on a Map):</p> <p>http://www.mapcollaborator.org/cpad/?base=map&y=37.50973&x=-123.93677&z=6&layers=mapcollab_cpadng_cpad_ownlevel%2Cnotes%2Cpolygons%2Cuploads&opacs=50%2C100%2C25%2C90</p>
83	CA school campus databases: why is this a critical dataset layer for Greenprint	<p>California School Campus Database: To this site’s credit, it does allow a user to access the site through an alternate “MapCollaborator” portal if one does not have ArcGIS software, and allows one to search by jurisdiction name. Last updated 11/30/2020.</p>

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March 1, 2022

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84	Park access – no park access within ½ mile – seems incorrect, showing no park access in Los Olivios Portola Springs – don’t understand the disadvantage community; why so little park space in Great Park Neighborhoods – this should be some of the highest percentages. UCI is severely disadvantage community (look at extremely disadvantage in neighborhoods next to Back Bay in Newport Beach)	California State Parks website: identifies neighborhood areas that do not have a park within a half-mile. Definition of what is counted as a park requires going into a separate link (SCORP) and having to review the report. Could not find the answers to questions below. A summary of what is being counted, should be included in the Park Access Tool website. Questions that come to mind in reviewing the data: <ol style="list-style-type: none"> 1) Is this an inventory of public parks only? Since private parks also satisfy a jurisdiction’s local park requirements, are private parks and recreational facilities included in this database, such as Lake Mission Viejo? 2) Mission Viejo has an extensive amount of acreage that serve as open space spines with open space recreational trails. Are these acreages included in the inventory when calculating park access?
85	Park acres – same comments as above	California State Parks: Ration of park acres per 1,000 residents. See comments in Database Layer 84 above.
86	Opportunities for affordable housing – TCAC; large portion of Irvine is low resource, missing info in Great Park Neighborhoods	TCAC website: Would be extremely helpful if the jurisdictional boundaries could be overlaid onto the 2021 TCAC/HCD Opportunity Map, so that a user could easily verify which TCAC census tracts are located within a specific jurisdiction. Also, there is no link that provides general, summary information about TCAC maps and their purpose.
87	Sequestration of NO2 by vegetation – what does this have to do with the SCAG region?	This is basically a link to a scientific article published in 2018 that identifies how vegetation such as grasslands can help improve air quality. There is no search function to isolate out a specific county. The entire State of California is illustrated as one color. Also (and this relates to Database Layer 88 below) the article is based upon the cumulative contribution of grasslands to five pollutants: CO, NOs, O3, SO2 and PM. There is not a singular calculation for each individual pollutant. All pollutants in this database that relate to this article, should be grouped into one master link and all five pollutants listed in the description.
88	Same comment as above	Sequestration of PM2.5 by vegetation: See comment in Database Layer 87 above.

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89	Historic redlining – focus is on LA County only (it appears) – US Map	The link identifies that the only California cities included in this database are Fresno, Los Angeles, Sacramento, San Diego, San Francisco, San Jose and Stockton. This limitation should be identified in the Database description.
90	LA County	Location of trails in Los Angeles County. Is this inventory accurate? It only shows dots versus linear lines for a trail, and lists total of 64 entries for the entire County of Los Angeles. Does not seem to be accurate.
91	National Historic Trails – PCT (GIS layer – no map, need GIS experience) Juan Bautista de Anza – NHT – okay; Old Spanish Trail – okay	National Park Service: National Historic Trails. Very awkward dataset. User needs to know ahead of time what trail it seeks to access, and then click that specific trail. Not helpful if one wants to focus on a specific geographic area and see if there are any national trails within that geographic area, or if there are several trails within that same geographic area.
92	Trails OC – source of data; doesn't seem to capture Class I bikeways throughout the City of Irvine	County of Orange Public Works Department: Orange County park trails. Not sure what trails are being illustrated in this database. The link shows there are no trails in Mission Viejo, which is absolutely incorrect and contrary to the City of Mission Viejo inventory: https://cityofmissionviejo.org/departments/recreation/parks-city-sites/walk-hike-bike-mv https://cityofmissionviejo.org/sites/default/files/Walking%20Trails%20Map.pdf
93	Riverside	Riverside County trail system.
94	Priority growth area, are established by SCAG – should be disclaimer added that these are not jurisdictional identified priority growth areas – the PGA's identified in Irvine are away from job centers and transit – areas are already recently developed	SCAG Priority Growth Areas: Need to overlay the jurisdictional boundaries on the base map so that a user can understand where the Priority Growth Areas are located within any specific jurisdiction. Same comment for the following, related, Database Layers, since they are all subsets of the same SCAG base map: Transit Priority Area (2016): Database Layer 101 Transit Priority Area (2045): Database Layer 103 HQTA (2016) Database Layer 100 HQTA (2045): Database Layer 102

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95	Native American reservations – no comment	Native American Reservations locational information.
96	Healthy Places Index – all blue with link from greenprint, go to full details – ArcGIS map doesn't load up	<ol style="list-style-type: none"> 1) The Healthy Places Index, according to the project description, is a compilation of several different and independent datasets (food access, retail density, park access, tree canopy). Are each of these individual datasets listed in the Greenprint dataset already, to allow a user to verify the applicability, methodology and accuracy of the individual datasets? If not in the Greenprint dataset, it is recommended that each of the individual sites be listed as “Additional Information” to allow for a quality control review. 2) Also, when a user clicks on a specific census tract on the map, and the pop-up window for that tract is displayed, or the corresponding table opened, there does not seem to be any Healthy Places Index listed. Is this an error, or has the data not been input? 3) What is the methodology by which all the different indices (food access, retail density, park access, tree canopy) were compiled into one score for a census tract? 4) Show the jurisdictional boundaries on the map to allow a user to navigate the census tracts of interest.
97	Communities of Concern – has data been vetted by jurisdictions	No Community of Concerns identified for Mission Viejo.
98	Environmental Justice Areas – see COI comment in letter	The July 2021 version of the draft Greenprint dataset does not identify a website link to access. Two individual links are identified, but are in strike-out text.
99	Proposed and existing bikeways – CTCs should get info from jurisdictions for the most up-to-date bikeways information (i.e. Santa Clarita does not identify the paseo system – local bikeways/walkways)	Existing and Proposed Bikeways.
100	HQTA – okay with 2016 data	SCAG HQTAs (2016): Need to overlay the jurisdictional boundaries on the base map so that a user can understand where the 2016 HQTAs are located within any specific jurisdiction.

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SCAG SoCal Greenprint Proposed Data Layers for Inclusion: July 2021 Release
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March 1, 2022

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101	TPA 2016 – okay with 2016 data	SCAG Transit Priority Areas (2016): Need to overlay the jurisdictional boundaries on the base map so that a user can understand where the 2016 TPAs are located within any specific jurisdiction.
102	HQTAs 2045 – see COI comment letter, shouldn't be included as it includes hypothetical information not vetted by jurisdictions	SCAG HQTAs (2045): Need to overlay the jurisdictional boundaries on the base map so that a user can understand where the 2045 HQTAs are located within any specific jurisdiction. Also, the map should identify the new, underlying transit stop or corridor that triggers a one-half mile radius that is expanded from the 2016 base.
103	TPA 2045 – layer list, no map to view; same comment as 102	SCAG Transit Priority Areas (2045): Is there a map that corresponds with this link? This site just provides narrative information.
104	Urban Displacement – who develops this? Is this an official SCAG document? Erefsnnyder(?) page says “These maps have not been groundtruthed to verify accuracy in accordance with UDP’s methodology and therefore cannot be officially endorsed by the UDP.” This data has never been vetted by jurisdictions.	<p>The link identifies the information as “SCAG Region Displacement and Gentrification Typologies”. Has any of this information been introduced and vetted at the SCAG Technical Working Group or SCAG policy committees as a characterization or category to include for regional planning purposes? As an example, the findings include statements such as “some neighborhoods in Palm Springs and Cathedral City in Riverside County appear to be retirement communities for high-income households. However, because the UDP typologies do not account for retirement income, these areas may be more likely to be classified as "Low-Income/Susceptible to Displacement". What entities developed the information? Are the</p> <p>This data layer is also identified as a “work in progress.” Is this scientific data that has been vetted? Or is this an academic exercise that may not be applicable or appropriate to include as a relevant dataset for regional planning purposes, especially in absence of any SCAG policy direction?</p>
105	National Forest System Trails – link to USDA Forest Service website, not clear direction to the system trails	The website that is listed, is a listing of all the national datasets collected and managed by the U.S. Department of Agriculture Forest Service. There are numerous datasets included in this website. If there is one particular link for the National Forest System trails, that specific link should be identified and listed.
106	Trails – Ventura County	The link to the Ventura County Trails data layer says “Page Not Found.”

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March 1, 2022

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107	Important bird areas – gives you general info of who to contact from Audubon in particular area	This is a map for all of California for Audubon Society “Important Bird Areas.” When a bird area is illustrated, one needs to click the area to access additional Ebird and website information on the identified areas. However, there is no corresponding legend to understand the different color codings for the identified areas (e.g., green versus red). Also, what is the meaning of an IBA designation? Does this mean that any identified area should not have future development?
108	Fish passage barriers – interesting storm drain channels included, have to open in BIOS	Not quite sure how to understand the use of this dataset, especially in urban creeks locations where there is an identification of partial barriers to fish passage (e.g., Mission Viejo Country Club site).
109	Wildlife movement barrier – have to open in map viewer classic to access a legend – what kind of wildlife? Only 9 in the SCAG region? Seems to be roads/highways – all wildlife include or only critical wildlife?	No additional comments.
110	Vernal pools – need to open in BIOS – need login, so few vernal pools in SCAG region	Hard to distinguish the layer for the vernal pools. Shows a green color in the BiOS layer, but green is also used for open space designations. Very confusing, until I realized one should hit “GO” on the BIOS layer.
111	Fish passage barriers – not user friendly	California Department of Fish and Wildlife salmon fish barriers: There needs to be a legend to know the difference between the different colors used on the map: orange vs. red vs. purple. Also, what is the significance or relevance for the different years (2011, 2012, 2017, 2018, 2019)? Does a user rely on the most current year, or is each year (and associated sites) relevant? Also, the website says the human-made barriers to salmonoid migration are deemed priorities for removal by State Fish and Game. But are all the sites inventoried, applicable to salmon or spawning fish? Some salmonoid sites listed in 2011 inventory are located in South Orange County. Accurate?

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112	Species biodiversity risk – ACE Areas of Conservation Emphasis – pdf not very clear, not user friendly, don’t understand how to use tools/maps, etc. – is this all species?	<p>California Department of Fish and Game species diversity measures Areas of Conservation Emphasis (ACE): 2018 dataset.</p> <ol style="list-style-type: none"> 1) Geolocation References layers does provide ability to have an overlay of city and county boundaries (BIOS). Previously thought the city boundaries were not available in related, prior BIOS-based datasets listed herein, but was looking under the “Political Boundaries” layer, not the “Geolocation” layer. 2) Took a while to figure out that one cannot just click an area to find more detailed data. Need to use the “Point Info” tool. But that information just provides latitude and longitude information, as well as confirmation of city. Where in this tool does one access the species diversity information? That is the critical information to access. As an example, the “Connectivity” layer identifies that there is “irreplaceable and essential” connectivity corridors between the City of Mission Viejo and county unincorporated area east of Mission Viejo. But there does not seem to be a way to find out more information and detail about this connectivity determination. This information should be more easily accessible, if it is to be used for transportation or development planning.
113	California Natural Diversity Database – rare find 5 requires subscription; CNDDDB in BIOS is password protected; QuickView only free tool – too confusing a tool would need to know exact species – took about 10 minutes to figure out how to navigate and information is by quads not jurisdiction	<p>California Natural Diversity Database: supposed to be a computerized library of the status and locations of California’s rare species and natural community types.</p> <ol style="list-style-type: none"> 1) The link listed in the Greenprint database layer is an abstract to an article. 2) Abstract has static, statewide maps which are not helpful for site analysis. 3) Concur with City of Irvine that trying to find access to the free, QuickView Tool was very frustrating and difficult, with no instructions on how to navigate there. Perhaps the Greenprint data layer should list the link directly to the QuickView Tool. https://apps.wildlife.ca.gov/bios/?tool=cnddbQuick

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		4) When accessing the data by county, it would be helpful to have the county names identified on the BIOS map so the user knows directly where to first navigate. 5) The database is in large quads; hard to then determine where within the quad is the area of concern for an endangered species.
114	Wildland carbon – Forest Ecology and Management – journal article from 2015 regarding timeline of 2001-2010; Elsevier; general public, planners won't be able to understand this document	California Air Resources Board site for total carbon density croplands. The link provided, is a January 2015 article from a Forest Ecology and Management article of above ground live carbon stock changes in California. Maps provided within the article are for the entire State, which are not helpful for any smaller geography, site analysis. Is there supposed to be a tool associated with this dataset that can allow a user to access data relevant to a specific, geographic area? Also, is 2015 data outdated?
115	Conservation easements – have to request to download data, not usable	California conservation easements database: Was able to access the NCED Mapping Application, after some searching. Again, it would be helpful if the Greenprint data layer actually list the link for the mapping tool, to avoid a user having to hunt around for it: https://www.conservationeasement.us/interactivemap/ 1) This is a national database, so one needs to use the tool to search by state and then by county. It would be helpful, however, to have a jurisdiction search capability, and for the base map to allow for a layer of the jurisdictional boundaries, to help navigate where the conservation easements are located. 2) While there are no reported easements in the City of Mission Viejo, a review of the mapping information identifies that an easement is located easterly. One can click the marked area and bring up information on the title and acreage and holder of the easement (e.g., Gobernadora Conservation Easement). But there is no additional information on the jurisdiction in which it is located, or a link to information about that easement.

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 March 1, 2022

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		<p>3) But when one goes to the Main Page of this database, and conduct a search of easements by State (California) and filter by county, Orange County does not come up as a county with searchable conservation easements, in the database. Goes from Monterey County to Placer County. Yet the NCED Mapping Application shows at least 20 easements in Orange County. There seems to be a disconnect of the database versus the map.</p>
116	Groundwater ecosystem – wetlands off Barranca Parkway next to Irvine Valley College? Doesn't seem accurate	California Department of Water Resources Groundwater Dependent Ecosystems: A very nicely designed mapping tool. Shows labels for the groundwater basins right on the map, and can click on a vegetation/wetlands separate layer and bring up a separate window that identifies if there are any vegetation in the area and the vegetation species, and also identifies the type of wetlands.
117	Land owned by recreational/conservation groups: CPAD map, who makes edits? Are these made by members of the public and then verified by whom?	<p>California Protected Area Database (CPAD)</p> <ol style="list-style-type: none"> 1) How is this distinct or different than Data Layer 115: California conservation easements database. Is there duplication or inconsistency? 2) Requires ArcGIS; cannot download information. As with the other CPAD datasets in the Greenprint table (Data Layer #82) this California Protected Area Database is a frustrating site. Once you sign up as to why you are accessing information, and try to “get data” through the following link: <p>https://data.cnra.ca.gov/dataset/california-protected-areas-database</p> <p>the site requires you to download the dataset. The data comes through as a massive zip file, which then has more multiple zip files, and then more multiple zip files. Too difficult to even access the data, and it appears one needs to have GIS software to then open and access the data.</p>

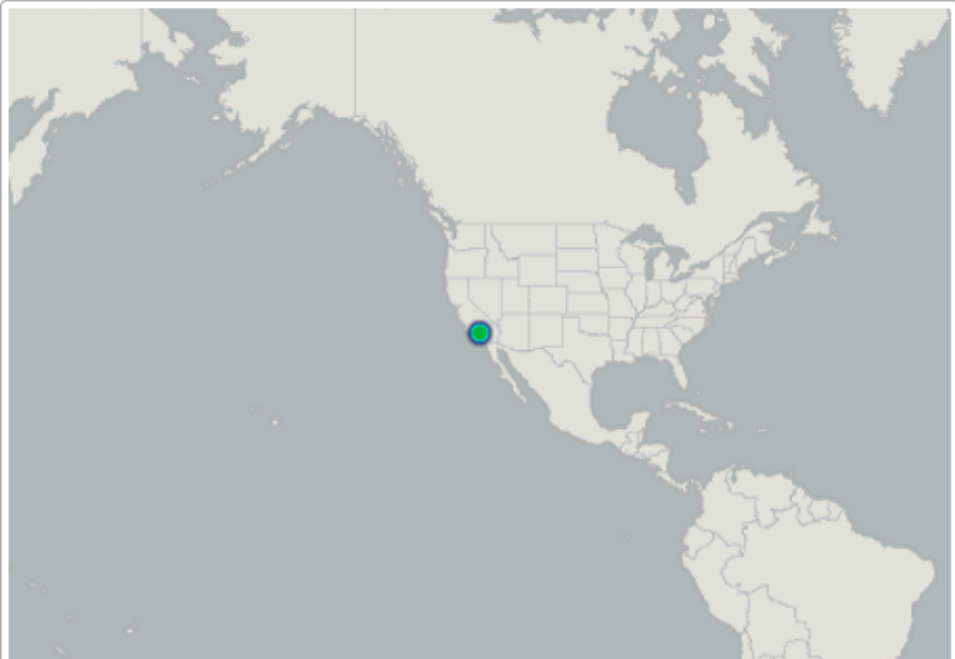
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SCAG SoCal Greenprint Proposed Data Layers for Inclusion: July 2021 Release
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 March 1, 2022

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		<p>3) Just found the ability to view the mapping tool without having to download the data, through MapCollaborator. Please include this link in the Greenprint table to allow a user to get access to the mapping tool (View CPAD on a Map): http://www.mapcollaborator.org/cpad/?base=map&y=37.50973&x=-123.93677&z=6&layers=mapcollab_cpadng_cpad_ownlevel%2Cnotes%2Cpolygons%2Cuploads&opacs=50%2C100%2C25%2C90</p> <p>4) Oddly, for Mission Viejo, the map shows private association land (e.g, property owned by the Lake Mission Viejo Association) but it does not show Lake Mission Viejo as an open space resource. The site offers an ability to update and edit the site, but it appears anyone can make an edit and submit it. Concur with City of Irvine comment about quality control and verification of accuracy/authorization on any edits.</p>
118	Ebird – not documented by verified scientists, member of public; “Wikipedia” of birding is a concern – not linked to science and is a problem for local jurisdictions	Cornell Lab of Ornithology bird data: Need to create an account and password to access data. Declined to do so with this effort.
119	AV RCIS – removed	Antelope Valley RCIS dataset removed by SCAG.
120	Soil carbon – this is an abstract, California soil compared to Tasmania soil	<p>Soil Carbon Storage: Abstract of a 2017 scientific article “SoilGrids250m: Global gridded soil information based on machine learning” and article is based on a worldwide profile. Buried within the article is a link (on Figure 3) that accesses the data points:</p> <p>https://doi.org/10.1371/journal.pone.0169748.g003. This map shows all the data points , BUT, when one tries to access the data points link: http://wfs.isric.org/geoserver/wosis/wfs, there is a message that states that this link is no longer available.</p>

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 Review Comments from the City of Irvine and the City of Mission Viejo
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121	Herp Mapper – citizen scientist, same comment as 118 ebirdr	<p>HerpMapper occurrence data for amphibians and reptiles, collected by citizen science observations. The database is worldwide; allows for a state and county level, but nothing at a smaller geography than county. Data is then by a particular species of amphibian or reptile. There does not seem to be a mapping function that lists all amphibians and reptiles of concern at a specific geography. Also, this is a listing of reported sightings. What is the significance of a reported sighting when it comes to resource conservation? Database does not sort by endangered or other classifications. Also, when you click on a particular species, the map is a very global view and cannot be zoomed in to get a more precise location (see example below):</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p>California Kingsnake (<i>Lampropeltis getula californiae</i>) - HM 364573</p> </div> <div style="border: 1px solid #ccc; margin: 10px 0;">  </div>

SCAG SoCal Greenprint Proposed Data Layers for Inclusion: July 2021 Release
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March 1, 2022

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122	iNaturalist – citizen scientist, same comment as 118 ebirdr	Species observation. Need to create an account and password to access data. Declined to do so with this effort.
123	Hotspots of species requiring mitigation – pending transit projects: Bay Area RAMP didn’t load – owner is The Nature Conservancy – created and modified in 16 July 2021 Bay Area Conservation Mitigation	<p>UC Davis study of suitable habitat in a 25-hectare region for species that may be impacted by proposed transportation projects in the next two decades. The dataset is managed by The Nature Conservancy, and the file that is available for access:</p> <p>Bay Area_RAMP_final_17Mar2016.pdf, applies to the Bay Area, not the SCAG region, and is a pdf of the Bay Area Conservation Mitigation Assessment. This has nothing to do with the SCAG region and any habitat areas to be impacted by SCAG-region transportation projects.</p>
124	South Coast Missing Linkages – okay, SC wetlands – non-profit	South Coast Missing Linkages: plan for a regional network that would maintain/restore habitat linkages between existing reserves. Collaborative effort among national, state, and regional agencies and universities and foundations. The site comprises a series of individual reports on different categories, and the report contains static maps that cannot be zoomed in to understand the location of the linkages. Not very useful or helpful at a precise site location or geography. Also, the release date of the California missing linkages is 2001. Data over 20 years old; still representative of current 2022 conditions?
125	Resilient Connected Network – The Nature Conservancy – Amargosa Region of the Mojave Desert only project in SCAG region, 2 nd link is to article on TNC website titled “Natural Highways and Neighborhoods: Conserving a Network of Climate – Resilient Lands”; 3 rd link has no legend for the maps	Nature Conservancy site that combines information to illustrate “resilience.” This seems to be a national database based on collected data by The Nature Conservancy and partners. On the first link, only one site is shown for Southern California, the Mojave Desert Amargosa region. But when you click on the spot, it just brings up a narrative description of the area with no detailed listing of the species. It then goes on to describe that “The Nature Conservancy has developed a blueprint to guide conservation activities for the entire Amargosa system.” This appears to be an advocacy effort to identify areas throughout the United States worthy of conservation management, but does it reflect a policy position that is endorsed by state and federal agencies?

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 March 1, 2022

Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo										
126	Mojave Desert Ecoregional Assessment – The Nature Conservancy is the source, abstract/article	This is another link to an article abstract, with this abstract on “Impact of solar and wind development on conservation values in the Mojave Desert.” It is based on a 2010 The Nature Conservancy study of a “Mojave Desert Ecological Assessment,” and the impacts of solar energy and large wind farms on the Mojave and Sonoran deserts. Affected counties should review the data to see if The Nature Conservancy information is consistent in approach and data with other studies, and also whether a 2010 study date is still relevant.										
127	West Mojave Lease Conflict Assessment: The Nature Conservancy is the source – journal article “Solar Energy Development in the Western Mojave Desert Identifying Areas of Least Environmental Conflict for Siting and a Framework for Compensatory Mitigation of Impacts.”	A 2012 report prepared by The Nature Conservancy on solar energy development in Western Mojave Desert and identifying a framework for compensatory mitigation. As noted in Data Layer #126 above, Affected counties should review the data to see if The Nature Conservancy information is consistent in approach and data with other studies, and also whether a 2012 study date is still relevant.										
128	Coastal Conservation Strategy: opinion article “Study ‘California’s Coast Highly Vulnerable to Sea Level Rise But Coastal Habitats Could Still Make It, If We Act.’”	Another The Nature Conservancy report, this time focusing on California sea level rise. This one has a split screen mapping function (2017 data) that takes a very long time to transfer. After five minutes of waiting for the Southern California map, gave up trying to look at the mapping capabilities and whether there is a legend to understand the depicted colors. Split screens are for different sections of the California coast. Larger question is how does The Nature Conservancy’s information and classifications of sea level rise, compare or contract with state agency data?										
129	Connectivity – The Nature Conservancy – Omniscape Explorer – no idea what this is for, no idea how to use this tool to access the data the description says it does. “where are animals moving from and to? How will they respond to various levels of human disturbances? How far are they likely to go?”	<p>Another The Nature Conservancy report, this time focusing on mapping ecological connectivity in California. Can query an address or place. Did a query for the geography of the City of Mission Viejo. A satellite aerial comes up, and a layer menu comes up with the following options:</p> <table border="0"> <tr> <td>Transportation</td> <td>Flow Potential</td> </tr> <tr> <td>Land Status: CPAD or CCED</td> <td>Human Modification</td> </tr> <tr> <td>Resilient and Connected Network</td> <td>Current Flow</td> </tr> <tr> <td>Climate Connectivity</td> <td>Present Day Connectivity</td> </tr> <tr> <td>Connectivity and Linkages</td> <td></td> </tr> </table>	Transportation	Flow Potential	Land Status: CPAD or CCED	Human Modification	Resilient and Connected Network	Current Flow	Climate Connectivity	Present Day Connectivity	Connectivity and Linkages	
Transportation	Flow Potential											
Land Status: CPAD or CCED	Human Modification											
Resilient and Connected Network	Current Flow											
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Connectivity and Linkages												

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

SCAG SoCal Greenprint Proposed Data Layers for Inclusion: July 2021 Release
 Review Comments from the City of Irvine and the City of Mission Viejo
 March 1, 2022

Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
		<p>However, there is no description of what this map is all about, nor any explanation for each of the layer options listed below. Also, when areas within a layer are mapped, there is no additional descriptors provided that allows you to understand the geographic areas that are being mapped:</p>
130	<p>Urban tree carbon – abstract from April 2015, UC Davis report for entire state of California, north LA Basin, Napa, Sacramento</p>	<p>UC Davis Study on the amount of carbon stored in street trees in urban areas. Link is to an abstract of a 2015 study, to highlight communities most vulnerable and most likely to benefit from tree plantings and maintenance. Figure 1-1, page 12 is a very poor map provided. If there is a mapping function associated with this report, the Greenprint Data Layer table should reference any mapping function, to see if the information is usable and pertinent. Otherwise, if one wants to know the scientific data that confirms that planting trees is good for carbon storage, this background article would satisfy that information need.</p>
131	<p>National Wetlands Inventory – national database, project mapper doesn't have any details just meta data</p>	<p>U.S Fish and Wildlife inventory on wetlands, with a Wetlands Mapper tool. Can conduct a search (e.g., City of Mission Viejo) and map identifies wetlands and riparian in the selected geography. Can click the area and it brings up a general description of the resource (e.g., 8.65 acre Freshwater Forested/Shrub Wetland) and the classification. Classification also works on a click function and does not transfer the user to a separate website. Also identifies year of the imagery. Also provides different options for the underlying base map.</p>
132	<p>Wells and change in groundwater level – okay, what info does this provide related to protecting open space though?</p>	<p>California Department of Water Resources dataset on groundwater level change. Data available through ARCGIS Online Map Viewer. Need to change to a grey base map so that one of the color codes for groundwater level change (green) does not conflict with open space/parklands (also green). No sites in Mission Viejo, but how would the information on this site be used? Or perhaps this is due to the fact that the sites in Orange County refer to wells.</p>

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Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
133	Hydrogeologically vulnerable areas – not user friendly for planners – need experience	California State Water Board: recharge capability of aquifers. The link accesses a report: Hydrogeologically Vulnerable Areas Map, with a static bitmap on page 2 of the state and a table of the hydrologic study area. Did not see any separate mapping tool to be able to more closely identify the location of the hydrologically vulnerable areas in relation to a specific geographic area. The provided map is only a gross-level perspective with poor resolution as one zooms in.
134	Points of diversion – zip file for data FGDB format	California Water Resources Control Board Points of Diversion map (where water is drawn from a surface water source). The link is the overall intro page for “Featured Maps and Apps.” The link should be specific to the Greenprint datalayer (e.g, points of data map) so the user doesn’t have to go through all the maps and apps and figure out which one to use. I could not open the database with its fGBD file format, which is a proprietary Esri database format for complex uses of GIS datasets in Esri software.
135	Overdraft groundwater basin – map okay, but what is relevance – is groundwater basin/sub basin okay?	California Department of Water Resources: database of groundwater basins and subbasins in conditions of critical overdraft. There is an SGMA Data Viewer mapping tool (again, the link to the tool should be included in the Greenprint table): https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#currentconditions I could not find a legend of the colors to understand the significance of the data illustrated (e.g., SB-200 Aquifer Risk Map).
136	Priority groundwater basin – not sure what the SGMA Basin prioritization dashboard is showing	California Department of Water Resources: SGMA Basin Prioritization Dashboard shows that the Coastal Plain of Orange County is in a Medium classification for Statewide basin priority. Have to scroll way down the pop-up window to get at information such as subsidence (little potential for irreversible subsidence for the Orange County Coastal Plain). But the overall objective of this dataset is unclear. What does the basin priority designation relate to, for Greenprint planning purposes? Is this to identify that certain areas that are designated as critically overdrafted, should not be developed (Oxnard, Pleasant Valley, Borrego Springs basins)?

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 March 1, 2022

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137	Adjusted groundwater basin – project completed, website notes no further basin prioritization projects planned at this time	California Department of Water Resources: Basin Prioritization. This seems to be the explanatory information to Dataset #136 above. Should be grouped together (#136 and #137), with this link preceding the link for Dataset #136, from a functional user perspective. Question in Dataset Layer #136 still remains.
138	Watershed report from 2013 – for screening level assessment of watershed protection priorities	California Integrated Assessment of Watershed Health: US EPA: November 2013 report. All the maps in this report are static maps that provide no jurisdictional boundaries to give the user any navigation assistance of the area they are looking into. Is there a mapping tool associated with this report? Otherwise, there is no functionality to this dataset other than giving an overview of statewide watershed planning. The description in the Greenprint table says that the data includes “information about stream conductivity, stream nitrate concentration and stream turbidity.” Maybe for the eight broad biogeographic regions in the State, but not at a small geography. Doubt many users will go through the 118-page report.
139	Same as #138	California Integrated Assessment of Watershed Health: US EPA: November 2013 report. This link is the same exact report as #138 above. See limitations on data usage in #138 comment above.
140	Hydrography dataset – surface water for US	Another The Nature Conservancy report abstract (September 2021) on “Planting Stormwater Solutions: A methodology for siting nature-based solutions for pollution capture, habitat enhancement, and multiple health benefits.” Presents vegetated nature-based solutions for stormwater management and development of an index system based on a variety of socioeconomic and public health factors in addition to other indicators. Figure 2 identifies areas designated by the LARIAC data set as Bare Soil and Other Paved, as “convertible lands for the development of new vegetated NBS. This map shows the opportunity to add or expand habitat across the study area.” Would need to explore each of the indicators used, for any comfort level with the overall designations that are being identified and recommended.
141	Pollutant loading – urban forestry and urban greening – abstract on planting stormwater solutions	This link brings up the same abstract report as Dataset #140 above. See comments in Dataset #140.

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March 1, 2022

Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
142	Municipal drinking water supply – Nature Conservancy document from October 2012	Another The Nature Conservancy report abstract (October 2012) on “Where Does California’s Water Come From.” Background information, but with a 2012 issue date, this report is 20 years old.
143	Flow modification – predicted streamflow modification for NHD – for US (1998-2015)	U.S. Geological Survey (2019) model of the probability of streamflow modification for every stream segment In the coterminous United States from 1980 to 2015). Can open a map viewer, but there is no legend or user interface to explain what is being illustrated on the map:
144	303d listed waterways – downloadable datasets – need GIS experience to extract shape files	U.S. EPA list of impaired and threatened waters (303(d) list. Database is all GIS downloads. There does not seem to be an open publically accessible database or mapping tool for those who do not have GIS applications from which to open and use the files.
145	Same as 144 – duplicate	U.S. EPA list of impaired streams. The link provided is the same as Dataset #144 above. Again, as in Dataset #144 above, there does not seem to be an open publically accessible database or mapping tool for those who do not have GIS applications from which to open and use the files.
146	Watersheds HUC10 – bad request, invalid item ID	U.S. Geological Survey link: Watersheds. There is a publically available map to access (separate from downloading GIS shape files), but the map is very limited. Can zoom in to see the watershed boundaries, but there is no other interface on the mapping tool to identify the name of the watershed.
147	Groundwater recharge – USGS California Water Science Center – California basin characteristic model – a dataset of historical and future hydrologic response to climate change 2017 latest data	USGS model that calculates water balance by using climate inputs, precipitation, minimum and maximum air temperature. Provides access to downloads for 30-year mean values and monthly data. Need to have an access form to access data, and data comes in ASCII or binary form.
148	Surface water quality monitoring sites – USGS – entire US – need understanding of hydrology	U.S. Geological Survey link: Water Storage Data. Accesses a National Water Information System Mapper. From a data retrieval perspective, the site allows a user to search by small geography (street address, city, state, watershed region). Illustrates surface water sites, groundwater sites, springs, atmospheric sites, and provides historical data on daily discharge, peak streamflow, etc. From a Greenprint or RAMP perspective, would the information value be that the site provides the location of surface water sites in the region?

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149	Groundwater quality monitoring sites – same as above	This is the same link as Dataset 148 above. See comment in Dataset 148.
150	Runoff – same as #147	Duplicative of Dataset 147. See comment in Dataset 147 above.
151	Areas of Conservation Emphasis (ACE) – terrestrial connectivity: difficult tool to use without training	<p>California Department of Fish and Game: Terrestrial Connectivity: Presence of mapped corridors or linkages and its juxtaposition to large, continuous natural areas.</p> <p>This is the same link as Dataset 112. See comment below from Dataset 112 review: California Department of Fish and Game species diversity measures Areas of Conservation Emphasis (ACE): 2018 dataset.</p> <ol style="list-style-type: none"> 1) Geolocation References layers do provide ability to have an overlay of city and county boundaries (BIOS). Previously thought the city boundaries were not available in related, prior BIOS-based datasets listed herein, but was looking under the “Political Boundaries” layer, not the “Geolocation” layer. 2) Took a while to figure out that one cannot just click an area to find more detailed data. Need to use the “Point Info” tool. But that information just provides latitude and longitude information, as well as confirmation of city. Where in this tool does one access the species diversity information? That is the critical information to access. As an example, the “Connectivity” layer identifies that there is “irreplaceable and essential” connectivity corridors between the City of Mission Viejo and county unincorporated area east of Mission Viejo. But there does not seem to be a way to find out more information and detail about this connectivity determination. This information should be more easily accessible, if it is to be used for transportation or development planning.
152	Same as comment 151	Same link as Dataset 112 and 151. See comment from review of Dataset 112 and 151.
153	Same as comment 151	Same link as Dataset 112, 151 and 152. See comment from review of Dataset 112 and 151.

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154	Coachella Valley – multiple species habitat conservation plan – no comment	Link to the Coachella Valley Multiple Species Habitat Conservation Plan.
155	Desert Renewable Energy Conservation Plan – BLM document navigator – all of US – metadata, need GIS experience	<p>Link to the Desert Renewable Energy Conservation Plan covering the desert regions of Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino and San Diego.</p> <p>After going into the site, found a Desert Renewable Energy Conservation Plan Gateway that provides the mapping platform for the plan: https://eplanning.blm.gov/eplanning-ui/project/66459/580</p> <p>This should be included and referenced in the Greenprint Data Layer Information column, to allow users to know that there is a mapping component to the plan documents.</p>
156	Los Angeles County Significant Ecological – no comment	<p>Link to Los Angeles County Significant Ecological Areas Program approved by the County Board of Supervisors in May 2019. Includes a pdf of the SEA Policy Map and a GIS web application, which can be accessed at: https://planning.lacounty.gov/site/sea/maps/</p> <p>The mapping link above should be listed in the Greenprint Data Layer Information column, to allow users to know that there is a mapping component to the plan documents that includes the SEA layer within the GIS-Net portal of unincorporated Los Angeles County.</p>
157	Lower Colorado River Multi Species Conservation Program – not really clear how to navigate to get data identified in description – interesting website, but unsure of purpose	<p>Bureau of Reclamation Lower Colorado River Multi-Species Conservation Program: It would be helpful for someone to go into the Conservation Areas link: https://www.lcrmscp.gov/cons_areas.html and identify which of the 13 listed Conservation Areas are located in the SCAG region, to provide some guidance in determining if this site is applicable to any specific county in a SCAG region.</p>

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Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
158	Conservation Assessment of Orange County – conservation biology institute – abstract written by Patricia Gordon-Reedy from Dec 2009	OCTA document identifying Priority Conservation Areas, based on biological criteria. The Link accesses an abstract and full report prepared by the Conservation Biology Institute for the Orange County Transportation Authority. Report date is December 2009. Defer to OCTA staff on whether the 2009 assessment is valid and current in 2022.
159	OC Conservation Plan – natural communities coalition – no comment	County of Orange Environmental Management Agency Natural Community Conservation Plan for the Central and Coastal Subregion of Orange County. Revised in 2019, and the link Includes a map section of the document: https://occonservation.org/wp-content/uploads/2015/04/NCCP-EIR-Map-Section.pdf However, the link to the maps accesses a scanned, static document, which makes it difficult to conduct a specific site location assessment.
160	Santa Ana River Wash Habitat Conservation District – no comment	Link to a San Bernardino Valley Water Conservation District: Upper Santa Ana River Wash Habitat Conservation Plan: May 2020.
161	USFWS – threatened and endangered species – no comment	<p>U.S. Fish and Wildlife Service data for active proposed and final critical habitats and threatened and endangered species. The website does qualify that not all of the spatial critical habitat data designated by the Fish & Wildlife Service is available through the portal; so how would a user know if something is missing?</p> <p>An online mapper portal is provided that should be listed in the Greenprint table:</p> <p>https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77</p> <p>Can conduct search by place (e.g., City of Mission Viejo) and view the locations of critical habitats; can click the area and it brings up a separate window that identifies the critical habitat (e.g., Coastal California gnatcatcher) and can also download specific GIS shapefiles of the areas.</p> <p>Note: the underlying basemap feature does not seem to be working on the online mapper.</p>

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Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
162	Western Riverside Habitat – no comment, not OC related	Riverside County Environmental Programs: Western Riverside County Multiple Species Habitat Conservation Plan.
163	Integrated Regional Conservation – tested OC – no ecoregion with Regional Conservation Assessment (RCA) – there will need to be training to understand how the tool works	<p>California Strategic Growth Council and California Biodiversity Council: Integrated Regional Conservation and Development Initiative on line tool.</p> <ol style="list-style-type: none"> 1) There is one ecosystem located in the SCAG region, and is in the Palmdale, Victorville, Lancaster, Joshua Tree area. 2) Can also conduct a search by county and view layers of data. 3) Question accuracy of General Plan land use layer within this mapping tool. When clicking the City of Mission Viejo General Plan data, the site refers to the data being provided by the California Resources Agency/University of California Davis: https://databasin.org/datasets/8d5da7200f4c4c2e927dafb8931fe75d/ 4) with a content date of “various, 09/01/2009.” There is also a disclaimer on the accuracy of data or maps, and the site shows a last modification of 1/02/2018. How often is the underlying data in this mapping portal, updated?
164	USFS Ecosystem Services – to get latest info on this project need to contact – not really clear what this provides	<p>U.S. Forest Service: Western Wildland Environmental Threat Assessment Center portal.</p> <ol style="list-style-type: none"> 1) The site references several “threat and resource mapping” applications on different topical areas such as vegetation changes, gypsy moth, beetle bark tree mortality. However, when looking at the beetle bark tree mortality map for California, the risk level mapping is very bit-mapped when zoomed, and there are no county boundaries to assist in understanding the data locations. https://www.fs.fed.us/wwetac/threat-map/threatmapper.php

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Greenprint Data Layer	Comment – City of Irvine	Comment – City of Mission Viejo
165	Urban heat island, air temp: assessing the role of urban trees in California – April 2015 tree canopy	U.C. Davis Urban Heat Island link accesses an abstract and download of a 2015 article “Biomass, Carbon Sequestration, and Avoided Emissions: Assessing the Role of Urban Trees in California.” This seems to be the exact same article that is referenced in Data Layer 130. Duplicative? Also see comments on Data Layer 130.
166	Tree equity score – no comment – but not quite sure where the data is derived from	American Forests Tree Equity Score: See City of Mission Viejo Greenprint comment letter dated 8/13/2021 (See Attachment 1-A).



City of Mission Viejo

Community Development Department

Trish Kelley
Mayor

Wendy Bucknum
Mayor Pro Tem

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Council Member

Greg Raths
Council Member

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Electronic Transmittal:
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August 13, 2021

Ms. Sarah Jepson
Planning Director
Southern California Association of Governments
900 Wilshire Blvd., Suite 1700
Los Angeles, California 90017

Subject: City of Mission Viejo Comments: SoCal Greenprint

The City of Mission Viejo appreciates the opportunity to review and provide initial comments on the proposed data layers for SCAG’s SoCal Greenprint project, and our key comments are enclosed. We sincerely hope that SCAG’s exploration and SCAG’s responses to the provided questions and comments, will help the targeted stakeholders – including local jurisdictions and the building community – better understand the proposed scope and application of SoCal Greenprint.

We also appreciate the assistance that SCAG staffmembers Kimberly Clark and India Brookover have provided to us on requested background information on SoCal Greenprint.

Should you have any questions on the City’s comments, please do not hesitate to contact our consultant, Gail Shiomoto-Lohr.

Respectfully,

Elaine Lister,
Director of Community Development
City of Mission Viejo

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Attachment: City of Mission Viejo Comments: SoCal Greenprint

cc: Mayor Pro Tem Wendy Bucknum, SCAG Regional Council District 13 Representative
Mayor Trish Kelley, SCAG Transportation Committee Representative
Councilmember Greg Raths, SCAG Energy & Environment Committee Representative
Dennis Wilberg, City Manager
Mark Chagnon, Public Works Director
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Attachment
City of Mission Viejo Comments: SCAG SoCal Project Greenprint

Technical Accuracy of Data Layer; Appropriateness of Including Additional Non-Resource Data Points in Any Proposed Data Layer

Question/Comment:

Does SoCal Greenprint consist of published data alone, or does it also apply published data to suggest a best management practice or mitigation action? If a SoCal Greenprint data layer proposes recommendations that result from the application of a published data layer, it is critical that the origin data be vetted for accuracy, to avoid incorrect or misrepresented conclusions. Further, the City of Mission Viejo questions the appropriateness of including non-resource data points in any proposed data layer. These topics are illustrated in the discussion of the proposed Tree Equity Score Data Layer (Data Layer #166), as outlined below:

Tree Equity Score Data Layer: #166 and Application to the City of Mission Viejo:

SoCal Greenprint includes Data Layer #166: Tree Equity Score, developed by American Forests (see Exhibit A). The SCAG data layer description says “The Tree Equity Score tool *calculates* a score for all 150,000 neighborhoods and 486 municipalities in urban America. Each score indicates whether there are enough trees for everyone to experience the health, economic and climate benefits that trees provide. The scores are based on how much tree canopy and surface temperature align with *income, employment, race, age and health factors.*” [emphasis added].

The website for the Tree Equity Score explains its use of a 0 to 100 point system to identify how a community fares on the number of trees in the geographic census block group area, with a score of 100 representing tree equity. The first release of scores was conducted in June 2021, and includes cities and towns that have at least 50,000 people.

The City of Mission Viejo is included in the Tree Equity database. There is not a citywide tree score. The City’s Tree Equity Score is based on a specific census block designation. The City’s tree score ranges from a high of 94 for Census Tract 320.27 that also includes the City of Lake Forest, to a low of 36 for Census Block Group 320.223 that includes Saddleback Community College and the Arroyo Trabuco Golf Club. As illustrated in Exhibit B – a print out of the Tree Equity tool – for Census Block Group 320.223, the surface temperature is identified to be 100 degrees, with a current canopy cover of 14% and a recommended canopy cover goal of 48%. In addition, other indicators besides surface temperature have been factored into the development of the tree equity score. These additional indicators include Unemployment, a Health Index, a People in Poverty percentage, a Seniors (65+) percentage, a Children (0-17) percentage, and a People of Color percentage, as illustrated in Exhibit B.

City of Mission Viejo Comments:

- 1) Socioeconomic Data Points Used in Developing the Tree Equity Score: One of the stated objectives of SoCal Greenprint is to map and identify natural resources from already published data. Such a tool allows stakeholders, such as local jurisdictions and project applicants, to understand and achieve an early identification of the location of natural resources in the project study area, and from this inventory, to better plan a project with such natural resources in mind.

The City of Mission Viejo expresses several concerns with the SoCal Greenprint Tree Equity Score data layer, as detailed below:

- a) In developing a Tree Equity Score for a census area, the data layer goes beyond just the identification of natural resources data (i.e., how much tree canopy cover is in the area and what is the reported surface temperature of that area), to also include additional, non-resource data points such as Unemployment, a Health Index, a People in Poverty percentage, a Seniors (65+) percentage, a Children (0-17) percentage, and a People of Color percentage. This tool appears to reach beyond the factual presentation of resource data, to include an application of non-resource related, socioeconomic data points that are weighted and used in the calculation of a community's Tree Equity Score. The City of Mission Viejo expresses concern that this approach seems to delve into a grey, policy area where there has not been any evaluation or acceptance of the approach that uses socioeconomic data points such as unemployment or age cohort data, to not only calculate a community's tree score, but also suggest a proposed percentage of how much more the tree canopy should be increased. The City would suggest that there needs to be a robust vetting and determination to accept any approach that uses more than just natural resource data to compile a community index, in SoCal Greenprint.
- b) Regarding the socioeconomic data points used in the Tree Equity Score Tool, the City of Mission Viejo consulted with the Center for Demographic Research at CSU Fullerton on the non-resource, socioeconomic score indicators that were used. The data points of Unemployment, a People in Poverty percentage, a Seniors (65+) percentage, a Children (0-17) percentage, and a People of Color percentage, largely mirror data points in the U.S. Census American Community Survey (ACS) data. However, in further examining some of the ACS data points, two issues surface:
 - (1) Frequency of Data Layer Updates: The socioeconomic data points in the Tree Equity Score Tool seem to be derived from the 2014 – 2018 ACS, but there is also a more recent and published 2015 – 2019 ACS dataset. Aside from the larger issue of whether non-resource, socioeconomic data should be used in the calculation of a community's tree score, there is the technical question of why the more current 2015 – 2019 ACS dataset is not used, especially when this tool was released in June 2021. How often should we expect any of the data layers to be updated in SoCal Greenprint?

- (2) Accuracy of data points: One of the data points used in the Tree Equity Score Tool, is the percentage of People In Poverty. In looking at the two census block groups in Mission Viejo that have the lowest tree equity scores, there seems to be a disconnect with the percentages reported in the Tree Equity Tool versus what is reported in the ACS. For example, as illustrated in Exhibit B, the Tree Equity Score Tool identifies that Census Block Group 320.223 is reported to have 32% of said census group's population in poverty. However, the 2014 – 2018 ACS data, which is the year of ACS data used for the other socioeconomic data points, identifies that 15% of the population is reported to be in poverty, versus 32%. The current 2015 – 2019 ACS data reports that 17% of the population is reported to be in poverty. Is the Tree Equity Score data point on poverty accurate, or does it use other considerations besides the ACS poverty data information to arrive at the percentage of population in poverty?
- c) Reported Surface Temperatures: Surface temperature represents the heat energy given off by land, buildings and other surfaces. According to the Tree Equity Score Tool methodology, the reported surface temperature is based on USGS Earth Explorer Landsat 8 imagery and thermal bands. However, CalEPA has also been assessing Urban Heat Island Impacts, as a result of AB 296 adopted in 2012. CalEPA's efforts is summarized at:

<https://calepa.ca.gov/climate/urban-heat-island-index-for-california/understanding-the-urban-heat-island-index/>

Of particular interest is the identification that CalEPA is defining and examining the characteristics of the urban heat island for each census tract in and around most urban areas in the State of California. The City of Mission Viejo suggests that the CalEPA effort be examined by SCAG staff, to better understand the status of this effort and if there has been any public outreach on this effort, especially if any of the CalEPA data is planned to be incorporated or applied to other statewide efforts. It would be helpful to know if the CalEPA effort is comparable or compatible with the approach used in the national Tree Equity Tool, especially since CalEPA also identifies that its urban heat index could be used for prioritizing urban greening.

Compatibility of SoCal Greenprint Data Layers with Local General Plan and Project CEQA Analyses

Question/Comment:

How is the information in SoCal Greenprint, envisioned to be used or not used, for project mitigation assessment and mitigation? How do the SoCal Greenprint data layers align with data used by local jurisdictions in their environmental assessments? Are there definitive, recognized data sources for certain subject areas, such as Noise?

City of Mission Viejo Comments:

SoCal Greenprint proposes to include data on noise levels for Aviation, Passenger Rail, and Road Noise, using 2018 Noise data from the U.S. Bureau of Transportation Statistics (BTS). This is identified in Proposed Data Layer #13: 2018 Noise Data (See Exhibit C).

From a project analysis perspective, conducting a Noise assessment and mitigating Noise impacts is a requirement of both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). From a General Plan perspective, noise analyses and assessment are conducted to develop a jurisdiction's required General Plan Noise Element, to ensure that the noise contours are used as a guide to establish a pattern of land uses in the Land Use Element to minimize exposure to excessive noise.

The City of Mission Viejo did not know if the use of the U.S. Bureau of Transportation Statistics (BTS) is the definitive data source to measure noise data, and sought the counsel of environmental consultants for their input on this issue. There was consensus that there is no one, individual data source for noise. Further, there was recognition that the BTS data source may have been used because of the large scale of the SCAG region, and the difficulty to consolidate the individual noise contour maps from local jurisdiction General Plans into one map. However, one key concern that was raised, is the level of detail in the BTS source data, and whether it is too generalized to be useful for the SCAG region.

One of the environmental consultants contacted the BTS to better understand what populates the BTS map and the detail level of the data. The U.S. Department of Transportation responded to this inquiry with the following caveat:

"Please note that the National Transportation Noise Map and associated data were developed for national level analysis and includes simplified noise modeling. It is intended for the tracking of trends and should not be used to evaluate noise levels in individual locations and/or at specific times. There are potential differences in the data sources and the complexity of the models used for noise modeling depending on type of analysis. The term "potential to be exposed" is used because there are several conservative assumptions that go into the analysis. If any one of those assumptions were to change, the noise exposure numbers could also change. For example, the documentation states "Shielding is not considered (i.e. attenuation due to barriers and terrain are not considered)"; for areas that have shielding, the noise levels may be overestimated. The average implies that sound levels could be both higher and lower, depending upon time of day, season of the year, etc. Additionally, sounds from transportation sources other than aviation and road (e.g. rail and maritime) as well as non-transportation sources are not considered. Sounds from things such as construction sites, rock quarries, power plants, etc., could dampen some of the transportation noise."

The consultant further noted that there could be conflict or inconsistency between local noise assessment data and the BTS noise data. It is recommended that one area that should be further examined, is the BTS's use of a 24-hour L_{eq} noise measurement. The consultant noted that L_{eq} data might not provide any nighttime noise weighting that is used for the L_{dn} measurement in California or the evening weighting for the CNEL metric, which would be important for land use siting decisions in the SCAG region.

The City of Mission Viejo respectfully requests that the use of the 2018 Noise data from the U.S. Bureau of Transportation Statistics be further examined with the input provided by the U.S. Department of Transportation and local environmental consultants consulted.

Related to SoCal Greenprint, the larger key issue is to clearly understand and explain how any data in SoCal Greenprint is to be used for local planning efforts, including environmental assessment and mitigation, and to address the potential that data in SoCal Greenprint may conflict with local planning data, adopted policies and adopted plans.



#	Theme	Data Name	Source	Description	Additional Information
166	Environmental Justice, Equity, and Inclusion	Tree Equity Score	American Forests	The Tree Equity Score tool calculates a score for all 150,000 neighborhoods and 486 municipalities in urban America. Each score indicates whether there are enough trees for everyone to experience the health, economic and climate benefits that trees provide. The scores are based on how much tree canopy and surface temperature align with income, employment, race, age and health factors.	https://www.americanforests.org/our-work/tree-equity-score/



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CA Congressional District 49

Census Block Group 60590320223

36

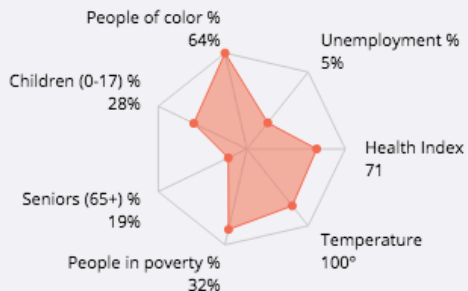
Tree Equity Score

RANK

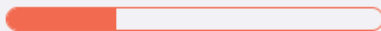
58th of 58 blockgroups in Mission Viejo

Score indicators

Priority index



Canopy cover goal: 48%



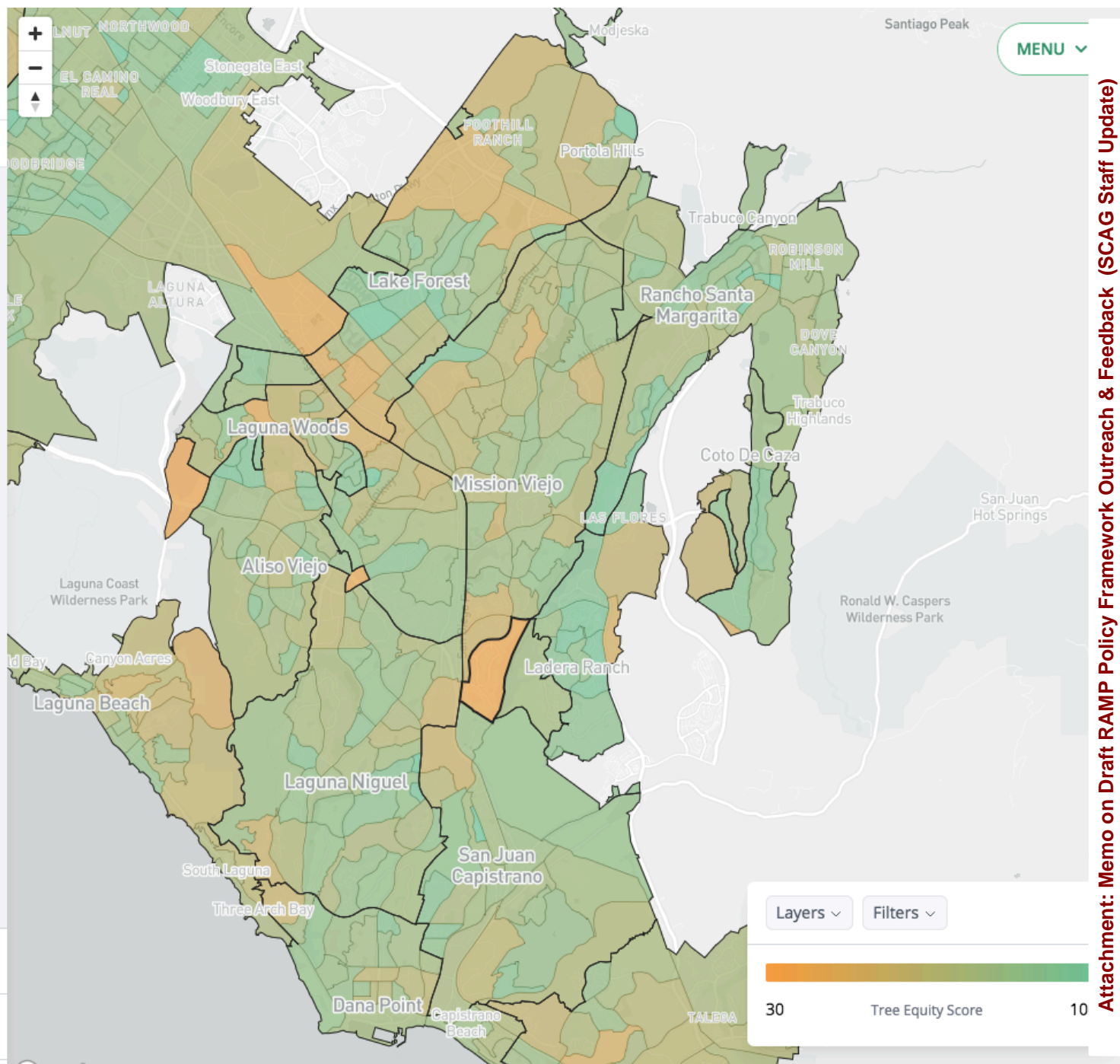
Current canopy cover: 14%

CA Congressional District 49

District report →

California

State report →



MENU

Layers Filters



Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
11	Built Environment	Light pollution	1) Falchi, Fabio; Cinzano, Pierantonio; Duriscoe, Dan; Kyba, Christopher C. M.; Elvidge, Christopher D.; Baugh, Kimberly; Portnov, Boris; Rybnikova, Nataliya A.; Furgoni, Riccardo (2016): Supplement to: The New World Atlas of Artificial Night Sky Brightness. GFZ Data Services. http://doi.org/10.5880/GFZ.14.2016.001 2) Falchi F, Cinzano P, Duriscoe D, Kyba CC, Elvidge CD, Baugh K, Portnov BA, Rybnikova NA, Furgoni R. The new world atlas of artificial night sky brightness. Science Advances. 2016 Jun 1;2(6):e1600377.	www.lightpollutionmap.info is a mapping application that displays light pollution related content over Microsoft Bing base layers (road and hybrid Bing maps). The primary use was to show VIIRS/DMSP data in a friendly manner, but over the many years it received also some other interesting light pollution related content like SQM/SQC measurements, World Atlas 2015 zenith brightness, almost realtime clouds , aurora prediction and IAU observatories features.	https://www.lightpollutionmap.info/
12	Built Environment	Desert Renewable Energy Conservation Plan (DRECP) Development Focus Areas & Variance Lands	Bureau of Land Management	Zones where renewable energy development is permitted.	https://www.blm.gov/programs/planning-and-nepa/plans-in-development/california/desert-renewable-energy-conservation-plan#:~:text=The%20Desert%20Renewable%20Energy%20Conservation,San%20Bernardino%2C%20and%20San%20Diego;https://navigator.blm.gov/data?keyword=DRECP
* 13	Built Environment	2018 Noise Data	Bureau of Transportation Statistics	Data within the National Transportation Noise Map represent potential noise levels across the nation for an average annual day for the specified year. This dataset is developed using a 24-hr equivalent A-weighted sound level (denoted by LAeq) noise metric. The results represent the approximate average noise energy due to transportation noise sources over a 24-hour period at the receptor locations where noise is computed. Layers include Aviation, Passenger Rail (prototype), and Road Noise for the Lower 48 States as well as Alaska and Hawaii.	https://data-usdot.opendata.arcgis.com/datasets/2018-noise-data
14	Built Environment	Local Area Transportation (vehicle miles traveled)	Bureau of Transportation Statistics	Average weekday household Vehicle Miles Traveled (VMT) is the estimated miles traveled by a household. The estimate is derived using data from the National Household Transportation Survey and the American Community Survey. Data is available at the census tract level.	https://www.bts.gov/latch/latch-data
15	Built Environment	Sewer network - LA county	LA County	Los Angeles Public Works Sanitary Sewer System includes sewer lines, manholes, pump stations, treatment plants and SMD Operations grid.	https://egis-lacounty.hub.arcgis.com/datasets/lacpw-sanitary-sewer-network

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
1	Agriculture and Working Lands	Farmland Mapping and Monitoring Program	CA Department of Conservation	The Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. The maps are updated every two years with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance.	https://www.conservation.ca.gov/dlrp/fmmp https://gis.conservation.ca.gov/portal/home/group.html?id=b1494c705cb34d01acf78f4927a75b8f#overview
2	Agriculture and Working Lands	Soil Agricultural Groundwater Banking Index (SAGBI)	California Soil Resource Lab at UC Davis and UC- ANR	The Soil Agricultural Groundwater Banking Index (SAGBI) is a suitability index for groundwater recharge on agricultural land. The SAGBI is based on five major factors that are critical to successful agricultural groundwater banking: deep percolation, root zone residence time, topography, chemical limitations, and soil surface condition.	https://casoilresource.lawr.ucdavis.edu/sagbi/
3	Agriculture and Working Lands	Williamson Act	Counties	Williamson Act contracts	https://www.conservation.ca.gov/dlrp/wa (Data available through request to each respective county in the SCAG region)

#	Theme	Data Name	Source	Description	Additional Information
4	Agriculture and Working Lands	Crop Type	Department of Water Resources Crop Mapping 2016	For many years, DWR has collected land use data throughout the state and uses this information to develop water use estimates for statewide and regional planning efforts, including water use projections, water use efficiency evaluation, groundwater model development, and water transfers. These data are essential for regional analysis and decision making, which has become increasingly important as DWR and other state agencies seek to address resource management issues, regulatory compliance issues, environmental impacts, ecosystem services, urban and economic development, and other issues. Increased availability of digital satellite imagery, aerial photography and new analytical tools make remote sensing land use surveys possible at a field scale comparable to that of the California Department of Water Resources (DWR) historical field surveys. Current technologies allow accurate, large-scale crop and land use identification to be performed at time increments as desired, and make possible more frequent, comprehensive statewide land use information. Responding to this need, DWR sought expertise and support for identifying	https://data.cnra.ca.gov/dataset/statewide-crop-mapping

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
				crop types and other land uses and quantifying crop acreages statewide using remotely sensed imagery and associated analytical techniques. Currently, Statewide Crop Maps are available for years 2014 and 2016. Historic County Land Use Surveys spanning 1986 - 2015 may also be accessed using the CADWR Land Use Data Viewer	
5	Agriculture and Working Lands	Community Gardens	SCAG	Locations of community gardens in the SCAG region.	https://scag.ca.gov/sustainability-program-green-region-initiative
6	Agriculture and Working Lands	Agritourism Locations	UC Agriculture and Natural Resources	Farms, orchards, apiaries, creameries, wineries in the SCAG region	http://www.calagtour.org/region_search/south-coast/ http://www.calagtour.org/region_search/easter-n-desert-and-mountains/ ; https://cheesetrail.org/trail-map/ ; https://discovercaliforniawines.com/wine-map-winery-directory/ ; http://www.calagtour.org/region_search/easter-n-desert-and-mountains/ ;
7	Agriculture and Working Lands/Water Resources	Projected Change in Climate Water Deficit	US Geological Survey	Climatic water deficit (CWD) quantifies evaporative demand exceeding available soil moisture and provides an estimate of drought stress on soils and plants. In a Mediterranean climate, climatic water deficit can also be thought of as a surrogate for water demand based on irrigation needs, and changes in climatic water deficit effectively quantify the supplemental amount of water needed to maintain current vegetation cover, whether natural vegetation or agricultural crops.	https://www.usgs.gov/software/basin-characterization-model-bcm https://ca.water.usgs.gov/projects/reg_hydro/basin-characterization-model.html

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
8	Agriculture and Working Lands	Irrigation Capability Class	USDA - Soil Survey Geographic Database	Preserving prime agricultural lands and open space is a key statutory mandate of California's Local Agency Formation Commissions (Cortese-Knox Hertzberg Act 2000, Gov. Code §56301). Irrigation capability is a soil characteristic that classifies potential agricultural lands by the suitability of soils for most kinds of field crops. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. Class I and II lands are statutorily defined as prime agricultural land.	https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/?cid=nrcs143_014040
9	Agriculture and Working Lands	Storie Index	USDA - Soil Survey Geographic Database	Preserving prime agricultural lands and open space is a key statutory mandate of California's Local Agency Formation Commissions (Cortese-Knox Hertzberg Act 2000, Gov. Code §56301). The Storie Index is a soil rating based on soil characteristics that govern the land's potential utilization and agricultural capacity. Lands with an index score of 80-100 or Grade 1 are statutorily defined as prime agricultural land. This land valuation is independent of other physical or economic factors that might determine the desirability of growing certain plants in a given location. The characteristics evaluated include suitable soil profiles, surface texture, slope, and dynamic properties.	https://datagateway.nrcs.usda.gov/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
10	Agriculture and Working Lands/Built Environment	Ventura County SOAR	Ventura County	SOAR (Save Our Agricultural Areas) Ordinance ensures that until December 31, 2050, property designated Agricultural, Open Space and Rural land use designations may not be changed to a more intense, urban designation except by vote of the people	https://www.ventura.org/gis-and-mapping/regulatory-boundaries-rma/
11	Built Environment	Light pollution	1) Falchi, Fabio; Cinzano, Pierantonio; Duriscoe, Dan; Kyba, Christopher C. M.; Elvidge, Christopher D.; Baugh, Kimberly; Portnov, Boris; Rybnikova, Nataliya A.; Furgoni, Riccardo (2016): Supplement to: The New World Atlas of Artificial Night Sky Brightness. GFZ Data Services. http://doi.org/10.5880/GFZ.1.4.2016.001 2) Falchi F, Cinzano P, Duriscoe D, Kyba CC, Elvidge CD, Baugh K, Portnov BA, Rybnikova NA, Furgoni R. The new world atlas of artificial night sky brightness. Science Advances. 2016 Jun 1;2(6):e1600377.	www.lightpollutionmap.info is a mapping application that displays light pollution related content over Microsoft Bing base layers (road and hybrid Bing maps). The primary use was to show VIIRS/DMSP data in a friendly manner, but over the many years it received also some other interesting light pollution related content like SQM/SQC measurements, World Atlas 2015 zenith brightness, almost realtime clouds , aurora prediction and IAU observatories features.	https://www.lightpollutionmap.info/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

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12	Built Environment	Desert Renewable Energy Conservation Plan (DRECP) Development Focus Areas & Variance Lands	Bureau of Land Management California Energy Commission	Zones where renewable energy development is permitted.	https://www.blm.gov/programs/planning-and-nepa/plans-in-development/california/desert-renewable-energy-conservation-plan#:~:text=The%20Desert%20Renewable%20Energy%20Conservation, San%20Bernardino%2C%20and%20San%20Diego; https://navigator.blm.gov/data?keyword=DRECP https://www.energy.ca.gov/programs-and-topics/programs/desert-renewable-energy-conservation-plan
13	Built Environment	2018 Noise Data	Bureau of Transportation Statistics	Data within the National Transportation Noise Map represent potential noise levels across the nation for an average annual day for the specified year. This dataset is developed using a 24-hr equivalent A-weighted sound level (denoted by LAeq) noise metric. The results represent the approximate average noise energy due to transportation noise sources over a 24-hour period at the receptor locations where noise is computed. Layers include Aviation, Passenger Rail (prototype), and Road Noise for the Lower 48 States as well as Alaska and Hawaii.	https://data-usdot.opendata.arcgis.com/datasets/2018-noise-data
14	Built Environment	Local Area Transportation (vehicle miles traveled)	Bureau of Transportation Statistics	Average weekday household Vehicle Miles Traveled (VMT) is the estimated miles traveled by a household. The estimate is derived using data from the National Household Transportation Survey and the American Community Survey. Data is available at the census tract level.	https://www.bts.gov/latch/latch-data

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
15	Built Environment	Sewer network - LA county	LA County	Los Angeles Public Works Sanitary Sewer System includes sewer lines, manholes, pump stations, treatment plants and SMD Operations grid.	https://egis-lacounty.hub.arcgis.com/datasets/lacpw-sanitary-sewer-network
16	Built Environment	LA County no wind policy	LA County Planning	The Renewable Energy Ordinance updates the County's planning and zoning code for the review and permitting of solar and wind energy projects. The ordinance helps California meet its goals for renewable energy generation and greenhouse gas reduction, while minimizing environmental and community impacts.	https://planning.lacounty.gov/energy
17	Built Environment	Impervious surfaces	NLCD 2016	USGS and other partner agencies created and the National Land Cover Database to provide spatially explicit and reliable information on the Nation's land cover and land cover change.	https://www.mrlc.gov/data/nlcd-2016-land-cover-conus
18	Built Environment	Sewer network - Orange County	Orange County Sanitation District	Orange County Sanitation District Sewer System, including sewer lines, manholes, pump stations, reclamation plants, and treatment plants.	https://www.ocsan.gov/about-us/general-information/service-area
19	Built Environment	Riverside County eRED	Riverside County	The purpose of the eRED program is to coordinate and encourage eligible renewable energy resource development (eRED) in the county at the General Plan level.	https://planning.rctlma.org/Home/Riverside-County-eRED-Program https://www.arcgis.com/home/item.html?id=7a13fe10540f41a496875222e2fabbb6
20	Built Environment	Imperial Overlay	Salton Sea Authority	Renewable energy zoning in Imperial County.	https://www.arcgis.com/home/item.html?id=7a13fe10540f41a496875222e2fabbb6

#	Theme	Data Name	Source	Description	Additional Information
21	Built Environment	San Bernardino Renewable Energy Element	San Bernardino County	The San Bernardino County government seeks to manage land use and development in a manner consistent with the Countywide Vision. This Element is focused on sustainability, public health and wellness, and stewardship of land to promote an environment of prosperity and well-being for those who reside and invest in the County. In this context, the Renewable Energy and Conservation Element (Element) is intended to ensure efficient consumption of energy and water, reduce greenhouse gas emissions, pursue the benefits of renewable energy and responsibly manage its impacts on our environment, communities and economy.	http://www.sbcounty.gov/uploads/LUS/Renewable/2019_WEBSITE/REC%20Element.pdf
22	Built Environment	Public Transit Lines	SCAG	Rail lines, Metrolink lines, bus lines from 2016.	<p>Maps available at</p> <p>https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_passenger-rail.pdf?1606001722</p> <p>https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_transit.pdf?1606002122</p> <p>https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_passenger-rail.pdf?1606001722</p>

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
23	Built Environment	Public Transit Stops	SCAG	Rail lines, Metrolink lines, bus stops from 2016.	<p>Maps available at https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_passenger-rail.pdf?1606001722 https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_transit.pdf?1606002122</p> <p>https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_transit.pdf?1606002122</p>
24	Built Environment	Entitlements (2018)	SCAG	Entitled projects conveyed by jurisdictions to SCAG in 2018. Note this dataset is not comprehensive, as it only includes volunteered information from jurisdictions and jurisdictions are the authority on entitled projects.	https://scag.ca.gov/sites/main/files/file-attachments/entitlementsscag.pdf?1604792634 ;
25	Built Environment	Airports	SCAG Open Data Portal	Locations (geometric centroids) of airports and airfields in the Southern California Association of Governments (SCAG) region.	https://gisdata-scag.opendata.arcgis.com/datasets/airports-scag-region-1/explore?location=33.756267%2C-116.923250%2C8.92
26	Built Environment	Ports	SCAG Open Data Portal	Cargo ports in the SCAG Region.	https://gisdata-scag.opendata.arcgis.com/datasets/cargo-ports-scag-region/explore?location=33.911500%2C-118.708050%2C11.29
27	Built Environment	City Urban Restriction Boundary (CURB) - Ventura County	Ventura County	City Urban Restriction Boundary (CURB) represents urban growth boundaries adopted by ballot initiatives or city councils. Development of property outside these boundaries requires the approval of the voters of the relevant city.	https://www.ventura.org/gis-and-mapping/regulatory-boundaries-rma/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
28	Built Environment	Greenbelts - Ventura County	Ventura County	Identification of the boundaries of the seven adopted greenbelts in Ventura County. Includes the Fillmore- Piru, Oxnard-Camarillo, Santa Paula-Fillmore, Santa Rosa Valley, Tierra Rejada, Ventura-Oxnard, and Ventura-Santa Paula Greenbelts.	https://www.ventura.org/gis-and-mapping/regulatory-boundaries-rma/
29	Vulnerabilities and Resilience	Liquefaction Susceptibility Zones	CA Department of Conservation	Liquefaction takes place when loosely packed, water-logged sediments at or near the ground surface lose their strength in response to strong ground shaking. Liquefaction occurring beneath buildings and other structures can cause major damage during earthquakes.	https://maps.conservation.ca.gov/cgs/EQZApp/app/
30	Vulnerabilities and Resilience	Tsunami Inundation Zone	CA Department of Conservation	Produced collectively by tsunami modelers, geologic hazard mapping specialists, and emergency planning scientists from CGS, Cal OES, and the Tsunami Research Center at the University of Southern California, the tsunami inundation maps for California cover most residentially and transient populated areas along the state's coastline. Coordinated by Cal OES, these official maps are developed for all populated areas at risk to tsunamis in California and represent a combination of the maximum considered tsunamis for each area. The tsunami inundation maps were prepared to assist cities and counties in identifying their tsunami hazard. They are intended for local jurisdictional, coastal evacuation planning uses only.	https://maps.conservation.ca.gov/geologichazards/#datalist

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
31	Vulnerabilities and Resilience	Fire Hazard Severity Zone	CAL FIRE	A Fire Hazard Severity Zone (FHSZ) is a mapped area that designates zones (based on factors such as fuel, slope, and fire weather) with varying degrees of fire hazard (i.e., moderate, high, and very high). FHSZ maps evaluate wildfire hazards, which are physical conditions that create a likelihood that an area will burn over a 30- to 50-year period.	https://gis.data.ca.gov/datasets/789d5286736248f69e4515e04f58f414 https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/
32	Vulnerabilities and Resilience	Historic Wildfire Perimeters	CAL FIRE	The fire perimeter database represents the most complete digital record of fire perimeters in California.	https://frap.fire.ca.gov/frap-projects/fire-perimeters/
33	Vulnerabilities and Resilience	Earthquake Shaking Potential	California Geological Survey	The California Geological Survey published maps of Earthquake Shaking Potential for California in 1999 and has revised the maps following each update of the National Seismic Hazard Maps (NSHM). Similar to the NSHMs, the Earthquake Shaking Potential Maps for California depict expected intermediate period (1s or 1hz) ground motions with 2% exceedance probability in 50 years. Unlike the NSHMs, Earthquake Shaking Potential Map for California incorporates anticipated amplification of ground motions by local soil conditions. The current update of the Earthquake Shaking Potential Map for California (California Geological Survey Map Sheet 48) is based on the 2014 NSHMs developed by the United States Geological Survey (Petersen et al., 2014), a new map of the average shear wave velocity in the upper 30m of the earths surface for California (Wills et al., 2015), and a new semi-empirical nonlinear site amplification model (Seyhan and Stewart, 2014).	https://www.arcgis.com/home/webmap/viewer.html?url=https%3A%2F%2Fgis.conservaation.ca.gov%2Fserver%2Frest%2Fservices%2FCGS%2FMMS48_ShakingPotential%2FMapServer&source=sd

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
34	Vulnerabilities and Resilience	Historic Landslides	California Geological Survey	The statewide landslide map database shows many of the landslides mapped by CGS and others over the past 50 years. Each feature includes a database record showing at least the source of the original mapping.	https://maps.conservation.ca.gov/cgs/lsl/ (Data Available Upon Request)
35	Vulnerabilities and Resilience	Landslides	California Geological Survey	Seismic Hazard Zones: Landslides	https://maps.conservation.ca.gov/geologichazards/#datalist
36	Vulnerabilities and Resilience	Alquist-Priolo Faults	California Geological Survey	Alquist-Priolo fault zones are regulatory zones around active faults in California to reduce human losses during earthquakes.	https://gis.conservation.ca.gov/server/rest/services/CGS_Earthquake_Hazard_Zones/SHP_Fault_Zones/FeatureServer
37	Vulnerabilities and Resilience	500-Year Floodplain	FEMA	Flood zones are defined by the Federal Emergency Management Agency (FEMA) to identify varying levels of flood risk and inform the Flood Insurance Rate Map. Floods are the second-most common natural disaster, and they often occur quickly in low-lying areas after heavy rains. The 500-year floodplain is the area that has a 0.2-percent annual chance of flooding and is also referred to as the moderate flood hazard area. These are between the limits of the 1-percent-annual-chance (base flood) and the 0.2-percent-annual-chance.	https://www.fema.gov/flood-maps

#	Theme	Data Name	Source	Description	Additional Information
38	Vulnerabilities and Resilience	100-Year Floodplain	FEMA	Flood zones are defined by the Federal Emergency Management Agency (FEMA) to identify varying levels of flood risk and inform the Flood Insurance Rate Map. Floods are the second-most common natural disaster, and they often occur quickly in low-lying areas after heavy rains. The 100-year floodplain is the area that has a 1-percent-annual-chance of flooding and is also referred to as the base flood, while moderate flood hazard areas are between the limits of the base flood and the 0.2-percent-annual-chance or 500-year flood.	https://www.fema.gov/flood-maps
39	Vulnerabilities and Resilience	Sea Level Rise	National Oceanic and Atmospheric Administration	5 foot inundation area and intertidal area	https://coast.noaa.gov/slr/#/layer/slr/5/-13129306.174783863/3794179.6383960927/10/satellite/none/0.8/2050/interHigh/midAccretion
40	Vulnerabilities and Resilience	Potential Future Habitat	The Nature Conservancy	TNC Conserving California Coastal Habitat. Due to predicted sea level rise, these areas are important migration space for highly restricted habitats.	https://www.scienceforconservation.org/products/coastal-assessment https://scc.ca.gov/2018/05/15/coastalassesment/
41	Vulnerabilities and Resilience	Coastal Habitat Vulnerability	The Nature Conservancy	TNC Conserving California Coastal Habitat. Due to predicted sea level rise, these areas are important migration space for highly restricted habitats.	https://www.scienceforconservation.org/products/coastal-assessment https://scc.ca.gov/2018/05/15/coastalassesment/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
42	Vulnerabilities and Resilience	Landscape Resilience - refugia	University of California, Davis	Areas where vegetation will not likely be stressed by climate change because the vegetation in those areas will likely experience climate conditions that are within the range of conditions they are currently found in in California.	See 'Vegetation Climate Exposure Analysis' for methods https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=116208&inline
43	Vulnerabilities and Resilience	Landscape Resilience - resilient areas	The Nature Conservancy California Science. 2015. Landscape Resilience to Climate Change.	An index that indicates the presence and accessibility of microhabitat options by quantifying both the permeability of the landscape and the diversity in potential "wetness" and "heat" based on topography.	See for similar methods used in California analysis https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/oregon/science/Documents/PNW%20Terrestrial%20Climate%20Resilience%20Report%20March3%202015.pdf https://www.conservationgateway.org/conservationbygeography/northamerica/unitedstates/oregon/science/pages/resilient-landscapes.aspx
44	Vulnerabilities and Resilience	Historic High Heat Days (100 degrees)	Union of Concerned Scientists	This analysis shows the rapid, widespread increases in extreme heat that are projected to occur across the country due to climate change.	https://www.ucsusa.org/resources/killer-heat-united-states-0
45	Vulnerabilities and Resilience	Projected High Heat Days (100 degrees, mid century, slow action)	Union of Concerned Scientists	This analysis shows the rapid, widespread increases in extreme heat that are projected to occur across the country due to climate change.	https://www.ucsusa.org/resources/killer-heat-united-states-0
46	Vulnerabilities and Resilience	Wildland-Urban Interface 2010/2017	US Forest Service	The wildland-urban interface (WUI) is the area where houses meet or intermingle with undeveloped wildland vegetation. This makes the WUI a focal area for human- environment conflicts such as wildland fires, habitat fragmentation, invasive species, and biodiversity decline.	https://doi.org/10.2737/RDS-2015-0012-2

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

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47	Vulnerabilities and Resilience	Wildfire Risk to Communities	US Forest Service	Wildfire risk and likelihood	https://wildfirerisk.org/explore/0/06/
48	Context	California Coastal Zone	California Coastal Commission	This data depicts the California Coastal Commission's Coastal Zone Boundary for the State of California.	https://map.dfg.ca.gov/metadata/ds0990.html
49	Context/Water Resources	Water Service Districts	California Department of Water Resources	Identifies public water agencies in California.	https://atlasdwr.opendata.arcgis.com/datasets/45d26a15b96346f1816d8fe187f8570d_0?geometry=-119.374%2C34.299%2C-117.433%2C34.695 https://gis.data.cnra.ca.gov/datasets/45d26a15b96346f1816d8fe187f8570d_0
50	Context	Open Space	California Protected Areas Database (CPAD)	The California Protected Areas Database (CPAD) contains GIS data about lands that are owned in fee and protected for open space purposes by over 1,000 public agencies or non-profit organizations.	https://www.calands.org/cpad/
51	Context	Land Cover	NLCD 2016	USGS and other partner agencies created and the National Land Cover Database to provide spatially explicit and reliable information on the Nation's land cover and land cover change.	https://www.mrlc.gov/data/nlcd-2016-land-cover-conus
52	Context	Land Use Imperial County	SCAG Open Data Portal	This is SCAG's 2016 landuse dataset developed for the Final Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), including general plan landuse, specific plan landuse, zoning code and existing landuse.	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-imperial-county/explore?location=33.024680%2C-115.277764%2C10.35

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
53	Context	Land Use Los Angeles County	SCAG Open Data Portal	This is SCAG's 2016 landuse dataset developed for the Final Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), including general plan landuse, specific plan landuse, zoning code and existing landuse.	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-los-angeles-county/explore?location=33.815053%2C-118.299074%2C9.02
54	Context	Land Use Orange County	SCAG Open Data Portal	This is SCAG's 2016 landuse dataset developed for the Final Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), including general plan landuse, specific plan landuse, zoning code and existing landuse.	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-orange-county/explore?location=33.666961%2C-117.767034%2C10.90
55	Context	Land Use Riverside County	SCAG Open Data Portal	This is SCAG's 2016 landuse dataset developed for the Final Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), including general plan landuse, specific plan landuse, zoning code and existing landuse.	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-riverside-county/explore?location=33.751919%2C-116.055780%2C9.75
56	Context	Land Use San Bernardino County	SCAG Open Data Portal	This is SCAG's 2016 landuse dataset developed for the Final Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), including general plan landuse, specific plan landuse, zoning code and existing landuse.	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-san-bernardino-county/explore?location=34.828232%2C-115.949280%2C9.05
57	Context	Land Use Ventura County	SCAG Open Data Portal	This is SCAG's 2016 landuse dataset developed for the Final Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), including general plan landuse, specific plan landuse, zoning code and existing landuse.	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-ventura-county/explore?location=34.063512%2C-119.120837%2C9.34

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58	Context	Census tracts	SCAG Open Data Portal	Census Tracts used in the 2010 United States Census.Last updated 01/2018.	https://gisdata-scag.opendata.arcgis.com/datasets/census-tracts-in-scag
59	Context	Green Region Initiative	SCAG Open Data Portal	This dataset is comprised of policy data, performance data, accompanying URL links on each data entry if available, and indicator category average data. The table of attributes contains data across 29 sustainability indicators, with upwards to 28,000 data entries.	https://gisdata-scag.opendata.arcgis.com/datasets/green-region-initiative
60	Context	California Assembly Districts	SCAG Open Data Portal	California Assembly Districts, updated as of 10/2017.	https://gisdata-scag.opendata.arcgis.com/datasets/california-assembly-districts-scag-region
61	Context	California Senate Districts	SCAG Open Data Portal	California Senate Districts in the Southern California Association of Governments (SCAG) region, updated as of 10/2017.	https://gisdata-scag.opendata.arcgis.com/datasets/california-senate-districts-scag-region
62	Context	SCAG regional council districts	SCAG Open Data Portal	Boundaries for the Southern California Association of Governments (SCAG) Regional Council districts. The Regional Council is SCAG's governing board, and it is made up of elected representatives from these 67 districts, each consisting of one or more cities in the region with approximately equal population and geographic continuity.	https://gisdata-scag.opendata.arcgis.com/datasets/regional-council-districts-scag-region

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

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63	Context	SCAG sphere of influence	SCAG Open Data Portal	SCAG's 2016 sphere of influence for individual cities (November 2019 version), developed for the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The dataset includes the sphere of influence for the 191 cities in the Southern California Association of Governments (SCAG) Region. The Sphere of Influence represents the geographic extent to which a city can expand by annexation.	https://gisdata-scag.opendata.arcgis.com/datasets/sphere-of-influence-scag
64	Context	SCAG subregions	SCAG Open Data Portal	Official subregional boundaries for the SCAG region. The file has been updated as of 06/12/2017.	https://gisdata-scag.opendata.arcgis.com/datasets/subregions-and-councils-of-government-scag-region
65	Context	SCAG supervisory districts	SCAG Open Data Portal	Boundaries of the supervisory districts within the Southern California Association of Governments (SCAG) region. This includes: Imperial County Supervisory Districts, Los Angeles County Supervisory Districts, Orange County Supervisory Districts, Riverside County Supervisory Districts, San Bernardino County Supervisory Districts and Ventura County Supervisory Districts.	https://gisdata-scag.opendata.arcgis.com/datasets/supervisory-districts-scag-region

#	Theme	Data Name	Source	Description	Additional Information
66	Context	Air basins	SCAG Open Data Portal	This dataset includes the boundaries and names of the California air basins in the Southern California Association of Governments (SCAG) region, as defined in state statute and regulation as of October 2014. This dataset includes the boundaries and names of the California air basins in the Southern California Association of Governments (SCAG) region, as defined in state statute and regulation as of October 2014.	https://gisdata-scag.opendata.arcgis.com/datasets/air-basins-scag-region
67	Context	Air districts	SCAG Open Data Portal	This dataset includes the boundaries and names of the California air pollution control and air quality management districts in the Southern California Association of Governments (SCAG) region, as defined in state statute and regulation as of October 2009.	https://gisdata-scag.opendata.arcgis.com/datasets/air-districts-scag-region
68	Context	City Boundaries	SCAG Open Data Portal	SCAG's 2016 city and county unincorporated area boundary data (November 2018 version), developed for the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The dataset includes the boundaries for the 191 cities and 6 county unincorporated areas in the Southern California Association of Governments (SCAG) Region.	https://gisdata-scag.opendata.arcgis.com/datasets/city-boundaries-scag-region
69	Context	Congressional districts	SCAG Open Data Portal	California Congressional Districts, updated as of 10/2017.	https://gisdata-scag.opendata.arcgis.com/datasets/california-congressional-districts-scag-region
70	Context	County Boundaries	SCAG Open Data Portal	County boundaries that make up the Southern California Association of Governments service area. These county boundaries are consistent with	http://gisdata-scag.opendata.arcgis.com/datasets/4342378398be43e091da8d-d85b02ab1d-1

#	Theme	Data Name	Source	Description	Additional Information
				the LAFCO city boundaries as of 08/2016 (Ver. 1.0).	https://gisdata-scag.opendata.arcgis.com/datasets/county-boundaries-scag-region
71	Context	Zoning Imperial County	SCAG Open Data Portal	Countywide land use information, including general plan land use, specific plan land use, zoning code and existing land use (November 2016 version). Countywide zoning code information (November 2016 version).	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-imperial-county/explore?location=33.023957%2C-115.277764%2C10.00 https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-imperial-county/explore?location=33.023957%2C-115.277764%2C10.00
72	Context	Zoning Los Angeles County	SCAG Open Data Portal	Countywide land use information, including general plan land use, specific plan land use, zoning code and existing land use (November 2016 version). Countywide zoning code information (November 2016 version).	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-los-angeles-county/explore?location=33.815053%2C-118.299074%2C9.02 https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-los-angeles-county/explore?location=33.812128%2C-118.299074%2C9.00
73	Context	Zoning Orange County	SCAG Open Data Portal	Countywide land use information, including general plan land use, specific plan land use, zoning code and existing land use (November 2016 version). Countywide zoning code information (November 2016 version).	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-orange-county/explore?location=33.666961%2C-117.767034%2C10.90

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
					https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-orange-county/explore?location=33.666740%2C-117.767034%2C10.90
74	Context	Zoning Riverside County	SCAG Open Data Portal	Countywide land use information, including general plan land use, specific plan land use, zoning code and existing land use (November 2016 version). Countywide zoning code information (November 2016 version).	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-riverside-county/explore?location=33.751919%2C-116.055780%2C9.75 https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-riverside-county/explore?location=33.750777%2C-116.055780%2C9.75
75	Context	Zoning San Bernardino County	SCAG Open Data Portal	Countywide land use information, including general plan land use, specific plan land use, zoning code and existing land use (November 2016 version). Countywide zoning code information (November 2016 version).	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-san-bernardino-county/explore?location=34.828232%2C-115.949280%2C9.05 https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-san-bernardino-county/explore?location=34.825266%2C-115.949280%2C9.00
76	Context	Zoning Ventura County	SCAG Open Data Portal	Countywide land use information, including general plan land use, specific plan land use, zoning code and existing land use (November 2016 version). Countywide zoning code information (November 2016 version).	https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-ventura-county/explore?location=34.063512%2C-119.120837%2C9.34

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

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					https://gisdata-scag.opendata.arcgis.com/datasets/2016-land-use-information-for-ventura-county/explore?location=34.060577%2C-119.120837%2C9.00
77	Environmental Justice, Equity, and Inclusion	CalEnviroScreen Pollution Burden	CA Office of Environmental Health Hazard Assessment	Pollution burden represents the potential exposures to pollutants and the adverse environmental conditions caused by pollution. The pollution burden indicators from CalEnviroScreen include ozone, particulate matter 2.5 (PM 2.5), diesel particulate matter, drinking water contaminant threats, pesticides, toxic releases, traffic impacts, cleanup sites, groundwater threats, hazardous waste, impaired waters, and solid waste.	https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30
78	Environmental Justice, Equity, and Inclusion	CalEnviroScreen Percentile	CA Office of Environmental Health Hazard Assessment	CalEnviroScreen is a statewide environmental health screening tool created by the California Office of Environmental Health Hazard Assessment (OEHHA) as part of the California Protection Agency's Environmental Justice Program. The tool aims to identify communities that are burdened by pollution from multiple sources and vulnerable to its effects. CalEnviroScreen 3.0 uses 20 indicators of pollution, environmental quality, and socioeconomic and public health conditions.	https://oehha.ca.gov/calenviroscreen

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
79	Environmental Justice, Equity, and Inclusion	Disadvantaged Communities	CA Office of Environmental Health Hazard Assessment	Disadvantaged communities in California are specifically targeted for investment of proceeds from the State's cap-and-trade program. These investments are aimed at improving public health, quality of life and economic opportunity in California's most burdened communities at the same time reducing pollution that causes climate change. These areas represent the 25% highest scoring census tracts in CalEnviroScreen 3.0, along with other areas with high amounts of pollution and low populations.	https://oehha.ca.gov/calenviroscreen/sb535
80	Environmental Justice, Equity, and Inclusion	Trails - CA State Parks	CA State Parks	CA state parks recreational routes	https://www.parks.ca.gov/?page_id=29682
81	Environmental Justice, Equity, and Inclusion	Toxic Release Inventory Facilities	California Department of Toxic Substances Control	Industrial and federal facilities that report toxic chemical releases and pollution prevention activities to the Toxic Release Inventory (TRI) system. The Toxics Release Inventory (TRI) is a federal database that contains detailed information on nearly 650 chemicals and chemical categories that over 1,600 industrial and other facilities in the state manage through disposal or other releases, recycling, energy recovery, or treatment. The data are collected from these facilities by the U.S. Environmental Protection Agency.	https://gis.data.ca.gov/datasets/0094052fe5114e789f4f770406035bf9_0?geometry=-118.957%2C33.657%2C-117.694%2C34.056
82	Environmental Justice, Equity, and Inclusion	Publicly accessible recreational lands	California Protected Area Database (CPAD)	Open space that is publicly accessible and can be used for recreation.	https://www.calands.org/cpad/

#	Theme	Data Name	Source	Description	Additional Information
83	Environmental Justice, Equity, and Inclusion	CA School Campus Database	California School Campus Database	CSCD is a GIS data set that contains detailed outlines of the lands used by public schools for educational purposes. It includes campus boundaries of schools with kindergarten through 12th grade instruction, as well as colleges, universities, and public community colleges. Each is accurately mapped at the assessor parcel level. CSCD is the first statewide database of this information and is available for use without restriction.	http://www.californiaschoolcampusdatabase.org/
84	Environmental Justice, Equity, and Inclusion	Park Access - no park within half-mile	California State Parks	Neighborhood areas that do not have a park within a half mile.	https://www.parksforcalifornia.org/parkaccess/?overlays1=parks%2Cnoparkaccess&overlays2=parks%2Cparksper1000
85	Environmental Justice, Equity, and Inclusion	Park Access - Park Acres per thousand	California State Parks	Ratio of park acres per thousand residents.	https://www.parksforcalifornia.org/parkaccess/?overlays1=parks%2Cnoparkaccess&overlays2=parks%2Cparksper1000

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
86	Environmental Justice, Equity, and Inclusion	Opportunities for affordable housing	California Tax Credit Allocation Committee	TCAC and HCD charged the Task Force with creating an opportunity map to identify areas in every region of the state whose characteristics have been shown by research to support positive economic, educational, and health outcomes for low-income families—particularly long-term outcomes for children. TCAC intended to adopt this map into its regulations, which it eventually did in December 2017, to accompany new policies aimed at increasing access to highopportunity areas for families with children in housing financed with 9% Low Income Housing Tax Credits (LIHTCs). For this reason, the Task Force designed this map and the methodology behind it with the funding infrastructure for the 9% LIHTC program (e.g., geographic competition, a separate funding pool for rural applicants), as well as that of key HCD funding programs such as the Multifamily Housing Program, in mind.	https://belonging.berkeley.edu/2021-tcac-opportunity-map
87	Environmental Justice, Equity, and Inclusion	Sequestration of NO2 by vegetation (g/yr)	Gopalakrishnan et al. 2018. Air quality and human health impacts of grasslands and shrublands in the United States. Atmospheric Environment 182: 193-199.	Contribution of vegetation to sequester NO2 to reduce its pollution impacts.	https://www.sciencedirect.com/science/article/abs/pii/S1352231018301936 (Data available through request) https://www.sciencedirect.com/science/article/abs/pii/S1352231018301936 (Data available through request)

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
88	Environmental Justice, Equity, and Inclusion	Sequestration of PM2.5 by vegetation (g/yr)	Gopalakrishnan et al. 2018. Air quality and human health impacts of grasslands and shrublands in the United States. Atmospheric Environment 182: 193-199.	Contribution of vegetation to sequester PM2.5 to reduce its pollution impacts.	<p>https://www.sciencedirect.com/science/article/abs/pii/S1352231018301936 (Data available through request)</p> <p>https://www.sciencedirect.com/science/article/abs/pii/S1352231018301936 (Data available through request)</p>

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
89	Environmental Justice, Equity, and Inclusion	Historic Redlining	Homeowners Loan Corporation	<p>The Home Owners' Loan Corporation (HOLC) was created in the New Deal Era and trained many home appraisers in the 1930s. The HOLC created a neighborhood ranking system infamously known today as redlining. Local real estate developers and appraisers in over 200 cities assigned grades to residential neighborhoods. These maps and neighborhood ratings set the rules for decades of real estate practices. The grades ranged from A to D. A was traditionally colored in green, B was traditionally colored in blue, C was traditionally colored in yellow, and D was traditionally colored in red.</p> <p>A (Best): Always upper- or upper-middle-class White neighborhoods that HOLC defined as posing minimal risk for banks and other mortgage lenders, as they were "ethnically homogeneous" and had room to be further developed.</p> <p>B (Still Desirable): Generally nearly or completely White, U.S. -born neighborhoods that HOLC defined as "still desirable" and sound investments for mortgage lenders.</p> <p>C (Declining): Areas where the residents were often working-class and/or first or second generation immigrants from Europe. These areas often lacked</p>	<p>https://tnc.maps.arcgis.com/home/item.html?id=ef0f926eb1b146d082c38cc35b53c947</p>

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
				<p>utilities and were characterized by older building stock.</p> <p>D (Hazardous): Areas here often received this grade because they were "infiltrated" with "undesirable populations" such as Jewish, Asian, Mexican, and Black families. These areas were more likely to be close to industrial areas and to have older housing.</p> <p>Banks received federal backing to lend money for mortgages based on these grades. Many banks simply refused to lend to areas with the lowest grade, making it impossible for people in many areas to become homeowners. While this type of neighborhood classification is no longer legal thanks to the Fair Housing Act of 1968 (which was passed in large part due to the activism and work of the NAACP and other groups), the effects of disinvestment due to redlining are still observable today. For example, the health and wealth of neighborhoods in Chicago today can be traced back to redlining (Chicago Tribune). In addition to formerly redlined neighborhoods having fewer resources such as quality schools, access to fresh foods, and health care facilities, new research from the Science Museum of</p>	

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
				Virginia finds a link between urban heat islands and redlining (Hoffman, et al., 2020). This layer comes out of that work, specifically from University of Richmond's Digital Scholarship Lab. More information on sources and digitization process can be found on the Data and Download and About pages.	
90	Environmental Justice, Equity, and Inclusion	Trails - LA County	LA County	Location of trails in LA County	https://egis-lacounty.hub.arcgis.com/datasets/trails-1/explore?location=33.805000%2C-118.295000%2C9.03
91	Environmental Justice, Equity, and Inclusion	National Historic Trails	National Park Service	National Historic Trails	<p>Pacific Crest Trail: https://services5.arcgis.com/ZldHa25efPFpMmfB/arcgis/rest/services/M_PCT_HalfmileProject_Centerline/FeatureServer</p> <p>Pacific Crest Trail https://services5.arcgis.com/ZldHa25efPFpMmfB/ArcGIS/rest/services</p> <p>Juan Bautista de Anza: https://nps.maps.arcgis.com/home/item.html?id=7b92e04dc7c74f269ba620e7540f9dbb</p> <p>Old Spanish NHT: https://nps.maps.arcgis.com/home/item.html?id=a4205715e04343638cfbc74ef128482d</p>
92	Environmental Justice, Equity, and Inclusion	Trails - Orange County	Orange County Public Works	Orange County Parks trails	https://data-ocpw.opendata.arcgis.com/datasets/a75cdbabf08e41e49d14aa4479e1061a_0

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
93	Environmental Justice, Equity, and Inclusion	Trails - Riverside County	Riverside County Parks	Trail System	https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A17ec701b-1afd-45cd-a584-c5f937f0bcc0#pageNum=14 https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A17ec701b-1afd-45cd-a584-c5f937f0bcc0#pageNum=14

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

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94	Environmental Justice, Equity, and Inclusion	Priority growth areas	SCAG	Priority Growth Areas (PGAs) are designated areas prioritized for new development based on established criteria (e.g. infrastructure, location, market) in the 2020 Connect SoCal Plan. PGAs follow the principles of center focused placemaking and are locations where many Connect SoCal strategies can be fully realized. PGA's account for only 4 percent of region's total land area, but implementation of SCAG's recommended growth strategies will help these areas accommodate 64 percent of forecasted household growth and 74 percent of forecasted employment growth between 2016 and 2045. This more compact form of regional development, if fully realized, can reduce travel distances, increase mobility options, improve access to workplaces, and conserve the region's resource areas.	https://maps.scag.ca.gov/scaggis/rest/services/HousingElements/Priority_Growth_Areas/MapServer Maps available starting on page 35 of Chapter 3 in Connect SoCal: https://maps.scag.ca.gov/scaggis/rest/services/HousingElements/Priority_Growth_Areas/MapServer https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial-03-plan.pdf
95	Environmental Justice, Equity, and Inclusion	Native American Reservations	SCAG Open Data Portal	This dataset contains the boundaries for the Native American Reservations in the six counties in the Southern California Association of Governments (SCAG) region, as defined by the United States Census Bureau.	https://gisdata-scag.opendata.arcgis.com/datasets/native-american-reservations-scag-region?geometry=-126.166%2C32.279%2C-105.259%2C35.470

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
96	Environmental Justice, Equity, and Inclusion	Healthy Places Index	SCAG Open Data Portal	dataset of Healthy Place Index (HPI) Total Percentile Ranking (0 for most - 100 for least) Advantaged for SCAG's Active Transportation Program (ATP) that contains Census tract level food access, retail density, park access, tree canopy coverage, and Healthy Places Index (HPI) score data of the SCAG region. Food access data for 2015 (data source: USDA FARA 2017) includes the percentage of the urban population residing less than 1/2 mile from a supermarket/large grocery store, or the percentage of the rural population living less than 1 mile from a supermarket/large grocery store. Retail density data (data source: EPA Smart Location Database 2010) includes the gross retail, entertainment, and education employment density (jobs/acre) on unprotected land. Park access data (data source: HCI/CalLands Database 2010) includes the percentage of population living within a half-mile of a park, open space, or beach. Tree canopy coverage data (data source: HCI/National Land Cover Database 2011) includes population-weighted percentage of census tract area with tree canopy coverage. The HPI score (version: December 2017) is composed of diverse non-medical	https://gisdata-scag.opendata.arcgis.com/datasets/healthy-places-index-hpi-2017

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
				<p>economic, social, political and environmental factors that influence physical and cognitive function, behavior and disease. These factors are often called health determinants or social determinants of health and form the root causes of health advantage. Indicator data used for HPI comes from publicly available sources and is produced at a census tract level. The HPI score was derived from 8 domain scores, 25 Individual indicators + race/ethnicity percent (8057 CTs). HPI materials will be made freely available online for use by communities and public and private agencies. More info at: http://phasocal.org/ca-hpi/</p>	
97	Environmental Justice, Equity, and Inclusion	Communities of Concern	SCAG Open Data Portal	<p>This dataset identifies “communities of concern,” and is designated for SCAG’s 2020 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS) Environmental Justice Analysis Report.</p>	<p>https://gisdata-scag.opendata.arcgis.com/datasets/communities-of-concern</p>

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
98	Environmental Justice, Equity, and Inclusion	Environmental Justice Areas	SCAG Open Data Portal	Environmental Justice (EJ) areas in the SCAG region. The data was created using the base year 2016 data at the level of SCAG Tier 2 TAZs. EJ Area TAZs were identified if they had a higher concentration of minority population or households in poverty than is seen in the greater SCAG region.	https://gisdata-scag.opendata.arcgis.com/datasets/environmental-justice-areas-1/explore?location=34.203500%2C-116.714600%2C8.42 https://gisdata-scag.opendata.arcgis.com/datasets/environmental-justice-areas-1/explore?location=34.179978%2C-116.714600%2C8.00
99	Environmental Justice, Equity, and Inclusion	Proposed and Existing Bikeways	SCAG Open Data Portal	SCAG Regional Bikeway Shapefile (RBS) contains proposed and existing bikeways, defined by class, within the SCAG region.	https://gisdata-scag.opendata.arcgis.com/datasets/bike-routes-scag-region
100	Environmental Justice, Equity, and Inclusion	High Quality Transit Areas (2016)	SCAG Open Data Portal	High Quality Transit Areas (HQTAs) in the SCAG Region for the year 2016, updated as of February 2020.	https://gisdata-scag.opendata.arcgis.com/datasets/high-quality-transit-areas-hqta-2016-scag-region
101	Environmental Justice, Equity, and Inclusion	Transit Priority Areas (2016)	SCAG Open Data Portal	Transit Priority Areas (TPAs) in the SCAG Region for the year 2016, updated as of February 2020. Transit Priority Area (TPA) means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.	https://maps.scag.ca.gov/scaggis/rest/services/SB743/TPAoverlaySP/MapServer/2

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
102	Environmental Justice, Equity, and Inclusion	High Quality Transit Areas (2045)	SCAG Open Data Portal	High Quality Transit Areas (HQTAs) in the SCAG Region for plan year 2045, updated as of February 2020. High Quality Transit Areas (HQTAs) is within one half-mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours.	https://gisdata-scag.opendata.arcgis.com/datasets/high-quality-transit-areas-hqta-2045-scag-region
103	Environmental Justice, Equity, and Inclusion	Transit Priority Areas (2045)	SCAG Open Data Portal	Transit Priority Areas (TPAs) in the SCAG Region for plan year 2045, updated as of February 2020. Transit Priority Area (TPA) means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.	https://maps.scag.ca.gov/scaggis/rest/services/HousingElements/Priority_Growth_Areas/MapServer/3

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
104	Environmental Justice, Equity, and Inclusion	Urban Displacement	The Urban Displacement Project	<p>UDP's Displacement Typologies use housing and demographic data from the US Census, as well as real estate market data from Zillow to classify a metropolitan area's census tracts into eight distinct categories. Each category represents a stage of neighborhood change, although should not be taken to represent a linear trajectory or to predetermine neighborhood outcomes. Instead, typologies allow practitioners and researchers to see patterns in their regions over a specified time period, and are meant to start conversations about how policy interventions and investment could respond and support more equitable development.</p> <p>UDP's typologies are divided into 9 categories that may be generalized into three broad groups: displacement, gentrification, and exclusion. Because UDP findings indicate that displacement precedes gentrification, the first two typologies on the chart below indicate tracts that are in danger or are currently experiencing a loss in low income households. Following Displacement, the next three categories indicate the danger of gentrification, indicated by both demographic and housing market changes. Finally, the four categories in orange indicate exclusivity, indicating difficulty for low income households to enter a tract.</p>	https://github.com/ereifsnyder/displacement-typologies/blob/main/code/SCAG_DT/Displacement%20and%20Gentrification%20Typologies.md
105	Environmental Justice, Equity, and Inclusion	National Forest System Trails	US Forest Service	Forest Service system trails	https://data.fs.usda.gov/geodata/edw/datasets.php

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
106	Environmental Justice, Equity, and Inclusion	Trails - Ventura County	Ventura County Resource Management Agency	Hiking Trails	https://venturacountyactiveoutdoors-vcitsgis.hub.arcgis.com/apps/e29c75fe083b46e284f148119934e8f8/explore
107	Habitat and Biodiversity	Important bird areas	Audubon	The objective of this project was to digitally map the boundaries of Audubon California's Important Bird Areas (IBA). Existing Important Bird Areas identify critical terrestrial and inland water habitats for avifauna, in particular, habitat that supports rare, threatened or endangered birds and/or exceptionally large congregations of shorebirds and/or waterfowl. The digitization of Important Bird Areas represents an important first step in conservation planning of these critical habitats using GIS. For more information, visit: http://docs.audubon.org/sites/default/files/documents/auduboncalifornia_gtr_iba_200812.pdf	https://www.audubon.org/important-bird-areas
108	Habitat and Biodiversity	Fish Passage Barriers - Total	CA Department of Fish and Wildlife	Fish passage barriers are barriers that prevent the movement of aquatic species that travel from the ocean to freshwater to breed. Barriers can be structures like dams, road crossings, culverts, or other structures that prevent the movement of fish.	https://map.dfg.ca.gov/metadata/ds0069.html

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
109	Habitat and Biodiversity	Wildlife Movement Barrier Priorities	CA Department of Fish and Wildlife	This dataset represents barriers to terrestrial wildlife movement in California that are high priority for remediation, as identified by the California Department of Fish and Wildlife (CDFW) in March 2020. CDFW divides the state into six administrative Regions. CDFW staff in each Region identified linear segments of infrastructure that currently present barriers to wildlife populations in their jurisdiction. In doing so, the Regions used all available empirical information in their possession, including existing connectivity and road crossing studies, collared-animal movement data, roadkill observations, and professional expertise. The dataset represents the ten highest priority barriers identified in each region. Additional information can be found in this report: http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178511	https://tnc.maps.arcgis.com/home/item.html?id=4b5afe427fc443f3aacccb1f192794fa
110	Habitat and Biodiversity	Vernal pools	CA Department of Fish and Wildlife	Vernal pools are seasonal depressional wetlands that are covered by shallow water for variable periods from winter to spring, but may be completely dry for most of the summer and fall. These wetlands range in size from small puddles to shallow lakes and are usually found in a gently sloping plain of grassland.	https://map.dfg.ca.gov/metadata/ds0948.html

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
111	Habitat and Biodiversity	Fish Passage Barriers - Priority	CA Department of Fish and Wildlife	Human-made barriers to salmonid migration, including road-stream crossings, irrigation diversions, and dams, that have been deemed priorities for removal by the California Department of Fish and Wildlife based on significance to fish migration. Migration passage impediments and delays affect both adult and juvenile fish. Given the magnitude and severity of barriers and the decline of salmonid populations, reconnecting isolated stream habitat is an important priority for the restoration of impaired anadromous salmon and steelhead stocks. The Passage Assessment Database (PAD) is an ongoing map-based inventory of known and potential barriers to anadromous fish in California, compiled and maintained through a cooperative interagency agreement.	https://www.calfish.org/ProgramsData/HabitatandBarriers/CaliforniaFishPassageAssessmentDatabase.aspx
112	Habitat and Biodiversity	Species Biodiversity Rank	CA Department of Fish and Wildlife ACE	Species Biodiversity Summaries combine the three measures of biodiversity developed for ACE into a single metric. These three measures include: 1) native species richness, which represents overall native diversity of all species in the state, both common and rare, as well as climate vulnerable species and important game and sport fish species; 2) rare species richness, which represents diversity of rare species; and, 3) irreplaceability, which is a weighted measure of endemism that highlights areas that support unique species of limited range.	https://wildlife.ca.gov/Data/Analysis/ACE

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
113	Habitat and Biodiversity	California Natural Diversity Database (CNDDDB)	CA Department of Fish and Wildlife CA Natural Diversity DataBase	The California Natural Diversity Database (CNDDDB) is a product of the California Department of Fish and Wildlife's Biogeographic Data Branch (BDB). The CNDDDB is both a manual and computerized library of the status and locations of California's rare species and natural community types. The CNDDDB includes in its data all federally and state listed plants and animals, all species that are candidates for listing, all species of special concern, and those species that are considered "sensitive" by government agencies and the conservation community.	https://wildlife.ca.gov/Data/CNDDDB
114	Habitat and Biodiversity	Wildland Carbon	California Air Resources Board	Total carbon density. This raster includes values for pixels that are croplands. Units: Metric tons carbon/ha [carbon density of wildland Above-Ground Live vegetation (Metric Tons Carbon/ha) note: biomass to carbon conversion factor is 0.47 g carbon/g biomass (from Gonzalez et al. 2015)].	https://nature.berkeley.edu/battleslab/wp-content/uploads/2015/03/Gonzalez-et-al.-2015.pdf (Data Available Upon Request)
115	Habitat and Biodiversity	Conservation Easements	California Conservation Easements Database	CCED is a GIS database defining easements and deed-based restrictions on private land. These restrictions limit land uses to those compatible with maintaining it as open space. Lands under easement may be actively farmed, grazed, forested, or held as nature reserves. Easements are typically held on private lands with no public access.	https://www.calands.org/cced/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
116	Habitat and Biodiversity	Groundwater Dependent Ecosystems	California Department of Water Resources	Groundwater Dependent Ecosystems are defined under the Sustainable Groundwater Management Act (SGMA) as “ecological communities or species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface.”	https://groundwaterresourcehub.org/sgma-tools/mapping-indicators-of-gdes/
117	Habitat and Biodiversity	Land owned by recreation/conservation organization	California Protected Area Database (CPAD)	Land that is protected for its recreation and conservation benefits by a recreation or conservation organization.	https://www.calands.org/cpad/
118	Habitat and Biodiversity	eBird	Cornell Lab of Ornithology	eBird data document bird distribution, abundance, habitat use, and trends through checklist data collected within a simple, scientific framework. Birders enter when, where, and how they went birding, and then fill out a checklist of all the birds seen and heard during the outing.	https://ebird.org/home

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
119-1	Habitat and Biodiversity	Antelope Valley RCIS Cores and Linkages	Desert Mountains Conservation Authority, and Antelope Valley Regional Conservation Investment Strategy Steering Committee	The RCIS area was divided into 15 core habitat areas and 18 landscape linkages for connecting the habitat core areas (or connecting to habitat outside the RCIS area). The habitat core areas and landscape linkages were identified using the conservation values maps from each of the three species groups, the habitat connectivity maps for large and small species, the landscape intactness map, the protected lands map, and the climate stability and climate refugia maps. The core habitat areas (cores) are large, contiguous patches of habitat with higher conservation value, and the linkages are important swaths of habitat that link the cores together to allow species to move and disperse between the habitat core areas and to areas outside of the RCIS area.	https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=175455&inline
120	Habitat and Biodiversity	Soil Carbon	Hengl et al. 2017	The carbon content in soil organic matter from microorganisms, root exudates, decomposed organisms, and soil biota. Soil organic carbon storage is summarized to a depth of 30cm.	https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0169748
121	Habitat and Biodiversity	HerpMapper Occurrence Data	HerpMapper	Occurrence data for amphibians and reptiles collected by citizen science observations.	https://www.herpMapper.org/
122	Habitat and Biodiversity	iNaturalist	iNaturalist - a joint initiative between the CalAcademy of Science and the National Geographic Society	iNaturalist is a citizen science app that allows individuals to record species observations. Observations were downloaded from the Global Biodiversity Information Facility in February 2020.	https://www.inaturalist.org/

#	Theme	Data Name	Source	Description	Additional Information
123	Habitat and Biodiversity	Hotspots of species requiring mitigation - pending transit projects	Patrick Huber - UC Davis	Cumulative hectares of suitable habitat in a 25-hectare region for species that may be impacted by proposed transportation projects in the next two decades. These species have some regulatory protective status that requires compensatory action to mitigate development impacts.	<p>Methods for similar work in the Bay Area described here: https://tnc.box.com/s/np1yj3x4h3qozzg3k5dtg8dfoxx91no</p> <hr/> <p>https://tnc.box.com/s/np1yj3x4h3qozzg3k5dtg8dfoxx91no</p>

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
124	Habitat and Biodiversity	South Coast Missing Linkages	South Coast Missing Linkages	The South Coast Missing Linkages project is a comprehensive plan for a regional network that would maintain and restore critical habitat linkages between existing reserves. These linkages form the backbone of a conservation strategy for southern California where the whole would be greater than the sum of the parts. South Coast Missing Linkages is a highly collaborative inter-agency effort to identify and conserve the highest-priority linkages in the South Coast Ecoregion. Partners include South Coast Wildlands, National Park Service, U.S. Forest Service, California State Parks, The Wildlands Conservancy, The Resources Agency, California State Parks Foundation, The Nature Conservancy, Santa Monica Mountains Conservancy, Resources Legacy Foundation, Conservation Biology Institute, San Diego State University Field Stations Program, Environment Now, Mountain Lion Foundation, and the Zoological Society of San Diego's Conservation and Research for Endangered Species, among others. Cross-border alliances have also been formed with Pronatura, Universidad Autonoma de Baja California, Terra Peninsular, and Conabio, in recognition of our shared vision for ecological connectivity across the border into Baja.	http://www.scwildlands.org/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
125	Habitat and Biodiversity	Resilient Connected Network (All)	The Nature Conservancy	We combined the sites and linkages identified by the combination of resilience, flow, and biodiversity into a single network. The network is designed to represent resilient examples all the characteristic environments of the region while maximizing amount of diversity contained within in them and the natural flow that connects them. By building the network around the natural flows and pathways that allow species populations to shift and expand and then identifying representative resilient sites situated within those pathways, the network is specifically configured to sustain biological diversity while allowing nature to adapt and change.	https://storymaps.arcgis.com/stories/86c89e79e9bf405cac71a71a0fd93590; https://storymaps.arcgis.com/stories/86c89e79e9bf405cac71a71a0fd93590 https://www.nature.org/en-us/what-we-do/our-priorities/protect-water-and-land/land-and-water-stories/climate-resilient-network/ https://www.nature.org/en-us/what-we-do/our-priorities/protect-water-and-land/land-and-water-stories/climate-resilient-network/ https://maps.tnc.org/resilientland/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
126	Habitat and Biodiversity	Mojave Desert Ecoregional Assessment	The Nature Conservancy	This dataset presents the results of an analysis to characterize the distribution of conservation values across the Mojave Desert Ecoregion. Using an ecoregional planning approach followed worldwide by The Nature Conservancy and its partners, we identified a suite of conservation targets (521 species, 44 ecological systems, and seeps and springs are the focus of the plan) and set quantitative conservation goals for each target. We also characterized land-use impacts across the desert, such as roads, urban areas, and agricultural uses. We then used Marxan conservation planning software to help identify and map the relative conservation value of lands across the region for meeting the stated conservation goals. Our analysis involved dividing the entire Mojave Desert Ecoregion into one-square-mile (259-hectare) planning units, synthesizing spatially-explicit information on the conservation targets and anthropogenic disturbance found in each planning unit, and then using this information to identify the relative value of each planning unit in meeting our conservation goals. High conservation value was attributed to areas with low levels of disturbance and unique conservation target occurrences or high concentrations of target occurrences.	https://www.scienceforconservation.org/products/mojave-desert-ecoregional-assessment https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0207678

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
127	Habitat and Biodiversity	West Mojave Least Conflict Assessment	The Nature Conservancy	This is a final summary result of an analysis conducted by The Nature Conservancy to implement the recommendations outlined by environmental NGOs in the white paper "Renewable Siting Criteria for California Desert Conservation Area" dated June 29, 2009. We identified data sources to represent areas that are high conflict based on that white paper as well as land use conditions that might enable least conflict siting for solar development. This grid is a combination of the land use disturbance categories and the spatial scale of conflict factors to use as the draft "Matrix" of areas based on the relative conflict. See report for full sources. For complete methods and inputs, see the associated report, entitled: Solar Energy Development in the Western Mojave Desert: Identifying Areas of Least Environmental Conflict for Siting and a Framework for Compensatory Mitigation of Impacts.	https://databasin.org/datasets/2c304ce76515495c890e816a9e6d3199 https://www.scienceforconservation.org/assets/downloads/West-Mojave-Assessment-2012.pdf
128	Habitat and Biodiversity	Coastal Conservation Strategy	The Nature Conservancy Conserving CA Coastal Habitat	This report assesses whether a coastal area is vulnerable, resilient, adaptive, or other. We measure the resilience of coastal areas to climate change and vulnerability to the impacts of climate change. This dataset identifies opportunities for conservation strategies to maintain coastal habitat area in the face of sea level rise.	https://www.scienceforconservation.org/products/coastal-assessment

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
129	Habitat and Biodiversity	Connectivity	The Nature Conservancy Omniscape	Borrowing principles of resistance and flow from electrical engineering, The Nature Conservancy in California mapped ecological connectivity throughout the state. Omniscape is a novel approach that applies a “moving window” to Circuitscape to enable a wall-to-wall characterization of the contribution of all areas to a connected landscape. It avoids the need to designate core areas and instead, it requires only three parameters which address the following questions: Where are animals moving from and to? How will they respond to various levels of human disturbance? And how far are they likely to go?	https://omniscape.codefornature.org/#/analysis-tour https://omniscape.codefornature.org/#/analysis-tour 3
130	Habitat and Biodiversity	Urban tree carbon	UC Davis Statewide Assessment of Urban Forests Project to the California Fire Urban and Community Forestry Program	The estimated amount of carbon (measured in Metric Tons of CO2-equivalent) stored in street trees in urban areas.	https://escholarship.org/uc/item/8r83z5wb

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
131	Habitat and Biodiversity	National Wetlands Inventory	US Fish and Wildlife Service	"The US FWS National Wetlands Inventory (NWI) is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of US wetlands. NWI data are used by natural resource managers, within the US FWS and throughout the Nation, to promote the understanding, conservation and restoration of wetlands" (USFS)	https://www.fws.gov/wetlands/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
132	Water Resources	Wells and Change in Groundwater Level	CA Department of Water Resources	This dataset depicts change in groundwater level at selected monitoring locations (wells) between two specified years, by season. Change values represent change in groundwater level (elevation) by year and season (fall or spring). Other information on the monitoring location is also included. Positive values indicate groundwater has risen (groundwater surface elevation has increased) from the early year to the late year, while negative values indicate groundwater level surface has fallen (decreased in elevation) from the early year to the late year. Water level monitoring locations and measurements used are selected based on measurement date and well construction information, where available, and approximate groundwater levels in the unconfined to uppermost semi-confined aquifers. For more information on this service, please contact gis@water.ca.gov	https://gis.water.ca.gov/arcgis/rest/services/Geoscientific/i08_GroundwaterLevelChangeSeasonal_Points/FeatureServer/0
133	Water Resources	Hydrogeologically Vulnerable areas	CA State Water Board	Areas over aquifers where soil or rock conditions enable higher rates of recharge and therefore make the aquifer more vulnerable (or susceptible) to surface contaminants.	https://www.waterboards.ca.gov/gama/docs/hva_map_table.pdf

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
134	Water Resources	Points of diversion	CA Water Resources Control Board	Points of Diversion (PODs) are locations where water is being drawn from a surface water source such as a stream or river. Each water right registered with the California State Water Resources Control Board's Division of Water Rights includes an identified point of diversion. Ground water extraction points (such as water supply wells) are generally not included in this dataset.	https://gispublic.waterboards.ca.gov/portal/home/index.html
135	Water Resources	Overdrafted groundwater basins	California Department of Water Resources	The Sustainable Groundwater Management Act (SGMA) directs the Department of Water Resources (DWR) to identify groundwater basins and subbasins in conditions of critical overdraft. As defined by SGMA, "A basin is subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts." Overdraft occurs where the average annual amount of groundwater extraction exceeds the long-term average annual supply of water to the basin. Effects of overdraft can include seawater intrusion, land subsidence, groundwater depletion, and/or chronic lowering of groundwater levels.	https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118/Critically-Overdrafted-Basins

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
136	Water Resources	Priority Groundwater Basins	California Department of Water Resources	California Statewide Groundwater Elevation Monitoring priority basins are determined by the California Department of Water Resources (CDWR) according to the following criteria: overlying population, projected growth of overlying population; public supply wells; total wells; overlying irrigated acreage; reliance on groundwater as the primary source of water; impacts on the groundwater, including overdraft, subsidence, saline intrusion, and other water quality degradation; and any other information determined to be relevant by CDWR.	https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization
137	Water Resources	Adjudicated groundwater basins	California Department of Water Resources	Priority Groundwater basins, in combination with adjudicated areas which have existing governance and oversight in place, account for 98 percent of the pumping (20 million acre-feet), 83 percent of the population (25 million Californians), and 88 percent of all irrigated acres (6.7 million acres) within the state's groundwater basins. Twenty-one of these basins were previously identified as Critically Overdrafted.	https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization
138	Water Resources	Water Quality Index from the Relative Stream Health Index	California Integrated Assessment of Watershed Health - US Environmental Protection Agency	The water quality index includes information about stream conductivity, stream nitrate concentration, and stream turbidity.	https://www.mywaterquality.ca.gov/monitoring_council/healthy_streams/docs/ca_hw_report_111213.pdf

#	Theme	Data Name	Source	Description	Additional Information
139	Water Resources	Naturalness of Active River Areas	California Integrated Assessment of Watershed Health - US Environmental Protection Agency	Those parts of the Active River Area that are still in a natural or semi-natural condition and are assumed to contribute to healthy river/stream function and water- related ecosystem services. These parts include the material contribution areas, the meander belts, the floodplains, and riparian wetlands of a river or stream. The degree of naturalness is used as an indicator of watershed health in the California Integrated Assessment of Watershed Health.	https://www.epa.gov/sites/production/files/2015-11/documents/ca_hw_report_111213_0.pdf
140	Water Resources	Mapped Stream Course	National Hydrography Dataset - US Geological Survey	Mapped stream courses showing streams, rivers, and other linear water bodies.	https://www.usgs.gov/core-science-systems/ngp/national-hydrography
141	Water Resources	Pollutant Loading (Greater LA County)	The Nature Conservancy	A unitless Pollutant Loading metric was created by summing estimated loading for fecal coliform, Total Copper (Cu), Total Lead (Pb) and Total Zinc (Zn) for land use polygons within each Census Block. Fecal coliform and metals were chosen because they are common pollutants for which Total Maximum Daily Loads are in place in the Los Angeles Region and they are indicative of exposure risk to humans and in-stream organisms respectively. The metric doesn't provide information related to absolute loading, but rather makes relative comparisons between blocks based on land use.	https://www.scienceforconservation.org/products/planting-stormwater-solutions https://doi.org/10.1016/j.ufug.2021.127300

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
142	Water Resources	Municipal drinking water supply watersheds	The Nature Conservancy	Using public sources of data, TNC mapped the surface drinking water sources (rivers, reservoirs, lakes, etc.) for 30 million (80%) of California's residents and the watersheds that supply water to those sources. This report evaluates the protection status and health of the watershed supplying drinking water.	https://www.nature.org/media/california/california_drinking-water-sources-2012.pdf
143	Water Resources	Streamflow Alteration	The Nature Conservancy	Quantifying the natural flow regime is essential for management of water resources and conservation of aquatic ecosystems. Understanding the degree to which anthropogenic activities have altered flows is critical for developing effective conservation strategies. Assessing flow alteration requires estimates of flows expected in the absence of human influence and under current land use and water management.	TNC 2020 analysis of existing USGS stream-gage data and functional flow data; under review
		Flow Modification	U.S. Geological Survey	This dataset estimates the probability of streamflow modification for every stream segment in the coterminous U.S. The assessment is based on the integration, modeling, and synthesis of monitoring data collected by the USGS and the U.S. Environmental Protection Agency at more than 7,000 streams and rivers across the conterminous United States from 1980 to 2014.	https://www.sciencebase.gov/catalog/item/5ca5419e4b0c3b00650cbd4

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
144	Water Resources	Impaired waterbodies - 303d listed water bodies	US Environmental Protection Agency	The term "303(d) list" or "list" is short for a state's list of impaired and threatened waters (e.g. stream/river segments, lakes). States are required to submit their list for EPA approval every two years. For each water on the list, the state identifies the pollutant causing the impairment, when known. In addition, the state assigns a priority for development of Total Maximum Daily Loads (TMDL) based on the severity of the pollution and the sensitivity of the uses to be made of the waters, among other factors (40 C.F.R. §130.7(b)(4)).	https://www.epa.gov/waterdata/waters-geospatial-data-downloads#CurrentStateGeospatialData
145	Water Resources	Impaired waterways - 303d listed streams	US Environmental Protection Agency	The term "303(d) list" or "list" is short for a state's list of impaired and threatened waters (e.g. stream/river segments, lakes). States are required to submit their list for EPA approval every two years. For each water on the list, the state identifies the pollutant causing the impairment, when known. In addition, the state assigns a priority for development of Total Maximum Daily Loads (TMDL) based on the severity of the pollution and the sensitivity of the uses to be made of the waters, among other factors (40 C.F.R. §130.7(b)(4)).	https://www.epa.gov/waterdata/waters-geospatial-data-downloads#CurrentStateGeospatialData

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
146	Water Resources	Watersheds HUC10	US Geological Survey	The United States is divided and subdivided into successively smaller hydrologic units which are classified into four levels: regions, subregions, accounting units, and cataloging units. The hydrologic units are arranged or nested within each other, from the largest geographic area (regions) to the smallest geographic area (cataloging units). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system.	https://www.sciencebase.gov/catalog/item/5696a727e4b039675d00a4ef
147	Water Resources	Groundwater Recharge	US Geological Survey	Water that penetrates below the root zone, infiltrating soils and potentially replenishing aquifers.	https://ca.water.usgs.gov/projects/reg_hydro/basin-characterization-model.html
148	Water Resources	Surface Water Quality Monitoring sites	US Geological Survey	The U.S. Geological Survey's (USGS) National Water Information System (NWIS) is a comprehensive and distributed application that supports the acquisition, processing, and long-term storage of water data. Nationally, USGS surface-water data includes more than 850,000 station years of time-series data that describe stream levels, streamflow (discharge), reservoir and lake levels, surface-water quality, and rainfall. The data are collected by automatic recorders and manual field measurements at installations across the Nation.	https://maps.waterdata.usgs.gov/mapper/index.html

#	Theme	Data Name	Source	Description	Additional Information
149	Water Resources	Groundwater quality monitoring sites	US Geological Survey	The USGS National Water Information System (NWIS) contains extensive water data for the nation. The Groundwater database consists of more than 850,000 records of wells, springs, test holes, tunnels, drains, and excavations in the United States. Available site descriptive information includes well location information such as latitude and longitude, well depth, and aquifer. The USGS annually monitors groundwater levels in thousands of wells in the United States. Groundwater level data are collected and stored as either discrete field-water-level measurements or as continuous time-series data from automated recorders.	https://maps.waterdata.usgs.gov/mapper/index.html
150	Water Resources	Runoff	US Geological Survey	Water that flows over the surface of the land into streams and rivers	https://ca.water.usgs.gov/projects/reg_hydro/basin-characterization-model.html

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
151	Habitat and Biodiversity	Areas of Conservation Emphasis (ACE), version 3.0, Terrestrial Connectivity	California Department of Fish and Wildlife	The Terrestrial Connectivity dataset is one of the four key components of the California Department of Fish and Wildlife's (CDFW) Areas of Conservation Emphasis (ACE) suite of terrestrial conservation information along with terrestrial Biodiversity, Significant Habitats, and Climate Resilience. The Terrestrial Connectivity dataset summarizes information on terrestrial connectivity by ACE hexagon including the presence of mapped corridors or linkages and the juxtaposition to large, contiguous, natural areas. This dataset was developed to support conservation planning efforts by allowing user to spatially evaluate the relative contribution of an area to terrestrial connectivity based on the results of statewide, regional, and other connectivity analyses.	https://wildlife.ca.gov/Data/Analysis/ACE
152	Habitat and Biodiversity	Areas of Conservation Emphasis (ACE), version 3.0, Species Biodiversity	California Department of Fish and Wildlife	Species Biodiversity Summaries combine the three measures of biodiversity developed for ACE into a single metric. These three measures include: 1) native species richness, which represents overall native diversity of all species in the state, both common and rare, as well as climate vulnerable species and important game and sport fish species; 2) rare species richness, which represents diversity of rare species; and, 3) irreplaceability, which is a weighted measure of endemism that highlights areas that support unique species of limited range.	https://wildlife.ca.gov/Data/Analysis/ACE

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
153	Habitat and Biodiversity	Areas of Conservation Emphasis (ACE), version 3.0, Terrestrial Native Species Richness	California Department of Fish and Wildlife	Native species richness is a measure of species biodiversity, and is one measurement used to describe the distribution of overall species biodiversity in California for the California Department of Fish and Wildlife (CDFW) Areas of Conservation Emphasis Project (ACE). Other measures of terrestrial species biodiversity included in the ACE terrestrial biodiversity summary are rare species richness and terrestrial endemism. Here, native species richness represents a count of the total number of native terrestrial species potentially present in each hexagon based on species range and distribution information. This dataset depicts the distribution of richness of all native species in the state, both common and rare. The data can be used to view patterns of species diversity, and to identify areas of highest native richness across the state and in each ecoregion. Users can view a list of species that contribute to the richness counts for each hexagon.	https://wildlife.ca.gov/Data/Analysis/ACE
154	Habitat and Biodiversity	Coachella Valley Multiple Species Habitat Conservation Plan	Coachella Valley Conservation Commission	The Coachella Valley Multiple Species Habitat Conservation Plan is a shared regional vision for balanced growth to conserve Coachella Valley's natural resources while also building a strong economy vital to our future.	https://www.cvmshcp.org/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
155	Habitat and Biodiversity	Desert Renewable Energy Conservation Plan	Bureau of Land Management	The Desert Renewable Energy Conservation Plan (DRECP) is focused on 10.8 million acres of public lands in the desert regions of seven California counties – Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego. It is a landscape-level plan that streamlines renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities.	https://www.blm.gov/programs/planning-and-nepa/plans-in-development/california/desert-renewable-energy-conservation-plan https://navigator.blm.gov/data?keyword=DRECP
156	Habitat and Biodiversity	Los Angeles County Significant Ecological Areas	Los Angeles County	Significant Ecological Areas (SEA) are officially designated areas within LA County with irreplaceable biological resources. The SEA Program objective is to conserve genetic and physical diversity within LA County by designating biological resource areas that are capable of sustaining themselves into the future.	https://planning.lacounty.gov/site/sea/
157	Habitat and Biodiversity	Lower Colorado River Multi-Species Conservation Program	Bureau of Reclamation	The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) was created to balance the use of the Colorado River water resources with the conservation of native species and their habitats. The program works toward the recovery of species currently listed under the Endangered Species Act (ESA). It also reduces the likelihood of additional species listings.	https://www.lcrmcp.gov/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
158	Habitat and Biodiversity	Conservation Assessment of Orange County	Orange County Transportation Authority	Priority Conservation Areas identified for the Conservation Assessment of Orange County, CA, complete by the Conservation Biology Institute for the Orange County Transportation Authority in 2009. Priority Conservation Areas (PCAs) identify lands based on biological criteria.	https://consbio.org/products/reports/conservation-assessment-of-orange-county
159	Habitat and Biodiversity	Orange County Habitat Conservation Plan	Natural Communities Coalition	The County of Orange Environmental Management Agency (EMA) has prepared a Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP) for the Central and Coastal Subregion of the County of Orange. The NCCP/HCP was prepared in cooperation with the California Department of Fish and Game and U.S. Fish and Wildlife Service. The primary goal of the NCCP/HCP is to protect and manage habitat supporting a broad range of plant and animal populations that now are found within the Central and Coastal Subregion.	https://oconconservation.org/about-ncc/
160	Habitat and Biodiversity	Upper Santa Ana River Wash Habitat Conservation Plan	San Bernardino Valley Water Conservation District	The Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan) is the culmination of two decades of coordination among Task Force partners to develop an integrated approach to permit and mitigate construction and maintenance activities within the Wash area, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement.	https://www.sbvacd.org/santa-ana-wash-plan

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
161	Habitat and Biodiversity	USFWS Threatened & Endangered Species Active Critical Habitat	U.S. Fish and Wildlife Service	Spatial data for active proposed and final critical habitat for FWS only and Joint FWS/NMFS threatened and endangered species. ECOS is a FWS-sponsored platform for FWS data. The ECOS critical habitat on- line mapper includes (some, not all of the) proposed and final critical habitat for species listed as Threatened and Endangered by the FWS, or that are jointly managed by FWS/NMFS.	https://ecos.fws.gov/ecp/report/table/critical-habitat.html
162	Habitat and Biodiversity	Western Riverside Habitat Conservation Plan	Riverside County Environmental Programs Division (EPD)	The Western Riverside County Multiple Species Habitat Conservation Plan (WR-MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on conservation of species and their associated habitats in Western Riverside County. The overall goal of this plan is to maintain biological and ecological diversity within a rapidly urbanizing region. The MSHCP allows Riverside and its Cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal Endangered Species Acts.	https://rctlma.org/epd/WR-MSHCP

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
163	Habitat and Biodiversity	Integrated Regional Conservation and Development	California Strategic Growth Council and the California Biodiversity Council	<p>RePlan is a core component of the California Strategic Growth Council’s (SGC) Integrated Regional Conservation and Development (IRCAD) initiative. This online tool supports the development and implementation of a sustainable and balanced vision for regional conservation and economic development.</p> <p>RePlan integrates the latest environmental, social, and economic data with analytic and reporting tools to allow users to identify optimal locations for implementing California’s conservation, resource management and development objectives. This tool helps to align regional planning and management activities in light of State and regional conservation, development, equity and resilience goals.</p>	http://replan-tool.org/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
164	Habitat and Biodiversity	USFS Ecosystem Services Assessment	United States Forest Service	<p>Healthy forest ecosystems are ecological life-support systems. Forests provide a full suite of goods and services that are vital to human health and livelihood, natural assets we call ecosystem services. Many of these goods and services are traditionally viewed as free benefits to society, or "public goods" - wildlife habitat and diversity, watershed services, carbon storage, and scenic landscapes, for example. This project quantifies and economically values the following ecosystem services on the landscape:</p> <p>1) Water quantity and quality, including watershed capacity to regulate erosion and sedimentation 2) Recreation opportunities 3) Carbon sequestration</p> <p>The project also evaluates the legal obligations and responsibilities of the Forest Service pertaining to air quality, biodiversity, energy and minerals, and cultural, tribal, and spiritual services.</p>	<p>https://www.fs.fed.us/wwetac/brief/landscapes-SEVA5.php (Data available through request)</p>

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

#	Theme	Data Name	Source	Description	Additional Information
165	Environmental Justice, Equity, and Inclusion	Urban Heat Island, Air Temperature	University of California, Davis and the Forest Service Pacific Southwest Research Station	Urban Heat Island, Air Temperature is reported by high and medium urban heat island threat classes from the source report. Large urban areas often experience higher temperatures, greater pollution, and more negative health impacts during hot summer months, when compared to more rural communities. This phenomenon is known as the urban heat island. Heat islands are created by a combination of heat-absorptive surfaces (such as dark pavement and roofing), heat-generating activities (such as engines and generators), and the absence of vegetation (which provides evaporative cooling).	https://escholarship.org/uc/item/8r83z5wb
166	Environmental Justice, Equity, and Inclusion	Tree Equity Score	American Forests	The Tree Equity Score tool calculates a score for all 150,000 neighborhoods and 486 municipalities in urban America. Each score indicates whether there are enough trees for everyone to experience the health, economic and climate benefits that trees provide. The scores are based on how much tree canopy and surface temperature align with income, employment, race, age and health factors.	https://www.americanforests.org/our-work/tree-equity-score/
					https://www.americanforests.org/our-work/tree-equity-score/

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

From: Appiah, Francis O@DOT <[REDACTED]>
Sent: Thursday, March 17, 2022 11:25 AM
To: SCAG Green Region
Subject: Advance Mitigation

Hello,

Caltrans has completed an Advance Mitigation Regional Needs Assessment (RAMNA) that will be for its Transportation Projects.

This RAMNA is known as the “Southern California Coast and Southern California Mountains and Valleys”; And the Geographical Area of Interest begins in Santa Barbara and extends into San Diego County. This particular RAMNA overlaps with Caltrans District 5 Santa Barbara/San Luis Obispo, District 8 San Bernardino, District 11 San Diego, and District 12 Santa Ana/ Irvine-Orange County. It will focus on plant and animal species, wetlands, and non-water impacts as result of Transportation Projects.

Having an Advance Mitigation Program in the District will:

- Improve environmental outcomes by consolidating potential compensatory mitigation needs from multiple projects in a given area and investing them strategically to address conservation priorities
- It will improve mitigation outcomes by having better planned and delivered mitigation projects that are successful and compliant
- Improve project delivery outcomes by having appropriate mitigation already in place when needed
- And finally, it will provide beneficial environmental outcomes by reducing costs and project delays that meet the requirements for multiple projects during the early stages of the planning process

The SCAG’s version of Advance Mitigation may be more than Transportation Projects (probably Housing, Farming, Water, Electricals and more). Housing and other components will bring increase demands on Transportation. Having Advance Mitigation will be very important-Knowing the resources in the SCAG Region and plan to mitigate before any project impacts occur. For this reason, having the SoCal GreenPrint will be also important because the GreenPrint will take all inventory of the available resources within the SCAG Region.

Thank you,

Francis Appiah
Mitigation Specialist
Department of Transportation
Division of Environmental Planning
100 S. Main Street, Los Angeles, CA 90012
Mobile: [REDACTED]

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)



March 21, 2022

Via Electronic Mail

(scaggreenregion@scag.ca.gov)

Southern California Association of Government
900 Wilshire Blvd., Ste. 1700
Los Angeles, CA 90017

RE: Comments and Concerns on SoCal Greenprint

Dear Members of the Board, Committee Members, and Staff:

This letter is sent in connection to Tejon Ranch Company’s letters dated August 18, 2021, October 5, 2021, and December 9, 2021, and, more recently, in the Greenprint’s Science and Strategic Advisors request for feedback on the proposed data layers for inclusion in the SoCal Greenprint tool. Tejon Ranch continues to object to the SoCal Greenprint in its current form, and more specifically, to the inclusion of the Antelope Valley Regional Conservation Investment Strategy (“AVRCIS”) as a dataset in the proposed SoCal Greenprint. It has been clearly demonstrated by the weaponization of the AVRCIS in challenging land use approvals under the Antelope Valley Area Plan that Greenprint, as currently envisioned, can and will be abused by opponents of locally planned sustainable growth, infrastructure, and housing to attack locally approved general plans and projects through litigation under the California Environmental Quality Act (CEQA). The further weaponization of CEQA threatens to stop regional economic growth and impedes the requirement to produce over 1.3 million housing units in Southern California under the Regional Housing Needs Assessment.

1. **The AVRCIS should be rejected as an approved dataset for Greenprint.** The attached public comment letters to California Department of Fish and Wildlife (“CDFW”) and Desert Mountains Conservation Authority (“DMCA”) detail that the AVRCIS was developed by conflicted individuals engaged in a non-transparent and deeply flawed “public” process where key stakeholder input was ignored (Los Angeles County withdrew from the effort as a result) and the AVRCIS failed to meet the best available science requirements as admitted by the proponents in their response to public comments, but ignored by CDFW and DMCA. The AVRCIS is inconsistent with and disregards Los Angeles County’s General Plan and directly conflicts with the Antelope Valley Area Plan, which was subject to a stringent environmental review process and is more scientifically accurate than an AVRCIS that uses regional level modeling based on less specific criteria and higher-level analysis. SoCal Greenprint is charged with including only the best available science. A failure to include best available science will invalidate the Greenprint as a legitimate conservation planning tool and since the AVRCIS has been demonstrated to be deficient and inferior in presenting best available science, by ignoring project level science for the Centennial project and the science supporting the AVAP Plan and the

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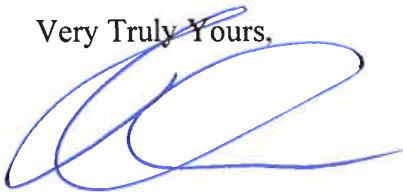
Northwest SR-138 Corridor expansion, SCAG staff must remove the AVRCIS in its entirety from Greenprint or risk jeopardizing its validity. Tejon Ranch Company and other stakeholders identified sources of best available science for inclusion in the AVRCIS that were summarily rejected and blatantly ignored by its proponents, which resulted in a flawed AVRCIS. As further outlined in the attached letters, the AVRCIS is an unfortunate example of how the development of well-intentioned conservation tools can be hijacked by radical environmentalists and the tools then weaponized to challenge and litigate approved projects as has already occurred with the Centennial project and will undoubtedly occur in the future as the Antelope Valley strives to meet its housing and economic development needs.

2. **Greenprint should apply only where lands are lawfully designated by Local Government for agricultural and open space.** SCAG staff reported to stakeholders that The Nature Conservancy intends to include 166 different data sets, which they propose should potentially overlie *all* lawfully established land use planning within the SCAG region. Greenprint can and should be limited in terms of geographic applicability. Greenprint should only apply where local jurisdictions have expressly designated lands for agricultural use or open space. Greenprint should be prohibited from being used for where lands have already been identified by local jurisdictions as suitable for development. It is problematic and particularly troubling that the 166 different data sets currently proposed to populate Greenprint do not include locally approved general plans and lawful land use designations. This approach cannot be regarded as justifiable or consistent with SCAG's pledge to respect and adhere to local land use authority and planning, nor SCAG's commitment to incorporate only the best available scientific data. Before proceeding with any regional planning tool, SCAG staff must take responsibility to ensure that any land use data sets incorporated into Greenprint reflect the best available science, which in the instance of the AVRCIS is the project level science for the Centennial project, the Northwest SR-138 Corridor expansion and the science supporting the AVAP Plan.

Considering the concerns stated above, we respectfully request that SCAG Leadership, the Regional Advance Mitigation Planning and Science and Strategic Advisory Group and the Regional Council move forward in a manner that is consistent with SCAG's stated public purpose it has put forth and assure that Greenprint will not include the deeply flawed AVRCIS as a data set. We urge SCAG to undertake a deliberate and meaningful effort to immediately address and rectify the concerns stated above.

We appreciate SCAG's attention to these vital concerns.

Very Truly Yours,



Marc W. Hardy
Senior Vice President/General Counsel



March 28, 2022

Kome Ajise
Southern California Association of Governments (SCAG)
ATTN: Maggie Aguilar <aguilarm@scag.ca.gov>
900 Wilshire Blvd., Ste. 1700
Los Angeles, CA 90017

RE: Comments on the Proposed Regional Advance Mitigation Policy Framework

Dear Mr. Ajise:

Endangered Habitats League (EHL) generally supports the proposed Regional Advance Mitigation Program (RAMP) Policy Framework and has the following comments. For your reference, EHL is a Southern California regional conservation group dedicated to ecosystem protection and sustainable land use.


EHL has extensive experience with RAMPs for transportation agencies while serving on stakeholder advisory committees. In Riverside County, the Western Riverside Multiple Species Habitat Conservation Program served as advance mitigation for projects of the Riverside County Transportation Commission. Time and cost savings for the agency were documented by a RAND study, endangered species permits were quickly obtained, and citizen opposition to major highway construction markedly reduced due to a conservation framework. In San Diego County, SANDAG made use of the San Diego Multiple Species Conservation Program for transportation mitigation, foregoing lengthy project-by-project permitting, contributing to a regional reserve, and building projects without opposition. In Orange County, the Orange County Transportation Authority created a Natural Community Conservation Plan/Habitat Conservation Plan for freeway improvements, reaped accolades from the community, and even added streamlined wetlands permitting to the program.

In all cases, Program EIRs provided streamlined CEQA review for the totality of biological impacts, thus providing benefits beyond endangered species. Your agency heard presentations from both the Riverside and Orange programs. We also note that Caltrans is enthusiastic about RAMPs

Our conclusion is that RAMPs for transportation projects have a track record of success for the agencies involved and for the environment. Because housing production is linked to transportation infrastructure, housing is a co-benefit. We urge SCAG to move forward on the RAMP to create a program unique to the region's needs, using collaboration at all steps, and bringing benefits to multiple agencies in our region.

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

Yours truly,



Dan Silver
Executive Director



March 29, 2022

Submitted via email to: SCAGGreenRegion@scaq.ca.gov

Kome Ajise
Southern California Association of Governments (SCAG)
900 Wilshire Blvd., Ste. 1700
Los Angeles, CA 90017

RE: Proposed Regional Advance Mitigation Program Policy Framework (Comments)

Dear Mr. Ajise:

Friends of Harbors, Beaches and Parks (FHBP) appreciates the opportunity to provide substantive feedback on the Southern California Association of Governments' (SCAG) proposed Regional Advance Mitigation Program (RAMP) Policy Framework. **We are supportive of the RAMP Policy Framework**, but offer a few substantive comments and historical reminders to strengthen the document.

By way of background, FHBP led a coalition of conservation and community groups in 2005 to support the inclusion of a RAMP when the Orange County Transportation Authority (OCTA) considered its ½-cent sales tax renewal. Because a coalition of 30+ environmentally focused organizations supported the transportation measure, the RAMP, and the alignment of goals (transportation and conservation)—FHBP was successfully able to dissuade *any group* from litigating the measure or its environmental review process because of the innovative and extraordinary benefits of the RAMP. This no doubt saved time, money, and effort on all sides. Further, the RAMP created a solid foundation to partner and collaborate with OCTA on numerous efforts and programs over the last 17 years. RAMPs bring parties together for a common goal.

Our comments on the documents are as follows:

Section: Background

It may be helpful in the Background Section to acknowledge that both a housing mandate (Regional Housing Needs Assessment) and conservation mandate (Executive Order N-82-20) exist *simultaneously*. An example of a conservation mandate is the statewide 30x30 Campaign. Further, we believe both housing and conservation goals can be met since they are not mutually exclusive.

Second, it may be helpful in this section to incorporate that RAMPs help meet local, regional, state, and federal policies and goals. This includes such polices and plans like Ventura's Saving

Open Space and Agricultural Resources (SOAR) program or the California Air Resources Board's Natural and Working Lands Implementation Plan. This means the SCAG RAMP would provide co-benefits simply by existing and, further, upon implementation it helps achieve multiple objectives in the SCAG region and across the state.

Third, another concept to include in the Background is that the science is clear on how to be successful with conservation planning. After decades of successes and failures in both urban and conservation planning—there are numerous ways science, baseline conditions, and planning all intertwine. Some of these scientific documents on how to be successful in conservation include the State Wildlife Action Plan or the Wildfire and Forest Resilience Action Plan. Again, the SCAG RAMP ties directly into these types of plans and helps achieve their goals based on science.

Section: Goals

While there is a risk to adding additional goals, we suggest two more goals be considered because they either align with existing SCAG policy positions or have been field tested elsewhere with great success (such as the OCTA RAMP). These potential new goals include:

- Incorporating wildlife corridors and connectivity
- Committing to develop a science-based methodology to evaluate projects

Additionally, acknowledging the types of conservation formats that RAMPs could harness may also be helpful in the Goals Section. These could include, but are not limited to: acquisition, restoration, management, climate mitigation, sea level rise protections, wildfire buffers, etc.

Further, using existing data, SCAG could complete a gap analysis of species coverage within existing RAMPs and Conservation Plan geographies. This research could answer what plans cover what species and what is missing since the plan was adopted. Secondarily, could those existing plans benefit from additional species or habitat inclusion above and beyond what is required in their plans? For example, are there new needs that should/could be addressed to keep the ecosystem functioning at the highest possible level?

Finally, SCAG could also consider a RAMP pilot program for charismatic species (such as monarch butterflies, cougars, and Joshua Trees). These species maybe outside of existing RAMPs, but whose existence is threatened and tenuous and could benefit from a targeted approach.

Section: Data Policies

We support the themes, data sets, and policies and actually have used many of them before in our own conservation mapping work. However, it is important to note that there are better ways to invest in mitigation when **more information is present**. For example, data on equity, tree cover, gentrification, and sea level rise are critical for understanding the big picture and planning for the future (or correcting past planning mistakes). Additionally, there is great potential for multi-benefit outcomes that address the biodiversity crisis (like species protection) **AND also** directly benefit people (like improving access and equity to nature). Another example

is that protecting habitat also helps alleviate the drought by protecting water supply, allowing for groundwater recharge, and the stabilizing the health of the aquifer. The intersections and overlaps are many and should not be discounted.

Section: Appendices

The list of existing RAMPs in the Appendix is helpful to understanding the abundance and possible jurisdictional collaboration with current RAMP operators, but it also allows an understanding of what geographies across the SCAG region **do not** have an existing RAMP. We suggest inclusion of a map with the existing RAMP boundaries as it may be beneficial for context. A similar map was included in the adopted Natural and Farmlands Appendix of the 2020 Connect SoCal document.

We also suggest a new appendix be created quantifying the types of permits typical development and/or transportation projects need that could be streamlined because of a RAMP process. For example, each proposed project would have to go through individual rather than collective permit processing. This is not only costly, but also time consuming. The types of permits and the timeframe applicants may need to obtain permissions and mitigation requirements from various agencies include: 401 and 404 permits, Individual or Nationwide permits, a Section 7 or 10 consultation, Streambed Alteration Agreements, wetland delineations, the California Environmental Quality Act (CEQA) checklist, etc. We believe it would be helpful to document in the Policy Framework the time, money, and effort saved through a streamlined RAMP process. Numerous research papers exist on this that quantify the benefits and were included in our letter dated January 18, 2022.

To be illustrative on this topic, the OCTA RAMP included 13 individual freeway projects—each of which would have had to been examined individually through the CEQA and federal environmental review process. Because the RAMP existed, **all 13 projects were evaluated, mitigated, and permitted as one project.** OCTA completed this permitting in record time—just five years for all 13 freeway projects.

Dashboards & Tools

Finally and separately, we applaud SCAG for continuing its efforts to deploy useful, relevant, timely, and innovative digital tools. Some of the tools we've seen SCAG release over the last few years include the Housing Element Parcel Tool, Climate Adaptation and Resilience Toolbox, the COVID-19 Vulnerability Dashboard, the data portal, etc. The creation of the RAMP tool is not only in line with the existing SCAG work plan, but also in line with the tools used and created for local jurisdictions, planners, and public.

To further this point, SCAG also worked with Calthorpe to use UrbanFootprint for its scenario planning modeling (UrbanFootprint) within Connect SoCal. Then, later, SCAG collaborated to build an **open source** version of UrbanFootprint **with an conservation focus**. This conservation-focused modeling tool was highlighted in the SCAG Connect SoCal Sustainable Communities Strategy (pg. 43-44). Thank you to SCAG for continuing to be innovative and for prioritizing multiple scenario planning models—one that takes into consideration a conservation

component. The RAMP and mapping tool are simply the next phase of tool development and deployment as promised as mitigation measures in the Program Environmental Impact Report.

Should you have any questions on our comments, please reach out to: GreenVision@FHBP.org. Thank you for the opportunity to comment.

Sincerely,



Michael Wellborn
President



March 30, 2022

Submitted via email to: SCAGGreenRegion@scag.ca.gov

Clint Lorimore, President
 Southern California Association of Governments (SCAG)
 900 Wilshire Blvd., Ste. 1700
 Los Angeles, CA 90017

RE: Comments on the Proposed Regional Advance Mitigation Policy Framework

Dear Honorable President Lorimore:

The below signed organizations wish to convey general support for the proposed Regional Advance Mitigation Program (RAMP) Policy Framework paper, but offer substantive comments on the document below.

Background

As indicated in the Policy Framework, many development and infrastructure projects are bound by numerous state and federal laws—and mitigation is typically left to the end of the process. These delayed regulatory requirements make a mandatory component more expensive, urgent, and sometimes less available due to high demand. One explanation believed missing from the Framework’s background is that multiple projects can be linked together to package the mitigation needs **and** the regulatory process together—through a RAMP. Consequently, not only is the mitigation streamlined, but so is the permitting process. This saves considerable time, money, and offers better opportunities for mitigating impacts.

Policy Framework

While there are existing RAMPs in the SCAG region, this Framework is meant to complement, not override, the existing programs. There are several benefits to supplementing existing programs that should be acknowledged in the Framework. First, the creation of a six county-wide program allows for RAMP participants to look in a wider geography to find mitigation locations. More geography means more mitigation opportunity sites. Second, the SCAG RAMP could provide additional benefits not covered under the purview of the existing localized

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

RAMPs. For example, to expand allowable uses under an existing transportation based RAMP could involve voter concurrence—a heavy lift and expensive undertaking no doubt. A more comprehensive SCAG RAMP would allow for others (across multiple agencies) to participate beyond a transportation-focused RAMP and have their project mitigation needs met.

As noted, some jurisdictions are not presently benefiting from a RAMP. This SCAG RAMP gives smaller agencies an opportunity to participate in a process that has extensive benefits, but does not heap all of the work onto the smaller agency with limited staff, capacity, and funding.

Regional Policy Foundation

It may be helpful to acknowledge in the Policy Framework section that participation in a RAMP as an agency, jurisdiction, or developer is entirely voluntary. Further, a RAMP may be better suited to those entities with ongoing, extensive, or long-term projects with a multitude of impacts. RAMPs provide certainty and assurances in the permitting process.

Natural and Farmlands Conservation and Climate Resolution

It should not be overlooked that numerous non-governmental organizations and regional and state agencies have already identified projects for acquisition or restoration, or better yet, simply need funding to complete them. The collaborative opportunities of a SCAG RAMP in meeting housing and transportation needs, while at the same time meeting conservation needs, cannot be overstated.

PEIR Mitigation Measures

We concur that the creation of a RAMP and digital mapping tool were listed as legal obligations in the SCAG Program Environmental Impact Report (PEIR) for the 2020 Connect SoCal. The expectation with these mitigation measures, as with all other mitigation measures in the PEIR, is that they must be completed in a timely fashion. Mitigation measures cannot be delayed permanently or deleted.

RAMP Opportunity & Challenge Areas

We also agree that a SCAG RAMP provides better, more comprehensive geographic coverage and therefore improved jurisdictional partnership opportunities across county lines.

Data Policies

We agree with the Data Policies listed in the Framework. The data source list appropriately displays the existing environment. This baseline data will be the cornerstone of a reliable, accurate, and relatable digital mapping tool. For example, data layers from cities with general plan designations, the California Department of Forestry and Fire Protection fire perimeters, California Department of Water Resources stream locations, US Geological Survey fault lines, or Bureau of Land Management ownerships are informational only and do not convey a position, direction, or proposal about the future. The data layers simply show us what is on the ground or its history, right now.

Data Selection Criteria

We support the seven data layer themes proposed for inclusion in the tool. These include:

- 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

Appendix A – Established RAMPs in the SCAG Region

It may be informative to list the signatories to the Conservation Plans to understand the diverse mix of participants (cities, counties, transportation agencies, developers, etc.) that have already realized benefits of RAMPs. We also recommend including the scope and/or limits of the RAMP (i.e., specific developments, geographies, and/or projects) so the breadth and depth of information is understood.

We appreciate the opportunity to comment on and support the process of developing a SCAG RAMP. Thank you.

Sincerely,

Michael Wellborn
President
Friends of Harbors, Beaches and Parks

Dan Silver, M.D.
Chief Executive Officer
Endangered Habitats League

Claire Schlotterbeck
Executive Director
Hills For Everyone

Terry M. Welsh, M.D.
President
Banning Ranch Conservancy

Rico Mastrodonato
Senior Government Affairs Manager
The Trust for Public Land

Mandy Sackett
California Policy Coordinator
Surfrider Foundation

Gayle Waite
President
Laguna Canyon Conservancy

Kim Kolpin
Executive Director
Bolsa Chica Land Trust

Denise Erkeneff
Chapter Coordinator
Surfrider Foundation - OC Chapter

Claire Robinson
Managing Director
Amigos de los Rios

Charles Klobe
President
Stop Polluting Our Newport

Rich Gomez and Gloria Sefton
Co-Founders
Saddleback Canyons Conservancy

Pamela Flick
California Program Director
Defenders of Wildlife

Damon Nagami
Staff Attorney
Natural Resources Defense Council

Elizabeth Lambe
Executive Director
Los Cerritos Wetlands Land Trust

Larry Klementowski
President
Chino Hills State Park Interpretive Association

Rev. Susan Chamberlain
President
OC Interfaith Coalition for the Environment

Belén Bernal
Executive Director
Nature 4 All

Melissa Baffa
Executive Director
Ventura Land Trust

Carol Tuch
President
Women for Orange County

R Lee Paulson
President
Responsible Land Use

Angela Chen Lindstrom
President
Friends of Coyote Hills

Ed Amador
Co-Founder
Canyon Land Conservation Fund

Elizabeth Wallace and Rebecca Crowe
Conservation Chair and Vice President
California Native Plant Society -
Orange County Chapter



April 1, 2022

Southern California Association of Governments
Regional Advance Mitigation Planning Advisory Task Group
c/o SoCal Greenprint Team
900 Wilshire Blvd., Suite 1700
Los Angeles, CA 90017

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

via electronic mail: scaggreenregion@scag.ca.gov

RE: Business and Construction Industry Coalition Summary Letter and Attached Comments concerning the Greenprint and the Draft Regional Advanced Mitigation Program (RAMP) Policy Framework that was presented at the February 18, 2022 meeting of SCAG’s Regional Advance Mitigation Planning Advisory Task Group.

Dear President Lorimore and Hon. Members of the Task Group:

In September 2020, we – as regional business and construction industry leaders – broadly supported SCAG’s adoption of its 2020 RTP/SCS “Connect SoCal”. We did so after months of working hand-in-hand with SCAG Leaders and Staff to assure that Connect SoCal would truly enable the production and implementation of the over \$650 billion worth of infrastructure and 1.3 million housing units called for in that plan. In the year and a half since its adoption, the need for these benefits has only increased. Likewise, the current local efforts to implement RHNA and take advantage of the historic infrastructure funding opportunities under the federal Infrastructure Investment and Jobs Act (totaling \$1.2 trillion) have both combined to highlight the urgency and critical need for Connect SoCal’s implementation to be a true enabler of this much needed development – and not an impediment.

Considering this, we’ve been greatly troubled by the ways that SCAG is proposing to implement two aspects of Connect SoCal: (i) the Greenprint, related to regional data sharing, and (ii) the Regional Advance Mitigation Program – or RAMP, related to land conservation and mitigation. Concerning these, SCAG’s current proposals are unfolding in ways that threaten to harm our region’s ability to achieve the infrastructure and housing benefits that Connect SoCal promises.

The good news is that SCAG’s Advisory Task Group (ATG) and the Regional Council can easily correct both the Greenprint and the RAMP at this early stage in their development, as explained in our attached comments. By following our recommendations, the Regional Council and SCAG can assure that the Greenprint and RAMP will not conflict with local governments’ existing land use plans and prerogatives, but rather they will complement and enable them. This will result in a Greenprint and RAMP that both are beneficial to our region and supportive of Connect SoCal’s goals related to housing, infrastructure, and environmental benefits.

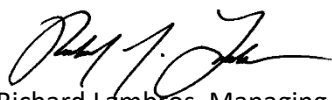
Our attached comments concerning both the Greenprint and RAMP efforts focus on the fact that both were launched without threshold principles defining them. Our comments can be summarized as follows:

- SCAG needs to stay focused on the Greenprint, such that all work on the current iteration of the Greenprint must be halted and the data pulled back until clear policy direction and guidance is in place.
- SCAG needs to consider the Greenprint and the RAMP individually and put in place policy guidance appropriate for each.

- SCAG needs to utilize our Coalition’s recommended core principles regarding the development of the RAMP, which are:
 1. Above all, the RAMP must be designed to facilitate achieving the housing and infrastructure benefits of Connect SoCal, not impede them. Thus, the RAMP should be a tool used to help expedite and enable the development that Southern California needs.
 2. We do not support the development of a single, massive, region-wide mitigation banking program conducted under SCAG’s auspices. Instead, we believe SCAG should support and help enable subregional RAMPs at properly scaled county levels or smaller (the OCTA mitigation bank is a good example of this).
 3. SCAG must respect the primacy of the local governments and other lead agencies that are most responsible for approving plans and projects and determining how much and how best to mitigate their impacts. It is not a proper role of SCAG to undercut or prejudice the rightful powers and prerogatives belonging to these other entities.
 4. The RAMP approach to mitigation must not impede or frustrate the development of infrastructure, housing, and other developments reflected in previously approved projects and plans. Given this imperative and the language of the mitigation measures that call for the RAMP, SCAG should aim to focus its RAMP only on agricultural lands and open space so as not to impact already approved, planned, or sited projects.

We greatly appreciate SCAG’s attention to the issues raised above and in the more detailed, attached comments. We look forward to our continued participation in SCAG’s efforts related to both the Greenprint and the RAMP, and to working collaboratively with you to assure the advancement of our region’s economy, infrastructure, housing, livability, and well-being.

Sincerely,



Richard Lambros, Managing Director
Southern California Leadership Council




Tracy Hernandez, Chief Executive Officer
Los Angeles County Business Federation (BizFed)




Jeff Montejano, Chief Executive Officer
Building Industry Association of Southern California (BIASC)




Maria Salinas, President & CEO
Los Angeles Area Chamber of Commerce



LOS ANGELES AREA
CHAMBER OF COMMERCE

Jon Switalski
Jon Switalski, Executive Director
Rebuild SoCal Partnership



Ray Baca
Ray Baca, Executive Director
Engineering Contractors' Association (ECA)



Jeff Ball
Jeff Ball, President & CEO
Orange County Business Council (OCBC)



Paul Granillo
Paul Granillo, President & CEO
Inland Empire Economic Partnership (IEEP)



Robert C. Lapsley
Robert C. Lapsley, President
California Business Roundtable (CBRT)



Dan Dunmoyer
Dan Dunmoyer, President & CEO
California Building Industry Association (CBIA)



Matthew Hargrove
Matthew Hargrove, President & CEO
California Business Properties Association (CBPA)
And Representing
BOMA California and NAIOP State Council



Rachel Michelin
Rachel Michelin, President & CEO
California Retailers Association (CRA)



Debra Carlton, Executive Vice President, State Public Affairs, California Apartment Association



Aaron Taxy, Director of Government and Public Affairs Building Owners and Managers Association of Greater Los Angeles (BOMA/GLA)



Mario Rodriguez, Chairman Hispanic 100



Bradley Kimball

Bradley Kimball, Executive Vice President Southern California Contractors Association (SCCA)



Jeremy Harris, President & CEO Long Beach Area Chamber of Commerce



Adam Wood, Chief Administrator Building Industry Legal Defense Foundation



Timothy Jemal, Chief Executive Officer NAIOP SoCal



Luis Portillo, President & CEO San Gabriel Valley Economic Partnership



Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)

Ivan Volschenk, President & CEO
Santa Clarita Valley Chamber of Commerce



SANTA CLARITA VALLEY
Chamber of Commerce

Dexter McLeod

Dexter McLeod, Chief Executive Officer
L.A. South Chamber of Commerce



South Chamber
of Commerce

Carolyn Cavecche

Carolyn Cavecche, President & CEO
Orange County Taxpayers Association



Victoria Hernandez, Executive Director
South Orange County Economic Coalition



Donna Duperron, President & CEO
Torrance Area Chamber of Commerce



Louise Lampara, Executive Director
Ventura County Coalition of Labor, Agriculture and
Business (CoLAB)



Michael W. Lewis

Mike Lewis, Senior Vice President
Construction Industry Air Quality Coalition
(CIAQC) and Construction Industry Coalition on
Water Quality (CICWQ)



**April 1, 2022 Comments
of the Business and Construction Industry Coalition
Concerning the Greenprint and
the Regional Advance Mitigation Program (RAMP) Policy Framework
that was presented
at the February 18, 2022 meeting of SCAG’s
Regional Advance Mitigation Planning Advisory Task Group
(RAMP-ATG).**

On behalf of the business, construction industry, and community organizations subscribing to this letter (the “Coalition”), we respectfully provide these comments concerning the Southern California Association of Governments’ (SCAG) Draft Regional Advance Mitigation Program (RAMP) Policy Framework (the “Draft RAMP Framework”). The Draft RAMP Framework was presented at the February 18, 2022 meeting of the Regional Advance Mitigation Planning Advisory Task Group (RAMP-ATG). Our concerns about the Draft Framework are both serious and very similar to the concerns that many of us have expressed consistently to SCAG about staff’s efforts to advance the problematic SoCal Greenprint (the “Greenprint”).

Many of the organizations signing this letter wrote to SCAG on April 30th, on June 29th, on August 24th, and again on October 6th of 2021, concerning the Greenprint. Based on the issues and concerns our Coalition raised in these letters, we asked then and we ask again now, that SCAG stop the Greenprint process completely, including all staff work thereon, and that it remain stopped until SCAG’s Regional Council deliberates and prescribes the core principles to govern this program. Specifically, we urged that the Greenprint would only restart under the Regional Council’s careful direction after the latter approves clear policy prescriptions related to the Greenprint’s goals, purpose, content, use, limitations, and process for ongoing review and approval. These are the steps that we would expect concerning any new undertaking as important as the Greenprint. If well-considered threshold policy prescriptions are not in place first, then “the cart is before the horse” as to the development of Greenprint.

Our coalition was optimistic when the Regional Council voted in October to both (i) halt the development of the Greenprint, and (ii) appoint an Advisory Task Group (the “ATG”) made up of five Regional Council member to address the threshold policy concerns that we and many others had voiced. Given the circumstances and the debate that led to the ATG’s establishment, we expected the ATG to undertake in a straightforward manner the task of formulating the policy for the Greenprint and offering it to the Regional Council for its consideration. We are disappointed because the ATG’s policy discussions concerning the Greenprint have barely begun. Instead, SCAG’s staff has focused the attention of the ATG increasingly on the development of a Regional Advanced Mitigation Program (RAMP). We are also concerned that the Draft RAMP Framework has been interposed as a distracting additional task for the ATG to undertake, which delays their ability to address the policy guidance for the Greenprint.

We therefore urge the ATG to postpone its consideration of the Draft RAMP Framework until such time as the ATG instead completes its recommendations to the Regional Council concerning the Greenprint. The hopping back and forth between focusing superficially on the Greenprint and similarly on the RAMP has been confusing and unproductive.

Our concerns about the Greenprint have been on record for almost a year now; and we believe that those concerns should be addressed squarely without further delay. If, however, the ATG intends to take up the Draft RAMP Framework presently, then the task should be undertaken only if two conditions exist. First, if consideration of the Draft RAMP Framework must proceed now, then all work on the Greenprint should be halted until the development of the RAMP Framework is completed. Until the RAMP framework policy prescriptions are in place, followed then by similar prescriptions concerning the Greenprint, SCAG's staff should remove from SCAG's webpages all narrative and datasets that SCAG's staff has proposed for inclusion in the Greenprint, and cease all efforts to advance it further before the afore-mentioned policy prescriptions for the Greenprint are approved.

Second, our longstanding position about the need to put in place well-considered, threshold policy prescriptions for the Greenprint applies with equal force to the Draft RAMP Framework. Therefore, if the ATG takes up the discussion of the Draft RAMP Framework at this time, we urge the ATG to jettison the Draft RAMP Framework which was prematurely developed thus far, and begin instead with the task of determining well-considered, threshold policy prescriptions that will govern the development of the RAMP.

For example, fundamental questions regarding the size and scope of the proposed RAMP have yet to be determined: As to size, does SCAG intend to develop a single regionwide RAMP or subregional RAMPs? Alternatively, would it be more effective for SCAG to support and provide resources to their constituent cities, counties, and transportation agencies to develop their own RAMPs? As to scope, will SCAG's RAMP approach provide mitigation for transportation projects alone in keeping with the RTP, or will the scope of SCAG's RAMP be much larger and designed to provide mitigation for all kinds of projects, including housing and commercial development, and water, energy, and other infrastructure projects? We believe these and other threshold determinations must be made by SCAG's policy makers (the ATG with the concurrence of the Regional Council) before undertaking the development of a detailed "policy framework" for this program. To do otherwise would be for SCAG to once again put "the cart before the horse." Likewise, it is impossible to meaningfully evaluate and critique the proposed Draft RAMP Framework without these important threshold determinations having been made.

We also believe that the ATG should consider the threshold policy prescriptions for the Draft RAMP Framework separate from its consideration of the policy prescriptions needed for the Greenprint – i.e., one before the other. Although the Greenprint and the RAMP will eventually relate to one another, they also differ from one another. Specifically, the Greenprint will be an aggregation of regional, geo-spatial, environmental datasets, which SCAG has officially designated as "best available science." As such, when wielded by environmental plaintiffs, SCAG's determinations concerning the Greenprint will have ramifications under the California Environmental Quality Act (CEQA, such that a circumspect and careful approach is needed. The RAMP, on the other hand, holds the prospect of

regionalizing land conservation mitigation planning in some as-yet undefined way, even though such conservation mitigation plans are typically undertaken carefully at scales far smaller than that of the SCAG region. Therefore, Greenprint and RAMP are two separate and independent programs with their own purposes. They are not codependent. Given this, each deserves its own well-considered threshold policy prescriptions and policy framework. This, unfortunately, is not the approach SCAG has used in the current Draft RAMP Policy Framework.

With that in mind, our Coalition offers the following principles that we believe SCAG should apply regarding the development of its regionalized RAMP effort. First, the RAMP must be designed to facilitate the effective implementation of SCAG’s Regional Transportation Plan (RTP) within Connect SoCal and specifically SCAG’s regional transportation implementation plan (RTIP) projects. Keeping in mind the RTP includes over \$650 billion in spending over the next 25 years on much-needed transportation infrastructure, the RAMP must not complicate, delay, prevent or increase the cost of implementing these projects.

Instead, the RAMP should be formed into a helpful tool that can be used to expedite and enable projects and plans that are needed to benefit the citizens of Southern California. In light of this, the framework for developing any SCAG-level RAMP must be fashioned by the Regional Council after very careful and circumspect consideration of the RAMP’s purpose and consequences. The Regional Council should then provide SCAG’s staff with the guideposts needed for developing an eventual RAMP – including goals, principles, and proper circumscription.

Second, we do not support the development of a single, massive, region-wide mitigation banking program conducted under SCAG’s auspices. Instead, we believe SCAG should support and help develop enable subregional RAMP’s at properly scaled county levels or smaller (the OCTA mitigation bank is a good example of this). When conservation mitigation planning is undertaken at relatively large scales, consensus is much harder to achieve, and affected landscapes tend to get “painted with a broad brush,” such that lands that are relatively suitable for development are unduly slated for conservation, while other areas that are most suitable for conservation may be left unprotected. Conservation mitigation therefore is best undertaken by biological experts who have garnered in-depth knowledge of the conservation values of the land at issue at a relatively close-in scale. This approach also respects the greater knowledge, responsiveness, and land use regulatory prerogatives of the local jurisdictions throughout the SCAG region.

Third, SCAG must respect the primacy of the lead agencies that are responsible for approving plans and projects and determining how much and how best to mitigate their impacts. Typically, conservation mitigation planning is undertaken, negotiated, and approved by the individual lead agencies that are involved in the respective projects or plans. It is the lead agencies themselves that possess the prerogatives under CEQA concerning the mitigation of the projects and plans that they approve. As such, it is not a proper role of SCAG to undercut or prejudice the powers and prerogatives of these other lead agencies. In fairness, SCAG has historically taken a strong position in support of the “local control” authority of the many local lead agencies within our region. Accordingly, we believe that the Regional Council should reaffirm its commitment to respect for the powers of local lead agencies by

making it a principle from the very beginning of its RAMP development process, and certainly before SCAG’s staff undertakes technical work on a RAMP framework and potentially launches off in the wrong direction.

Lastly, the RAMP approach to mitigation must not impede or frustrate the development of infrastructure, housing, and approved projects and plans. In light of both this and the language of the mitigation measures that call for RAMP, SCAG should aim to focus RAMP only on agricultural lands and open space so as not to impact already approved, planned, or sited projects. We note that, just like the Greenprint that was launched last year, the Draft RAMP Framework seems aimed broadly at the entirety of the SCAG region. It therefore implicates areas that were long ago developed as well as local jurisdictions’ existing, approved plans for further development. This broad sweep is at odds with the mitigation measures that were approved related to Connect SoCal, which promised both a Greenprint and a RAMP for the purpose of “build[ing] on existing efforts including those at the sub-regional and local levels to identify potential priority conservation areas.” (See the mitigation measure denominated SMM BIO-2, set forth in the addendum to the program environmental impact report that accompanied the 2020 adoption of Connect SoCal.) We continue to believe that SCAG’s staff is expanding the scope of both the Greenprint and a SCAG-level RAMP in ways that unduly implicate the entire SCAG region, including existing, built communities and existing local plans for further development. The Regional Council needs to reign in both of these staff efforts, and refocus them on the challenges of identifying “potential priority conservation areas” – without implicating projects and community plans which have already been approved by local jurisdictions and other lead agencies.

As this Coalition has stated consistently, we do not oppose SCAG’s determination to develop a Greenprint and a RAMP. We recognize and appreciate that SCAG promised to undertake these programs within the language of two mitigation measures that SCAG formally adopted in connection with last year’s Connect SoCal (as mentioned above, SMM BIO-2 and SMM AG-2). What we oppose is any hastily compiled Greenprint like the one that has surfaced, which seems certain to result in problems and abuse. We have similar concerns with how SCAG’s staff has thus far launched its RAMP effort.

A problematic Greenprint or RAMP would undercut our collective efforts to provide sufficiently robust job, infrastructure, and housing opportunities in the years ahead. The ATG and the Regional Council should not stand by and permit such a result, especially given our region’s need for more housing production and our 197 local governments’ present need to accommodate over 1.3 million housing units under the Regional Housing Needs Assessment (RHNA) process. A wrongheaded Greenprint or RAMP will make our local governments’ and other lead agencies’ challenges more daunting, and could hand housing and infrastructure opponents the ammunition to delay and prevent vitally needed projects. Such would also undermine SCAG’s own housing and infrastructure goals for our region as articulated in Connect SoCal.

The good news is that these pitfalls are avoidable in that the ATG and the Regional Council can take charge of the Greenprint and RAMP process as we have outlined above. By following this path, the Regional Council and SCAG can assure that the Greenprint and RAMP will not conflict with local

governments' existing land use plans and prerogatives, but instead will complement and enable them. This will result in a Greenprint and RAMP that both are beneficial to our region and supportive of Connect SoCal's goals related to housing, infrastructure, and environmental benefits.

Our Coalition appreciates your consideration of these comments, and strongly encourages SCAG to accept and implement the recommendations outlined above.

CC: Hon. Clint Lorimore, SCAG President
Hon. Jan C. Harnik, SCAG First Vice President
Hon. Carmen Ramirez, SCAG Second Vice President
Hon. Rex Richardson, SCAG Immediate Past President



R. REX PARRIS
MAYOR

MARVIN CRIST
VICE MAYOR

DARRELL DORRIS
COUNCIL MEMBER

RAJ MAHLI
COUNCIL MEMBER

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COUNCIL MEMBER

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March 30, 2022

Southern California Association of Governments
900 Wilshire Boulevard, Ste 1700
Los Angeles, CA 90014

SUBJECT: SoCal Greenprint – Draft Policy Framework

To Whom it May Concern,

Thank you for the opportunity to review the Draft Regional Advanced Mitigation Program Policy Framework for SoCal Greenprint. Like many other jurisdictions, the City of Lancaster has some concerns regarding the proposed contents and future use of the document.

The City is supportive of a document that provides resources for jurisdictions within the SCAG region to utilize in developing plans and programs of their own. However, we are concerned that the SoCal Greenprint would be prescriptive and require cities and counties to comply with a series of programs and policies that may not be the best solution for our community. We are also concerned that the SoCal Greenprint will be utilized as a mechanism to challenge California Environmental Quality Act documents and project approvals for development projects that provide the necessary jobs and housing for our community.

The City also has many sustainability/green initiatives that we do not want to be impacted by a regional framework. These include support of alternative energy uses, goals to become a hydrogen city and promotion of conservation habitat through our Biological Impact Fee Ordinance. The City has long been in support of alternative energy, specifically solar, and currently produces more solar power than electricity consumed within the City limits. Additionally, the City has set a goal to become the first hydrogen City in the nation and is actively working to achieve this. The flexibility to continue to work towards these goals is very important to the City.

The City has also worked to conserve open space that is reflective of the biological resources found throughout the Antelope Valley since 2005 through the use of the biological impact fee ordinance. As a result of this ordinance, the City has funded the acquisition and placed under conservation easements a total of 831.91 acres. The City believes that our current approaches to sustainability and conservation are the most appropriate for our community.

Attachment: Memo on Draft RAMP Policy Framework Outreach & Feedback (SCAG Staff Update)



R. REX PARRIS
MAYOR

MARVIN CRIST
VICE MAYOR

DARRELL DORRIS
COUNCIL MEMBER

RAJ MAHLI
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KEN MANN
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Please keep the City informed of other opportunities to comment on and be involved in the SoCal Greenprint process. Should you have further questions about this information, please contact me at (661) 723-6079 or ldelacruz@cityoflanasterca.org.

Sincerely,

Larissa De La Cruz
Senior Manager – Community Development

Appendix C: Table of all comments received on Draft RAMP Policy Framework

Name(s)	Organization(s) / Affiliation(s)	Venue	Comment Type	Date Received	Applicable Section of Draft RAMP Policy Framework	Summary of Feedback / Comments
Hon. Peggy Huang	RAMP-ATG Member	RAMP-ATG Meeting #3	Verbal	2/18/2022	Goals of Regional Advance Mitigation; Data Policies	Policy framework addresses many forms of development, not only transportation. Concern that outreach to partners in other sectors, specifically the development community, has not been done. All stakeholders need transparency and opportunity to actively participate on the next step once the policy framework is completed/published. SCAG should consider next steps once the policy framework is adopted; particularly, how it will be used related to the next RTP/SCS. Concern and question regarding who selected the Greenprint Science Advisors. Data used by government gives it credibility. Consider what SCAG uses to vet data from other organizations and what “accessible” means. Suggest that the Energy & Environment Committee review data layers and develop recommendations before bringing to Regional Council.
Hon. Curt Hagman	RAMP-ATG Member	RAMP-ATG Meeting #3	Verbal	2/18/2022	Goals of Regional Advance Mitigation; Data Policies	SCAG should include measuring outcomes for the RAMP goals (e.g., average time and expense of project before and after participation in RAMP) to see if goals are achieved. If goals are not being achieved, SCAG can reevaluate the program. SCAG should establish a process for vetting data as well as an appeals process if stakeholders object to certain data; including, a balanced recommendation committee to review data sets and seek feedback on data layers, specifically including the business sector; possibly presenting to the Energy & Environment Committee; incorporating Regional Council or elected officials; pausing development and publishing of Greenprint layers until process and guiding policy is established. Vetting criteria could include those vetted by a different agency and consideration of what makes good data beyond being publicly accessible.
Hon. David Pollock	RAMP-ATG Member	RAMP-ATG Meeting #3	Verbal	2/18/2022	Goals of Regional Advance Mitigation	Share expressed concern that CEQA can impede building much-needed housing, but CEQA challenges arise because the only way to get mitigation done is to do so on a project-by-project basis. RAMP provides the ability to do mitigation in a much smarter way that can help expedite projects.
Hon. Sean Ashton	Former RAMP-ATG Member	RAMP-ATG Meeting #3	Verbal	2/18/2022	Data Policies	As elected officials who represent constituents, RAMP-ATG should have the opportunity to go through data layers to make sure the data is what we’d like to convey. Request for more information on what was used to identify which data to use.

Name(s)	Organization(s) / Affiliation(s)	Venue	Comment Type	Date Received	Applicable Section of Draft RAMP Policy Framework	Summary of Feedback / Comments
Richard Lambros	Southern California Leadership Council	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	General Comments	Concerns with Greenprint process. There is RAMP, white paper, the policy framework, but we don't have clear policy direction. Concerned by SCAG response to Hon. Huang's letter and Regional Council's role in adopting the Greenprint tool. Recommend refocusing of RAMP-ATG to develop white paper to provide policy direction for Greenprint and pause Greenprint until policy work is complete. Concerns from the business community that the Greenprint and RAMP processes are being conflated. Focus on the mission of infrastructure delivery and cost challenges in California, due to the CEQA process. No objection to environmental benefits. Need to understand CEQA and accommodate solutions that work with CEQA. Relating to housing and utility sectors, consider how this could be seen as a benefit or concern. Accelerating projects would save taxpayer money on project cost and create jobs, so there is a benefit to accelerating projects but that must be done right under CEQA.
Jack Eidt	SoCal 350	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	General Comments	State has concurrent goals for both housing and land conservation. Urge SCAG to adopt innovative strategies and Connect SoCal to advance smart cities. Two tools are RAMP and the Greenprint, they offer opportunities to plan for the future. As a regional entity, SCAG is tasked to create tools to reduce the impact of issues at a regional level. The Greenprint can help inform planners how to create resilient landscapes for both housing and conservation.
Jon Switalski	Rebuild SoCal Partnership	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	General Comments	Concerns about process. Understood the RAMP-ATG would tackle Greenprint and a white paper as a policy document, but that is not occurring. Region needs to understand what Greenprint will result in. Concern that process is not transparent or offering robust discussion. Greenprint is a data tool and data drives our economy. Concerns about policy and Greenprint data sets, that will effect building infrastructure and have CEQA implications. Disclaimer language will not mitigate CEQA implications. Greenprint is not just a data tool, it is public policy that needs to be discussed thoroughly.
Chris Wilson	Los Angeles County Business Federation (BizFed)	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	General Comments	Concern that the development of a Greenprint policy paper have not yet been discussed. RAMP is important, but would like RAMP-ATG to address Greenprint. Policy framework is not ready to go to Regional Council in April.
Sylvie LeDuc	Amigos de los Rios	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	General Comments	What happens upstream impacts what happens downstream. Suggest using a watershed planning approach to create an emerald necklace. Our work fits into the Greenprint. The Greenprint provides a holistic view. RAMP is important, especially in riparian areas.
Luis Portillo	San Gabriel Valley Economic Partnership	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	General Comments	Concerns with impact on housing development. Communities of color are being denied homeownership opportunity, which is the best way to build intergenerational wealth, as a result of lack of housing. Environmental policies are used to stop housing. Greenprint will add new layer to make it harder to build housing and harder for communities of color to own homes. This could be one of the most significant impacts on that. One lawsuit that a court requires Greenprint to be used can set precedent.
Paolo Perrone	Trust for Public Land	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	General Comments	RAMP is a decades old tool that advances free market values. Not clear as to why some want to control existing public data. RAMP can create market efficiencies, and SCAG should have efficient processes.
Francis Appiah	Caltrans	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	General Comments	Caltrans is developing advance mitigation program for transportation projects. We will share RAMNA with SCAG staff so they know what data is available through that program. Encourage transportation agencies to look at mitigation for the near future. SCAG, as the regional agency, must look into advance mitigation for Connect SoCal. We cannot avoid mitigation because it could be used as a weapon. Encourage SCAG to explore RAMP.
Melanie Schlotterbeck	Friends of Harbors, Beaches and Parks	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	Background; Goals for Regional Advance Mitigation	Support for draft policy framework. Suggestions for improvement including: acknowledging in the background section that housing and conservation mandates exist simultaneously (e.g., CA 30x30), that there are local, regional, state, and federal RAMP policies, highlight that the science is clear on how to be successful with conservation planning, and include a list of permits that can be streamlined using RAMP; incorporate wildlife corridor and connectivity in the goals section; commit to develop a science-based methodology for biological and non-biological criteria for evaluating projects, that includes co-benefits; define what RAMP could include; complete a gap analysis of species covering within existing RAMPs and conservation plans to identify what is missing; consider RAMP pilot programs for certain species; highlight in data policies that there are better ways to invest with access to more information.
Andy Henderson	The Henderson Law Firm	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	Data Policies	Data policy #7 promises a timeline and process for updated Greenprint datasets to ensure use of the best available scientific data. Concern that a time and process should have been in place before the Greenprint was started.
Jennifer Hernandez	Holland & Knight	RAMP-ATG Meeting #3	Public comment (verbal)	2/18/2022	General Comments	Concern over development of Greenprint Science Advisory Committee. Concern over potential CEQA implications of the Greenprint tool, based on a determination of best available scientific data. Greenprint purpose was to be subordinate to RTP/SCS. Concern over interference with federal funding and affordable housing funding. Local jurisdictions are still working on housing elements, concern over use of Greenprint to re-envision community planning. Support Caltrans RAMP but belief that Greenprint is flawed and not aligned with Caltrans. Concerns over use of the Greenprint in potential CEQA legal challenges, impacting development and infrastructure funding for the region.
Oliver C. Chi; Dennis Wilberg	Cities of Irvine and Mission Viejo (joint letter)	Via email	Public comment (written)	3/10/2022	General Comments	Joint review of the July 2021 proposed data layer list. Concerns over discussing Greenprint data layers prior to policy recommendations from RAMP-ATG and suggestion to pause discussions on data until policy framework is established. Request for more information on how the Bay Area Greenprint has been applied.
Warren Whiteaker	Orange County Transportation Authority	Technical Working Group	Workshop	3/17/2022	General Comments	Data layers developed for OCTA are outdated and would need to be reevaluated if they are to be used. Suggestion to describe how to convey that and what an end product would look like.
Francis Appiah	Caltrans	Via email	Public comment (written)	3/17/2022	General Comments	Caltrans has completed an Advance Mitigation Regional Needs Assessment (RAMNA) that covers the SCAG region. An advance mitigation program can improve environmental outcomes as well as project delivery and cost by consolidating compensatory mitigation needs, investing strategically, and addressing for mitigation early in the planning process. The Greenprint will be a useful resource to support regional advance mitigation.
Marc Hardy	Tejon Ranch Company	Via email	Public comment (written)	3/21/2022	General Comments	Concerns over use of data regarding the Antelope Valley Regional Conservation Investment Strategy in the Greenprint. Request that the Greenprint be limited to areas that local jurisdictions have designated for agricultural use or open space.
Melanie Schlotterbeck	Friends of Harbors, Beaches and Parks	Environmental Stakeholder Workshop: Session 1	Workshop	3/22/2022	Goals for Regional Advance Mitigation; Data Policies; Data Selection Criteria; Appendix A; General Comments	Important to include wildlife corridors and connectivity as goal, as the issue spans multiple jurisdictions. Important there is a science-based evaluation process for how properties could line up with impact needs. Identify gaps in existing advance mitigation programs, as existing programs only cover what was endangered or sensitive at the time of creation, and there could be opportunities to expand to other species that now need mitigation in a geography with an already defined RAMP. Support for data policies and data selection criteria. Include how other SCAG mapping/data tools have been launched and the similarities/differences in process. Apply a fair and consistent process across all data tools SCAG has launched. Clarify in policy framework that a SCAG RAMP is meant to complement existing programs and not supersede them, and existing RAMP programs will stay intact and participation in a RAMP program is entirely voluntary. Include in the policy framework that creation of a regionwide program allows for broader opportunities by providing benefits such as more opportunities for mitigation across a broader geography and assistance to smaller jurisdictions/agencies/communities that may not have resources to look for mitigation or develop their own RAMP program. Regarding water resources, Orange County's advance mitigation program set a precedent with the Army Corp of Engineers that streamlined the regulatory process for the projects in the OCTA program. OCTA's program benefitted from foresight by OCTA Board leaders to create the mitigation program before the sales tax measure took effect. Suggest to include more context in the Appendix of the policy framework (e.g., what sectors does the RAMP support, who were the signatories).

Melanie Schlotterbeck	Friends of Harbors, Beaches and Parks	Environmental Stakeholder Workshop: Session 2	Workshop	3/24/2022	Regional Policy Foundation: Connect SoCal Goals and PEIR Requirements; Data Parameter Requirements; Appendix A; General Comments	Support for conclusion in policy framework that RAMP and Greenprint are mitigation measures. Important to hear alignment of what is in Connect SoCal and what is in the policy framework. SCAG should not delay or forgo these initiatives. List of thematic data layers is appropriate and inclusive. The data layer list and examples in policy framework are reliable, accurate, and reliable information. From a land owner's perspective, it would be useful to understand what options are available on a property (e.g., sell, develop, mitigate). Understanding underlying land use authorities as well as environmental sensitivities provides a one stop shop for due diligence. Can also help a conservation entity that is trying to understand what a potential acquisition would mean for a particular site. All data layers identified are important. Data is not controversial, it is simply stating the facts as they are no. Vulnerabilities and resilience layers are particularly hard to find. Knowing what the region might be facing in terms of housing and infrastructure issues in the context of climate impacts would be useful. On Appendix A, suggest to show the types of permits a project would be required to obtain if there were impacts to water resources, species, etc. and how the permits could be consolidated into one process under RAMP (possibly in a summary table). For OCTA, the timeframe of consolidating permits into one process took 5 years, whereas sometimes it takes 10-20 years. Acknowledge in the policy framework that there are nonprofits who already have a project list. If there is a mitigation need for a specific habitat type, a RAMP policy framework and Greenprint could link supply and demand together (e.g., who needs mitigation, where it is located, identified opportunities).
Dan Silver	Endangered Habitats League	Environmental Stakeholder Workshop: Session 2	Workshop	3/24/2022	General Comments	Strong support for Greenprint and RAMP. They go together, as Greenprint provides information. Highlight the positive experiences transportation agencies have had using RAMPs in Southern California (e.g., RCTC using the MSHCP, SANDAG's Transnet measure, OCTA). RCTC has documented quantitative improvements due to RAMP. Existing RAMPs have had good environmental outcomes, but also good outcomes for transportation agencies. SCAG should proceed.
Andy Henderson	The Henderson Law Firm	Business Consortium Workshop: Session 2	Workshop	3/25/2022	PEIR Mitigation Measures; Data Policies; Governance Standards; General Comments; Data Parameter Requirements	Experience shows that the bigger the mitigation program is, the more problematic. Issues putting it in place, and bigger programs can overconserve land and fail to conserve with the precision that smaller scale programs can achieve. Question about SCAG's thinking regarding the scale of program to help local governments. Concern over statement in policy framework that Greenprint is not endorsed by Regional Council as policy and that datasets will not be taken to Regional Council for consideration. SCAG should address CEQA implications of labelling anything as best available science. Greenprint datasets implicated in CEQA analysis can be prejudicial to maintenance and continuation of local governments' existing plans. Concern over RAMPs and Greenprints that work against local government plans. Regarding data, publicly available is a low bar. Question regarding the disclosure language. Concern that it will not be effective. Concern over maintaining local land use in Connect SoCal 2020. Consider how datasets could impact how local governments maintain their plans. SCAG should be supportive to local governments and this issue should be brought to Regional Council. Concern over misuse of data in ways that are prejudicial to local governments. Clarify guidance on how to use data (e.g., disclaimers) and how Greenprint can be misused.
Chris Wilson	Los Angeles County Business Federation (BizFed)	Business Consortium Workshop: Session 2	Workshop	3/25/2022	PEIR Mitigation Measures; Data Selection Criteria; General Comments	Regarding mitigation measure, clarify what best available scientific data means as well as who makes that decision and who chooses scientists. Urge to follow direction of Regional Council. Concern that RAMP and Greenprint are being combined. RAMP-ATG was established to focus on Greenprint; if RAMP-ATG is to focus on RAMP, Greenprint should be shelved until RAMP is developed. Clear direction from RAMP-ATG is needed. Concern that there is no policy analysis or white paper to comment on, we only have a tool. This is not reflective of Regional Council direction, and nothing tangible to date has been produced.
Jon Switalski	Rebuild SoCal Partnership	Business Consortium Workshop: Session 2	Workshop	3/25/2022	General Comments	Should be addressing the Greenprint first before the policy framework process. The two are interrelated. Policies need to be developed in an open forum. Concern over lack of clarity on scale of mitigation program. Policy development process has been confusing and we should not be jumping into RAMP before policy development. Labor community is concerned that this will impact infrastructure development.
Richard Lambros	Southern California Leadership Council	Business Consortium Workshop: Session 2	Workshop	3/25/2022	General Comments; Data Policies; Data Selection Criteria	Policy framework relates to SCAG's supportive role and connection to transportation and cross-jurisdictional approach. Question on process for policy framework and seeking stakeholder input. Framework is great but concerns about guiding policy. Question regarding SCAG's intention for RAMP. Size, scale, and scope should be addressed before policy. Question about who selects scientific advisors and how they conduct their review (e.g. more info on the level of engagement). Data that is just publicly available is a low bar. Confusion regarding RAMP-ATG purpose and process, sequencing of addressing policy framework or Greenprint. Understood desire to address Greenprint first. Believe Greenprint needs to be paused and stopped to get policy direction. Confusion regarding RAMP that includes Greenprint policy. Suggest addressing Greenprint first. Mitigation measures references multiyear effort to develop Greenprint. Greenprint is informer of RAMP. RAMP-ATG tasked to develop white paper and establish policy framework. Greenprint should be paused and addressed first, or RAMP and Greenprint should be separated. RAMP discussion needs to include discussion on scale and role for SCAG. RAMP processes (e.g. MSHCPs are long processes). Data needed in Greenprint could vary widely depending on what you do with RAMP. RAMP and Greenprint as mitigation measures are intended to facilitate infrastructure development. Focus on purpose of enabling development. No objection to goals, as RAMP could be a tool to enable infrastructure and Greenprint could help enable RAMP. Concern over approach. Suggest to look at datasets regarding where infrastructure is to be built in RTP/SCS and overlay with environmental impacts. Do not believe regionwide RAMP is the best approach, and it is better to support county scale or smaller RAMPs. Concern that business and private sector scientists are not included in list of scientists providing vetting. Question regarding what scientists use for their evaluation of best scientific data.
Mary Alyssa Rancier	Associated General Contractors of California	Business Consortium Workshop: Session 2	Workshop	3/25/2022	Data Policies; General Comments	Question on the process of evaluating data and if the analysis will be made available to the public. Would like to know more about reliability, statistical significance, and generalizability of the data. Possible concerns with the proposal that could impact members. Will be doing more research before taking a position.
Connor Medina	Orange County Business Council	Business Consortium Workshop: Session 2	Workshop	3/25/2022	General Comments	The Greenprint pause as directed by SCAG leadership is ambiguous. All work should be halted and process should be clearly defined to avoid problematic data and policy issues. RAMP and Greenprint should be considered individually. SCAG should adhere to the guidance of the RAMP-ATG to address Greenprint concerns. Regarding RAMP, concern over proceeding without stakeholder input.
Dan Silver	Endangered Habitats League	Via email	Public comment (written)	3/28/2022		General support for proposed RAMP policy framework. In Riverside County, the Western Riverside Multiple Species Habitat Conservation Program served as advance mitigation for projects of the Riverside County Transportation Commission. Time and cost savings for the agency were documented by a RAND study, endangered species permits were quickly obtained, and citizen opposition to major highway construction markedly reduced due to a conservation framework. In San Diego County, SANDAG made use of the San Diego Multiple Species Conservation Program for transportation mitigation, foregoing lengthy project-by-project permitting, contributing to a regional reserve, and building projects without opposition. In Orange County, the Orange County Transportation Authority created a Natural Community Conservation Plan/Habitat Conservation Plan for freeway improvements, reaped accolades from the community, and even added streamlined wetlands permitting to the program. In all cases, Program EIRs provided streamlined CEQA review for the totality of biological impacts, thus providing benefits beyond endangered species. Your agency heard presentations from both the Riverside and Orange programs. We also note that Caltrans is enthusiastic about RAMPs. RAMPs for transportation projects have a track record of success for the agencies involved and for the environment. Because housing production is linked to transportation infrastructure, housing is a co-benefit. Urge SCAG to move forward on the RAMP to create a program unique to the region's needs, using collaboration at all steps, and bringing benefits to multiple agencies in our region.
Michael Wellborn	Friends of Harbors, Beaches and Parks	Via email	Public comment (written)	3/29/2022	General Comments; Background; Goals; Data Policies; Appendix	Support for the RAMP policy framework. FHBP led a coalition to support inclusion of RAMP when OCTA considered its sales tax measure in 2005, and the RAMP has been a success. Suggestion to include context about housing mandates (e.g., RHNA) and conservation mandates (e.g., EO N-82-20) that exist simultaneously, that RAMPs help meet local, regional, state, and federal policies and goals, and the science that supports successful conservation planning. Suggestion to add two additional goals: incorporating wildlife corridors and connectivity and committing to develop a science-based methodology to evaluate projects. Suggestion to acknowledge types of conservation that RAMPs can support in the goals section. Consider completing a gap analysis of species coverage within existing RAMPs and conservation plans and consider a pilot program for charismatic species. Support for data themes, datasets, and policies. Highlight that there are better ways to invest in mitigation when there is more information. Support potential for multi-benefit outcomes. Suggest inclusion of a map with existing RAMP boundaries in the Appendix. Suggestion to include an additional Appendix quantifying the types of permits typical development and/or transportation projects would need that could be streamlined through a RAMP process. Support for SCAG efforts to deploy innovative digital tools and development of the conservation modeling tool used in Connect SoCal. RAMP and a mapping tool is the next phase of tool development and deployment committed to in SCAG's PEIR mitigation measure.

Environmental Coalition	Friends of Harbors, Beaches and Parks Endangered Habitats League Hills for Everyone Banning Ranch Conservancy The Trust for Public Land Surfrider Foundation Laguna Canyon Conservancy Bolsa Chica Land Trust Surfrider Foundation - OC Chapter Amigos de los Rios Stop Polluting our Newport Saddleback Canyons Conservancy Defenders of Wildlife Natural Resources Defense Council Los Cerritos Wetlands Land Trust Chino Hills State Park Interpretive Association OC Interfaith Coalition for the Environment Nature 4 All Ventura Land Trust	Via email	Public comment (written)	3/30/2022	General Comments; Background; Policy Framework; Regional Policy Foundation; Natural and Farmlands Conservation and Climate Resolution; PEIR Mitigation Measures; RAMP Opportunity & Challenge Areas; Data Policies; Data Sekectuib Criteria; Appendix A	General support for proposed RAMP policy framework. Include in background section that multiple projects can be linked together to package mitigation needs and regulatory processed together through a RAMP, that can lead to time and financial savings as well as better mitigation opportunities. Highlight that the draft policy framework is meant to complement and not override existing RAMP programs. A regionwide program allows participants to look across a wider geography to find mitigation locations and opportunities to participate beyond a transportation-focused RAMP beyond the purview of existing RAMPs. Acknowledge in the policy framework that participation in a RAMP is entirely voluntary. Highlight that NGOs and agencies have already identified projects for acquisition or restoration and simply need funding to complete them. A SCAG RAMP could provide collaborative opportunities. Creation of a RAMP and digital mapping tool are legal obligations in the PEIR. Mitigation measures cannot be delayed permanently or deleted. A regionwide RAMP provides more comprehensive coverage and improved cross-jurisdictional partnerships. Support data policies in the policy framework. The data source list is appropriate and baseline data is a cornerstone of a reliable, accurate, and relatable digital mapping tool. Support for the seven data layer themes proposed for inclusion in the tool. Suggestion to list the signatories to conservation plans in the Appendix to understand the diverse mix of participants that have realized benefits from RAMPs. Suggestion to include scope and/or limites of the RAMPs in the Appendix for context.
Larissa De La Cruz	City of Lancaster	Via email	Public comment (written)	4/1/2022	General Comments	Support for providing resources to local jurisdictions for developing local plans and programs. Concern that the Greenprint could be prescriptive and require cities and counties to comply with programs/policies that may not be locally-appropriate. Concerns over potential CEQA implications of the Greenprint. The City of Lancaster has many sustainability, and conservation goals and initiatives that we do not want to be impacted by a regional framework. Importance of flexibility to continue local work and value of local approaches.
Business and Construction Industry	Southern California Leadership Council Los Angeles County Business Federation (Bafed) Building Industry Association of Southern California (BIASC) Los Angeles Area Chamber of Commerce Rebuild SoCal Partnership Engineering Contractors Association (ECA) Orange County Business Council (OCBC) Inland Empire Economic Partnership (IEEP) California Business Roundtable (CBRT) California Building Industry Association (CBIA) California Business Properties Association (CBPA), representing BOMA California and NAIPF State Council California Retailers Association (CRA) California Apartment Association Building Owners and Managers Association of Greater Los Angeles (BOMA/GLA) Hispanic 100 Southern California Contractors Association (SCCA) Long Beach Area Chamber of Commerce Building Industry Legal Defense Foundation NAIPF SoCal San Gabriel Valley Economic Partnership Santa Clarita Valley Chamber of Commerce L.A. South Chamber of Commerce Orange County Taxpayers Association South Orange County Economic Coalition Torrance Area Chamber of Commerce Ventura County Coalition of Labor, Agriculture and Business (ColAB) Construction Industry Air Quality Coalition (CIAQC) Construction Industry Coalition on Water Quality (CICWQ)	Via email	Public comment (written)	4/1/2022	General Comments	Concern over impacts of RAMP and Greenprint on infrastructure and housing development. Concern that RAMP may conflict with local governments' existing land use plans. Request SCAG focuses on Greenprint by stopping work until policy direction is established and consider Greenprint and RAMP separately. Principles of RAMP should include: facilitating housing and infrastructure benefits; support for subregional RAMPs and not a regionwide mitigation banking program; respect for primacy of local governments and agencies for approving plans and projects and mitigating their impacts; focus of RAMP only on agricultural lands and open space. Request that SCAG stop Greenprint process and only restart upon Regional Council direction and approval of Greenprint policy. Concern that RAMP-ATG is focusing on development of RAMP and not Greenprint. Request SCAG postpone consideration of RAMP Policy Framework until Greenprint is addressed. Confusion between RAMP and Greenprint. If RAMP policy proceeds, SCAG should pause development of Greenprint until policy framework is completed and remove all narrative and datasets regarding Greenprint from SCAG's webpage.

Draft Regional Advanced Mitigation Program Policy Framework

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

February/April 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 4

 Connect SoCal Goals 4

 Natural and Farm Lands Conservation and Climate Resolution 21-628-1 5

 PEIR Mitigation Measures 5

 RAMP Opportunity & Challenge Areas 7

 Goals for Regional Advanced Mitigation 7

Data Needs & Resources to Support RAMP 9

 Science Based Approach 9

 Data Policies 10

 Governance Standards 10

 User Guidelines 11

 Data Selection Criteria: 11

 Data Parameter Requirements 12

Appendix A – Established RAMPs in SCAG Region 14

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 4

 Connect SoCal Goals 4

 Natural and Farm Lands Conservation and Climate Resolution 21-628-1 5

 PEIR Mitigation Measures 5

 RAMP Opportunity & Challenge Areas 7

 Goals for Regional Advanced Mitigation 7

Data Needs & Resources to Support RAMP 9

Attachment: Redlined version of revised Draft RAMP Policy Framework (SCAG Staff Update)

Science Based Approach 9

Data Policies 10

Appendix A - Established RAMPs in SCAG Region 14

Appendix B – Map of Existing RAMP Boundaries in the SCAG Region 19

Appendix C – Statewide Regional Advance Mitigation Program 20

Appendix D – The Project Permit Process with and without RAMP 21

Appendix E – Draft RAMP White Paper 22

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, (CEQA), 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. Such a RAMP initiative is meant to complement existing RAMP programs in the SCAG region and encourage new sub-regional programs. While SCAG is required by the PEIR to establish a RAMP initiative and facilitate regional interest in developing RAMPs, SCAG will not create its own RAMP, supersede existing RAMP programs, or require any local jurisdiction or agency to participate in any RAMP program, local or regionwide. To help define potential advanced mitigation efforts, the Connect SoCal plan and PEIR also ~~anticipate development of~~direct SCAG to develop 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. The white paper (attached as Appendix E) provides background information and context that has contributed to the development of

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.

this policy framework. Early findings were shared at RAMP-ATG meetings alongside presentations from implementing agencies that were engaged in the white paper development. The white paper provides research to support broader policymaking around SCAG’s goals and potential role in supporting advanced mitigation in the SCAG region and informed the context, opportunities and challenges and data needs identified below.

Regional Policy Foundation: Connect SoCal Goals and PEIR Requirements

Connect SoCal Goals

As discussed, Connect SoCal ~~expects~~and its PEIR provide for a RAMP planning initiative to support ~~the establishment~~implementing agencies in establishing or supplement the region’s established advanced mitigation programs, mitigation banks, and other approaches to more effectively address impacts for projects that support reduction of per-capita vehicle miles traveled. The initiative would also support implementing agencies in the 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 a~~jurisdiction’s participation in a RAMP initiative established by Connect SoCal and its PEIR 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. The RAMP initiative 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;

¹³ Connect SoCal p. 9.

- 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;
- 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 [the RAMP initiative](#) 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 \(PEIR\)](#), [the 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 [measuremeasures](#) 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

¹⁴ Connect SoCal p. 50.

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](#).

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 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 advance 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 advance 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.*

It bears noting that, notwithstanding inclusion of any particular data set in the Greenprint tool or the qualitative characterization of the data set, a public agency acting as the “lead agency” for a project subject to CEQA has wide latitude and discretion to make its own conclusions on the quality of data and information (including scientific or technical assessments) as part of its consideration of the project. (See 14 Cal. Code Regs. § 15151.) Nothing in the mitigation measures or Greenprint tools is meant or intended to limit or restrict a public agency’s discretion in reviewing projects.¹⁸

¹⁸ See Memorandum from Margaret M. Sohagi, Esq., Attachment F to the October 7, 2021 Regional Council, https://scag.ca.gov/sites/main/files/file-attachments/21-10-07_rceec_original_staff_report_with_attachments_and_public_comments.pdf?1641857134.

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, ~~an are currently ongoing and continued through Spring 2022 to inform the RAMP white paper.~~

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 initiative 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 initiative could have potential duplication and/or conflicting mitigation efforts between regional, county, and local approaches, and that a RAMP initiative 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~~ SCAG's RAMP initiative shall aim to foster collaboration between programs across the region and support local implementing agencies to:

1. Facilitate infrastructure development and associated co-benefits, including but not limited to creating jobs, maximizing taxpayer funds, and supporting the building of housing;
- ~~1-2.~~ Expedite project delivery;
- ~~2-3.~~ Improve predictability for project funding;
- ~~3-4.~~ Examine potential environmental impacts at the early stages of project development, utilizing the SoCal Greenprint tool, to help expedite the CEQA process;
- ~~4-5.~~ Reduce costs, risks, and permitting time for responsible development;
- ~~5-6.~~ Improve and reinforce regulatory agency partnerships;
- ~~6-7.~~ Balance future growth and economic development with conservation and resilience; and
- ~~7-8.~~ Achieve meaningful, regional-scale conservation outcomes and co-benefits, including but not limited to landscape and community resilience, emissions reduction, improved water and air quality, wildlife corridors and connectivity, and recreation opportunities.

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 support implementing agencies 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 implementing agencies in the 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~~ Initiate studies to assess gaps where programs do not exist, and ascertain best ways to collaborate with partner agencies and permitting entities to address those gaps, including by supporting implementation agencies in developing new or partnership efforts;
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~~ RAMPs 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;
9. Use a science-based methodology to support implementing agencies’ development of RAMP initiatives across the region; and
10. Develop a process for monitoring and measuring outcomes from RAMP efforts.

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 (the PEIR) ~~and~~ focus SCAG’s role on serving as an “information provider” and “convener and coordinator” as described in the RAMP white paper. Any expansion of SCAG’s role as a “mitigation

planner,” “marketplace,” “funder” or “sponsor,” also described in the white paper, would require additional consideration and action by the Regional Council.

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.”¹⁹

Consistent with Connect SoCal’s PEIR Mitigation Measure AMM AG-2 and SMM BIO-2, SCAG ~~shall~~is obligated to develop a web-based SoCal Greenprint tool to assist in defining a ~~RAMP~~RAMPs that ~~provides~~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. The SoCal Greenprint tool 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~~this tool is an information resource that is primarily intended for use by 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 described below, and to governance standards, user guidelines, data selection criteria, and data parameters that will be developed by staff with input and consultation from a technical advisory committee (described below) and presented to the Energy & Environment Committee (EEC) and the Regional Council as an addendum to this policy framework no later than December 31, 2022. The technical advisory committee will be comprised of at least one staff representative from: each county transportation commission in the SCAG region, the Transportation Corridor Agencies, Caltrans, each county government in the SCAG region, and one city government within each county in the SCAG region. This technical advisory committee shall be open to the public and seek input from the development community, non-governmental conservation groups, regional conservation agencies, researchers, and other stakeholders.

¹⁹ 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.

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~~ agency's final Future Communities Framework;
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 included in the SoCal Greenprint tool must be created by a government agency, funded by a government agency, vetted by a government agency, used by a government agency, or developed in partnership with a government agency;
- ~~3.4.~~ 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;
- ~~4.5.~~ Publicly available data ~~to be~~ that is made accessible through the SoCal Greenprint are not adopted by SCAG and are not an expression of regional policy;
- ~~5.6.~~ 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, consistent with Connect SoCal's PEIR Mitigation Measure AMM AG-2 and SMM BIO-2, as outlined in approved governance standards;~~
- ~~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. AGovernance standards shall include
 - 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;~~
10. Data elements will have geographic and thematic breadth necessary to support conservation assessments and consider co-benefits that support the broader goals of Connect SoCal, including consideration of the expressed local planning needs for data related to: agriculture and working lands; built environment; environmental justice, equity and inclusion; habitat and biodiversity; vulnerabilities and resilience; water resources; and context;
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

[In response to stakeholder feedback, this section will be updated to list the signatories to conservation plans to understand the diverse mix of participants that have realized benefits from RAMPs, as well as information on the scope and/or limits of the RAMPs for additional context.]

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.²⁰

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.²¹

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.²²

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.²³

V. Barry Jones Wetland Mitigation Bank, Riverside County

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

²¹ Land Veritas, <https://landveritasmitigationbanks.com/petersen.html>

²² California Department of Fish and Wildlife, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=180663>;
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109831>

²³ 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

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 acres of the pool's upland watershed. The bank was established in 1997 and is managed by the Center for Natural Lands Management.²⁴

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.²⁵

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.²⁶

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.²⁷

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).²⁸

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

²⁴ 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/>

²⁵ Wildlands, <https://www.wildlandsinc.com/banks/black-mountain-conservation-bank-2/>

²⁶ Vulcan Materials Company, <https://westerncsr.vulcanmaterials.com/2019/01/08/protecting-our-endangered-species/>

²⁷ The Mojave Desert Tortoise Conservation Bank, <https://deserttortoisebank.com/>

²⁸ McCollum & Sweetwater, <https://mccollum.com/mitigation/>; Ecosystem Investment Partners, <https://ecosystempartners.com/project/riverpark/>

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, 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.

|

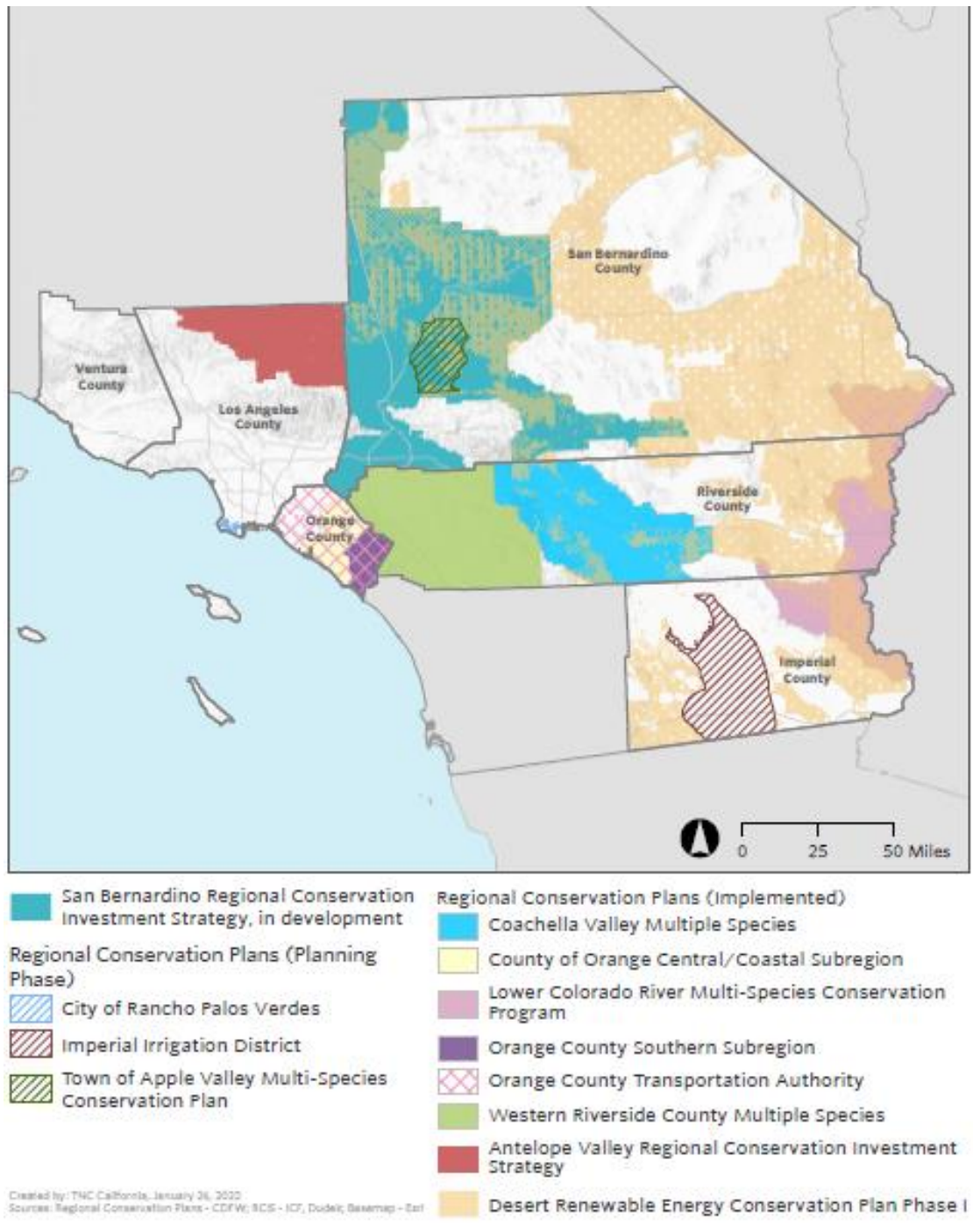
Regional Conservation Investment Strategies

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.

Appendix B – Map of Existing RAMP Boundaries in the SCAG Region



Attachment: Redlined version of revised Draft RAMP Policy Framework (SCAG Staff Update)

Appendix C – Statewide Regional Advance Mitigation Program

[In response to stakeholder feedback, a section will be added here on state RAMP efforts, including Caltrans' RAMNA process.]

Appendix D – The Project Permit Process with and without RAMP

[In response to stakeholder feedback, a section will be added here on the types of permits typical development and/or transportation projects are required to obtain and how the permits could be consolidated into one process under RAMP.]

Appendix E – Draft RAMP White Paper

Regional Advance Mitigation Planning to Support Connect SoCal in the SCAG Region



Photo: San Bernardino County Transportation Agency



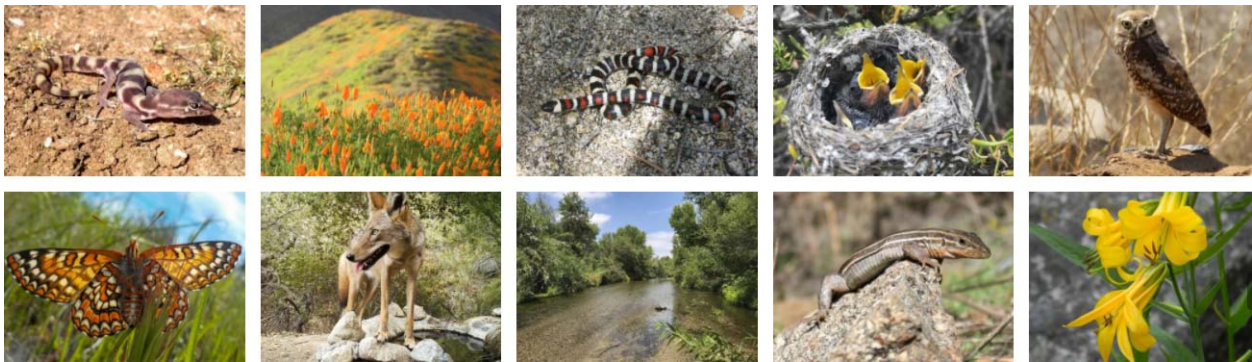
Photo: Lindsay P. Martin/TNC



Photo: Transportation Corridor Agencies



Photo: Orange County Transportation Authority



Photos: Western Riverside County Regional Conservation Authority

DRAFT White Paper Prepared for Southern California Association of Governments
 By Liz O'Donoghue, The Nature Conservancy
 April 13, 2022

Attachment: Redlined version of revised Draft RAMP Policy Framework (SCAG Staff Update)

Table of Contents

Acknowledgements.....	4
Executive Summary.....	5
Regional Advance Mitigation Planning: An Overview.....	8
Regional Advance Mitigation Planning (RAMP).....	10
RAMP Foundations and Tools.....	11
Applicable regulations	12
Federal Laws and Regulations.....	12
State Laws and Regulations	12
Advance Mitigation Frameworks, Strategies and Plans	13
<i>Habitat Conservation Plans/Natural Communities Conservation Plans</i>	14
<i>Regional Conservation Investment Strategies</i>	15
<i>Mitigation and Conservation Banks</i>	16
<i>Programmatic Mitigation Plans</i>	16
<i>In Lieu Fee Programs</i>	17
A Science-Based Integrated Planning Framework.....	17
RAMP Planning Steps.....	17
Science and Methods.....	21
Conservation Assessments	22
Co-benefits and Leveraged Opportunities.....	24
Infrastructure Assessments to estimate potential impacts.....	26
Partners and Collaborators.....	28
Outreach conducted and feedback from partners and collaborators.....	28
Scope, Scale and Models.....	30
Models	31
Funding and Financing.....	35
Funding Frameworks.....	37
Potential Sources of Funding	38
Authorities, Potential Roles and Responsibilities	40
Potential roles for SCAG in a RAMP Initiative	40
Partner Roles.....	42
Recommendations	42
Finalize the draft Regional Advanced Mitigation Program Policy Framework	42

Identify the potential demand for advance mitigation 43
Evaluate regional network and collaborative opportunities 43
Explore addressing gaps in RAMP plans and mechanisms 43
Financial assessment and modeling..... 43
Consider supporting pilot project based on emerging needs..... 43

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Executive Summary

The adopted regional plan, Connect SoCal, is a long-range plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal identifies over \$638 billion in transportation system investments through 2045 in the six-county Southern California region, and recognizes the need for the housing, energy projects and water investments to support the region's communities and economy. At the same time, Southern California's natural environment hosts an extraordinarily rich and diverse array of ecosystems that provide habitat for plants and wildlife, many of which exist nowhere else on earth, and are essential to maintaining the fragile balance of nature and support resident's health and quality of life. The region's natural and working lands provide clean water and clean air, local fresh food, opportunities for healthy recreation, protection from climate threats like flooding, wildfire, and urban heat, and mitigate climate change by sequestering greenhouse gas emissions.

To achieve the balance envisioned in Connect SoCal, SCAG is working on new initiatives at the intersection of land use, transportation, and technology to achieve its goal of a more mobile, sustainable, and prosperous region, and to reach the region's greenhouse gas reduction goals. Regional Advance Mitigation Planning (RAMP) is one example of a strategy that sits at that intersection of land use, transportation, and technology, and supports Connect SoCal's goals. RAMP seeks to balance the need for infrastructure and conservation in the region to maximize benefits to the environment, economy, and communities. Given the synergistic outcomes from RAMP, especially the benefits to the environment, a RAMP planning initiative was included as component of a mitigation measure in the Connect SoCal Programmatic Environmental Impact report (EIR).

RAMP is a science-based integrated planning framework that, when implemented, expedites infrastructure project delivery, and achieves meaningful conservation outcomes. By identifying and aligning future development and conservation planning, RAMP saves time, money and staff resources, results in permit efficiencies, accelerates conservation investments, and encourages agency communication and coordination. RAMP allows infrastructure agencies to get ahead and stay ahead, by planning and securing anticipated compensatory mitigation needs well in advance of project development, getting projects done sooner and cheaper through streamlined regulatory review and permitting. Simultaneously, conservation benefits are achieved from pooling required mitigation funding to enable protection, restoration or enhancement of larger-scale and higher priority habitat than the typical project-by-project mitigation approach.

Guided by the data-rich integrated planning framework, RAMP can be implemented through Natural Communities Conservation Plan/ Habitat Conservation Plans (NCCP/NCCPs), Regional Conservation Investment Strategies (RCIS) and associated Mitigation Credit Agreements (MCAs), and mitigation and conservation banks. Southern California has been a leader in developing highly successful RAMP programs, mostly at the sub-county level that are well established and achieving their desired outcomes. However, there are gaps in RAMP coverage and coordination in and throughout the SCAG region, and there may be opportunities to provide region-wide RAMP resources and support that can assist existing programs, potentially new programs and inter-jurisdictional collaboration.

This white paper was commissioned by SCAG to investigate the question of advancing RAMP in the six-county region as a regional strategy and is guided by research, and information from transportation agencies, conservation organizations, and others. The paper provides background on RAMP and identifies the benefits and challenges of instituting RAMP in the region. This white paper does not come to a conclusion; rather it explores opportunities to support existing and future programs, RAMP initiatives that could cross jurisdictions to serve inter-regional infrastructure and conservation needs, science and planning resources, agencies' roles, questions and information gaps.

That said, the white paper suggests that SCAG is well positioned to support RAMP in the region, given its regional scope, existing partnerships and relationships, robust data and infrastructure planning expertise, and commitment to project delivery and conservation outcomes. SCAG has no intention to assume responsibility for RAMP in the region; a program, should it be established consistent with Connect SoCal's PEIR mitigation measures, would be voluntary, promote flexibility in options and actions, address clear needs, and add value to existing partners and programs. As SCAG, partners and collaborators explore more deeply the possibility of a RAMP initiative in the region, specific tasks can be pursued that can help inform decisions as the conversation continues. Those next steps are: 1) Identify the potential demand for advance mitigation through integrating conservation and impacts assessments, potentially focusing on specific sectors or geographies; 2) Evaluate regional network and collaborative opportunities to study options for the structure and stakeholder engagement for a RAMP initiative; 3) Consider opportunities to close gaps in RAMP plans and mechanisms to enable RAMP throughout the region; 4) Explore options for funding and financing a RAMP initiative in the SCAG region; and 5) Consider a pilot project based on emerging mitigation needs.

The white paper is organized around the following chapters:

Regional Advance Mitigation Planning: an overview

This chapter identifies the problems with project-by-project mitigation and describes the RAMP approach, its benefits and challenges. It highlights the existing advance mitigation programs in the Region, gaps in coverage and cross-jurisdictional considerations.

RAMP Foundations and Tools

This chapter describes the regulatory context and foundations for RAMP and identifies advance mitigation tools and plans that can act as implementation opportunities. It also describes the regional and local planning context and other important considerations (like climate resilience, climate mitigation and general plans) at the various jurisdictional scales.

A Science-based Integrated Planning Framework

This chapter outlines the stepwise planning process to integrate and align infrastructure and conservation planning information that is the basis for RAMP. It provides the science and methods that underpin the RAMP approach enabling certainty and acceptance. It includes the principles behind conservation planning, the methods and data needed for assessing potential project impacts, and the data, tools and outreach needed for identifying advance mitigation opportunities.

Partners and Collaborators

This chapter describes the range of partners and collaborators in the RAMP process, identifies potential engagement opportunities and structures, and reports on feedback from interviews with partners and collaborators.

Scope, Scale and Models

This chapter identifies and considers different approaches to a regional RAMP program, given the existing advance mitigation programs, plans and other opportunities. It considers the inter-jurisdictional issues such as linear infrastructure, wildlife connectivity corridors, large sensitive habitats, and regulatory agency preferences such as ecoregional and watershed scales.

Funding and Financing

This chapter describes the importance of funding and financing to implementing a RAMP program. The chapter describes funding models, sources of funding for mitigation, costing models and timing.

Authorities, Potential Roles and Responsibilities

This chapter clarifies existing authorities and identifies potential roles for SCAG in a regional RAMP initiative and identifies the array of expertise and partners in the SCAG region.

Recommendations

This chapter provides recommendations for SCAG to consider based on the research and information gathered through the process, proposes areas of focus and incremental next steps, identifies information gaps and potential tools, and considerations for collaboration and roles.

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Regional Advance Mitigation Planning: An Overview

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 2050¹. 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 Yet due to major stressors such as climate change, urbanization and fragmentation, California is experiencing rapid biodiversity loss, with the most imperiled biodiversity of any state in the contiguous United States.⁴

Given the sensitive natural habitats of the Southern California region, many essential development projects will have impacts on sensitive species and habitats that may result in degradation of existing habitats and species, and increased fragmentation further threatening the viability of habitats and species and may require environmental mitigation as prescribed in each project’s environmental document to avoid, or minimize the potential impact; if there are unavoidable impacts to species, habitats or resources, the project proponent is required to compensate for any impacts that do occur. This avoid-minimize-compensate sequence is called the mitigation hierarchy.⁵

The mitigation hierarchy guides project proponents to address environmental impacts 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;

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

⁴ Hamilton, Healy, Regan L. Smyth, Bruce E. Young, Timothy G. Howard, Christopher Tracey, Sean Breyer, D. Richard Cameron, et al. 2022. “Increasing Taxonomic Diversity and Spatial Resolution Clarifies Opportunities for Protecting US Imperiled Species.” *Ecological Applications* e2534. <https://doi.org/10.1002/eap.2534>

⁵ See U.S. EPA website: <https://www.epa.gov/cwa-404/types-mitigation-under-cwa-section-404-avoidance-minimization-and-compensatory-mitigation>

- (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.

Compensatory mitigation measures may include purchasing, restoring or enhancing habitat for certain affected species or activities. Mitigation is often required under federal statutes such as the Clean Water Act, Endangered Species Act, Federal Wild and Scenic Rivers Act, as well as state requirements under the California Environmental Quality Act (CEQA), California Endangered Species Act, CA Fish and Game Code Sections 1600-1616 (Lake and Streambed Alteration Agreements), Porter-Cologne Water Quality Control Act, California Wild and Scenic Rivers Act, and the Habitat Restoration and Enhancement Act.

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 projects. Over \$3.3 billion is spent annually on compensatory mitigation under the Clean Water Act (CWA) and Endangered Species Act programs.”⁶

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.”⁷ 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. Furthermore, the lack of early coordination with regulatory agencies to pro-actively incorporate conservation data and align mitigation with regional conservation priorities results in delays in securing accepted mitigation and small-scale ineffective mitigation.⁸ 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.⁹

⁶ 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.

⁷ Ibid

⁸ Ibid

⁹ Ibid

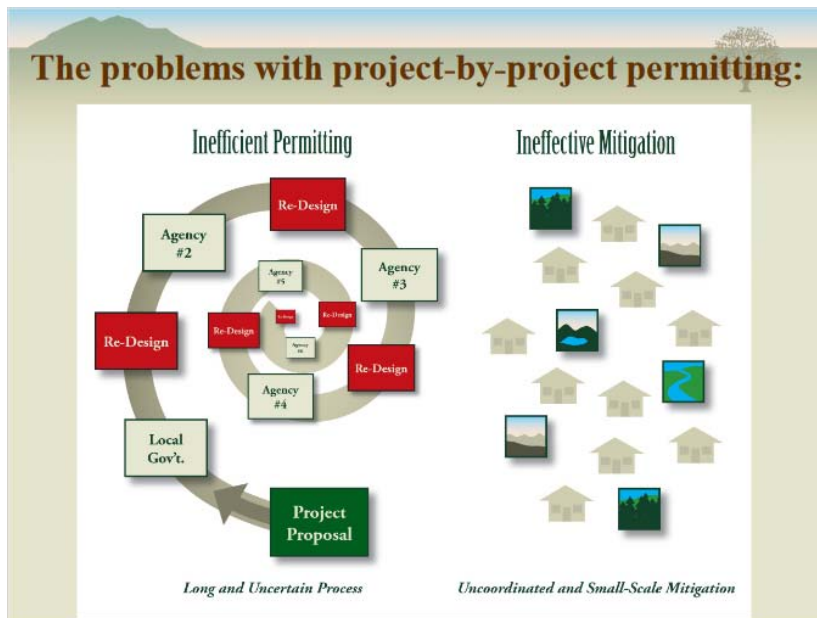


Figure 1. Courtesy - ICF for East Contra Costa County Habitat Conservancy

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.¹⁰ 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.¹¹ Continued cost escalations over the past two decades have prompted Caltrans to consider strategic planning for consolidated advance mitigation opportunities.

The delays, costs, and lack of effective conservation outcomes from traditional project-by-project mitigation has led to the growing trend of identifying mitigation needs and opportunities in advance of project development, known as advance mitigation planning, both in California and nationally.¹²

Regional Advance Mitigation Planning (RAMP)

RAMP is a planning framework that represents an integrated and comprehensive approach to mitigating unavoidable biological resource impacts potentially caused by infrastructure or development projects. An alternative to project-by-project mitigation, RAMP aims to integrate regional-scale conservation into project proponents' efforts well in advance of detailed project-level planning. By focusing mitigation activities to areas that provide greater habitat and connectivity value, preserve highly functional

RAMP is a science-based approach to identify and implement advance mitigation actions to support regional conservation priorities and expedite project delivery.

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 Sciara, 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.

¹² Metro Regional Advance Mitigation Needs and Feasibility Assessment, June 2018, prepared by ICF.

ecosystems, and reflect the conservation priorities of the region, RAMP seeks to better optimize mitigation spending and align mitigation projects with regulatory agency priorities.

RAMP incorporates both a regional geographical component and an advance time frame. The regional geographical component allows agencies to consider potential impacts of multiple planned development projects and the landscape and watershed health needs in the region. The advance time frame allows agencies to identify and implement regional mitigation opportunities that will satisfy anticipated mitigation requirements early in the project planning and the environmental review process, before projects are constructed, often years in advance.

RAMP aims to be faster, less expensive, and more effective than traditional project-by-project mitigation. The goal is for natural resource agencies and infrastructure agencies or project proponents to work together to integrate conservation data and estimate mitigation needs early in the projects' timelines for mutual benefit. For infrastructure agencies or developers, RAMP helps to potentially reduce potential mitigation needs and costs, avoid permitting and regulatory delays, and allow public mitigation dollars to stretch further.¹³ For natural resource agencies and conservation organizations, RAMP requires a landscape-scale approach that better facilitates the early integration of mitigation considerations (such as avoidance and minimization) in project planning and design, that helps to ensure the durability and success of mitigation measures over time, transparency and consistency and facilitates investment in conservation priorities to create larger scale, connected and functional and resilient ecosystems. Further, RAMP catalyzes conservation actions such as protection, restoration or enhancement sooner, earlier in the development timeline, thereby avoiding conversion of valuable habitat to other uses.

RAMP itself is not a regulatory process and does not change CEQA in any way. By planning strategically on a larger scale and implementing mitigation in advance of project impacts or project delivery, RAMP allows both resource agencies and infrastructure agencies to work together to implement mitigation to be more cost effective, efficient, and successful.

RAMP Foundations and Tools

RAMP is a planning framework that integrates infrastructure and development plans and projects with conservation information to satisfy regulatory requirements and to support regional planning and sustainability goals. It is an important strategy to advance Connect SoCal, a long-range plan that balances future mobility and housing needs with economic, environmental, and public health goals.

“As a result of [the Western Riverside MSCHP], we are achieving key quality of life goals: protecting our environment and delivering needed transportation projects. The plan has proven that growth and conservation can co-exist.” Anne Mayer, Executive Director, Riverside County Transportation Commission.

¹³ 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.

It is well aligned with strategic mitigation tools that have been developed over the past thirty years, such as Natural Communities Conservation Plans (NCCPs). The Federal Highway Administration’s Eco-Logical Approach and the Integrated Ecological Framework¹⁴, programmatic mitigation plans in federal transportation and water infrastructure authorization laws and the U.S. Fish and Wildlife Service mitigation policies¹⁵ encourage and authorize strategies to integrate conservation early into infrastructure development for better infrastructure and environmental outcomes. Agencies regulating wetlands and Waters of the U.S. emphasize the importance of a watershed approach¹⁶ to mitigation. Both state and federal policies support the use of advance mitigation to fulfill state and federal compensatory mitigation requirements. More recently, the California Natural Resources Agency identified “Institutionalize Advance Mitigation” as one of nine strategic actions to achieve the state’s goal of protecting 30 percent of California’s lands and waters by 2030.¹⁷

Applicable regulations

Development projects, whether advanced by public infrastructure agencies or private interests, are subject to federal, state, and local environmental regulations. As mentioned before, the RAMP process does not alter existing regulations. Since the RAMP process facilitates integrating conservation information with predicted impacts for future projects, the RAMP process aims to enable agencies to comply with the mitigation hierarchy more efficiently and mitigation requirements resulting from environmental regulations. The following is a list of the most relevant federal and state policies governing mitigation.¹⁸

Federal Laws and Regulations

- National Environmental Policy Act (42 U.S.C. 4321 et seq.).
- Endangered Species Act of 1973 (16 U.S.C. 1531-1543).
- Clean Water Act (33 U.S.C. 1251-1543).
- U.S. Army Corps of Engineers (USACE)/US Environmental Protection Agency’s (USEPA) 2008 Compensatory Mitigation for Losses of Aquatic Resources (Compensatory Mitigation Rule, USACE/USEPA 2008).
- Magnuson-Stevens Fishery Conservation and Management Act (U.S.C. Section 1801 et seq.).
- Coastal Zone Management Act (16 U.S.C. 1415, et seq.).

State Laws and Regulations

- California Environmental Quality Act (P.R.C. 21000 et seq.).
- California Endangered Species Act (Fish and Game Code 2050 et seq.).

¹⁴ https://www.environment.fhwa.dot.gov/env_initiatives/eco-logical.aspx

¹⁵ [USFWS mitigation policy, filed at OMB](#)

¹⁶ https://www.epa.gov/sites/default/files/2015-07/documents/watershed_approach_handout.pdf

¹⁷ <https://www.californianature.ca.gov/pages/30x30> p. 4 in draft Pathways to 30x30 in California document

¹⁸ Additional relevant statutes, regulations, policies, and guidelines are listed in the 2021 Statewide Advance Mitigation Initiative Memorandum of Understanding between Caltrans and regulatory agencies.

<https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/2021-sami-mou-a11y.pdf>

- California Natural Community Conservation Plan Act (Fish and Game Code Section 2800 et seq.).
- California Coastal Act, as amended (P.R.C., Division 20, 3000, et seq.).
- Other California Fish and Game Codes
 - Sections 1601-1603: Lake and Streambed Alteration Agreement.
 - Sections 3503, 3503.5, and 3511(a)(1). These sections prevent unlawful take, possession, or needless destruction of the nest egg of any bird, including birds of prey and fully protected birds.
 - Sections 4150 and 4700(a)(1). These sections prevent the take or possession of non-game mammals and fully protected mammals.
 - Sections 1850-1861: Regional Conservation Assessments, RCISs and Mitigation Credit Agreements.
 - Sections 1797-1799.1: Conservation Bank and Mitigation Bank Applications and Fees.
- State Water Resources Control Board: State Policy for Water Quality Control--State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures).

Advance Mitigation Frameworks, Strategies and Plans

Advance mitigation planning is not a new idea. There are a host of frameworks, strategies and plans that enable advance mitigation through science-based integration of development and conservation data and planning strategies. The following strategies and plans are based on science, plan at a landscape scale and can be primary implementation mechanisms for RAMP mitigation actions.

SPOTLIGHT RIVERSIDE COUNTY: HABITAT CONSERVATION PLANS/ADVANCE MITIGATION

Multi-species habitat conservation plans were launched in Southern California in the late 1990s/early 2000s to facilitate economic development and the conservation of threatened and endangered species and their habitats. Two of the first NCCPs/HCPs are in Riverside County: The Western Riverside MSHCP, administered by the Regional Conservation Authority (a subsidiary of the Riverside County Transportation Commission), and the Coachella Valley MSHCP, administered by the Coachella Valley Conservation Commission. Both plans were in response to the need to build housing, transportation, and other economic projects in an area that is a global biodiversity hotspot hosting species that are found nowhere else on Earth yet are in decline due to habitat fragmentation and loss. Today, the plans are in the implementation phase, protecting essential habitat while streamlining permitting for development projects. The Western Riverside MSHCP is the largest plan in the nation, protecting 146 native animals and plants and 33 endangered or threatened species, permanently conserving 500,000 acres of nature, while saving taxpayers more than \$500 million and expediting environmental permits for freeway and road projects. The Coachella Valley MSCHP protects 240,000 acres of open space and 27 species and expedites permits for future road projects. Both plans offer certainty for infrastructure agencies and the business community. The conservation projects preserve native natural communities, habitat linkages and wildlife corridors, and create systems of open space parks, trails and reserves for residents and tourists to enjoy. The parks and reserves also support healthy recreation, clean air, clean water and climate resilience.

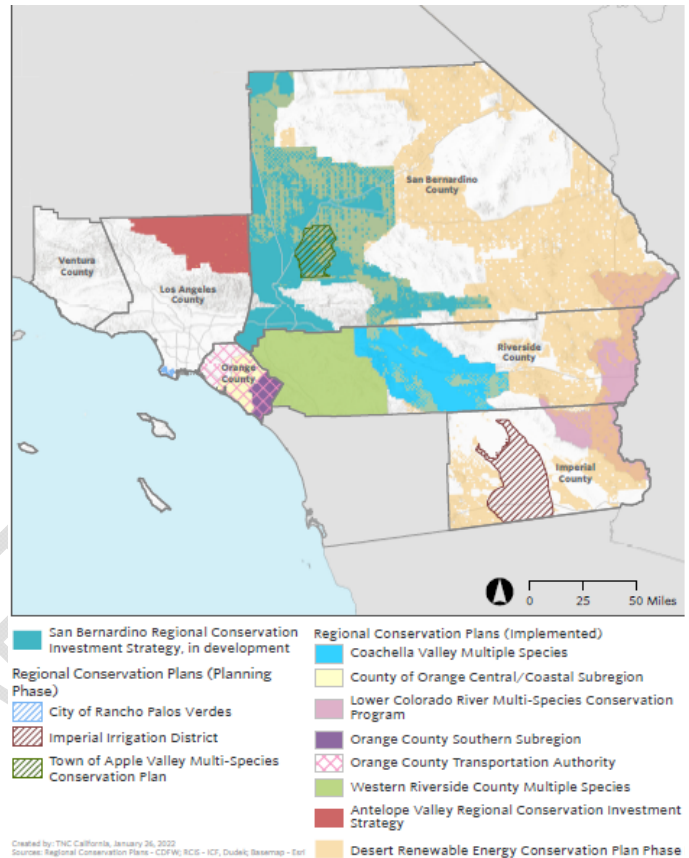
Habitat Conservation Plans/Natural Communities Conservation Plans

Habitat Conservation Plans (HCPs), authorized under the federal Endangered Species Act, are designed to reduce conflicts between listed species and economic development by authorizing the limited and unintentional take of listed species and requiring conservation measures to minimize or mitigate the impacts at a regional scale.¹⁹ Natural Communities Conservation Plans are authorized by California’s Natural Community Conservation Planning Act are similar to HCPs in that they provide for the regional protection of plants, animals and their habitats while allowing compatible and appropriate economic activity.²⁰ The NCCP Act is broader in its orientation and objectives than the California and federal Endangered Species Acts, as NCCPs take a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity for a suite of species, requiring that conservation actions contribute to the recovery of the covered species.

In Southern California, there are four highly successful multispecies habitat conservation plans, combined NCCP/HCPs that provide long-term coverage for federal and state covered species, involving both federal and state wildlife agencies, and streamlining environmental permitting for transportation and other projects.

- Orange County (Central/Coastal) NCCP/HCP (1996)²¹
- Western Riverside Multiple Species Habitat Conservation Plan (2004)²²
- Coachella Valley Multiple Species Habitat Conservation Plan (2008)²³
- Orange County Transportation Authority NCCP/HCP (2017)²⁴

NCCP/HCPs typically have plan boundaries that are county subregions, designed to cover areas of high biodiversity, threatened and endangered species and habitats, where anticipated infrastructure and development projects may have environmental conflicts. While NCCP/HCPs can take many years to



Regional Conservation Plans in the SCAG Region

¹⁹ <https://www.fws.gov/service/habitat-conservation-plans>

²⁰ <https://wildlife.ca.gov/Conservation/Planning/NCCP>

²¹ <https://occonservation.org/about-ncc/>

²² <https://www.wrc-rca.org/>

²³ <https://cvmshcp.org/>

²⁴ <https://www.octa.net/About-OC-Go/OC-Go-Environmental-Programs/Environmental-Mitigation-Program/>

develop and receive approval, once approved, the plans enable a turnkey permitting approval process and a funding structure that supports robust investments to implement science-based conservation reserve designs approved by wildlife agencies. Some NCCP/HCPs have agreements with agencies regulating wetlands and waters, allowing coverage for multiple resources and permits, a significant benefit for project proponents.

Regional Conservation Investment Strategies

Established by Assembly Bill 2087, a Regional Conservation Investment Strategy (RCIS) is a voluntary, non-regulatory regional planning process intended to result in higher-quality conservation outcomes and includes an advance mitigation tool, called Mitigation Credit Agreement (MCA). RCISs use a science-based approach to identify conservation and enhancement opportunities that, if implemented, will help California's declining and vulnerable species by protecting, creating, restoring and reconnecting habitat, and may contribute to species recovery and adaptation to climate change and resiliency. Any public agency can develop an RCIS and once approved, any entity can develop an MCA within the boundary of the RCIS to create advance mitigation credits by implementing the conservation or habitat enhancement actions identified in an RCIS. The credits may be used as compensatory mitigation for impacts under CEQA, CESA and the Lake and Streambed Alteration Program.²⁵ If other applicable natural resource agencies determine that an MCA meets relevant state or federal requirements under the federal ESA, the Clean Water Act, the Porter Cologne Act or other applicable regulations and policies, those agencies could elect to allow the MCA to create mitigation credits that can be used under those laws, regulations, and policies.

RCISs and associated MCAs differ from NCCP/HCPs in a number of ways; most significantly that MCAs are limited to generating advance mitigation investments for future use, helping to expedite project delivery. Project proponents must secure permits through the normal regulatory process.

SPOTLIGHT OCTA: M2 AND THE MITIGATION PROGRAM

In 2006, Orange County residents passed Measure M2 to extend the county's half-cent sales tax for transportation projects until 2041. The conservation community, OCTA and Caltrans collaborated to include an advance mitigation component, modeled after SANDAG's TransNet and Riverside County's Renewed Measure A. M2 pools impacts of the freeway improvement projects in the plan and allocates \$243.5 million (5 % of the cost of the projects) for larger scale mitigation with a focus on habitat protection, connectivity and resource preservation in exchange for streamlined project approvals. A greenprint developed by the Green Vision Coalition helped identify priority conservation lands to protect or restore. An Environmental Oversight Committee (EOC) oversees the Environmental Mitigation Program. In 2016, OCTA completed its NCCP/HCP for the mitigation lands. To date, OCTA has acquired 1,300 acres of open space lands, and restored about 350 acres of land. OCTA staff cite cost savings, strategic and meaningful conservation investments, wildlife agencies' expedited review of freeway projects, streamlined review of clean water act permits, productive partnerships and a legacy access program as key benefits of the program.

²⁵ Text adapted from CDFW's RCIS webpage: <https://wildlife.ca.gov/Conservation/Planning/Regional-Conservation>

In the SCAG region, the Antelope Valley RCIS is approved, and the San Bernardino County RCIS is in development, sponsored by the San Bernardino County Transportation Authority.

Mitigation and Conservation Banks

Mitigation or conservation banks are privately- or publicly owned lands managed for natural resource values. In exchange for permanently protecting and managing the land, the bank operator can sell habitat, species, or aquatic resource credits to project proponents who need to satisfy legal requirements for compensating environmental impacts of projects.

A conservation bank generally protects threatened and endangered species and/or habitat. Credits are established for the specific sensitive species or habitat that occurs on the site. Agencies that typically participate in the regulation and approval of conservation banks are CDFW, USFWS and NMFS.

Mitigation banking relies on the same concept as conservation banking, but it includes aquatic resource creation, restoration, and enhancement undertaken to compensate for unavoidable impacts to aquatic resources. Mitigation banks are generally approved by the wildlife agencies, USACE, EPA, and regional water quality control boards using a coordinated review process through the Interagency Review Team. Where approved conservation banks or mitigation banks are available and have appropriate mitigation credits, project proponents or entities may purchase the credits. Where approved conservation banks or mitigation banks are not available, a RAMP program or any entity may establish or fund the establishment of one or more such banks.

Programmatic Mitigation Plans

Programmatic mitigation plans are authorized in federal transportation²⁶ and water resources development²⁷ statutes to address the potential impacts of transportation and water resources development projects to ecological resources, habitat, fish, and wildlife. A programmatic mitigation plan includes an assessment of the conditions of environmental resources in the plan area and potential opportunities to improve the overall quality of the resources through strategic mitigation for impacts of infrastructure projects and can be used to help identify opportunities for advance mitigation.

²⁶ 23 U.S.C. Sec. 169 (a) (SHC 800.9)

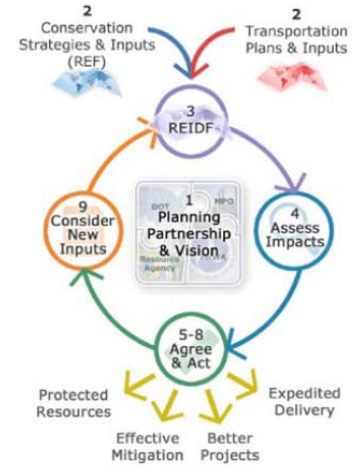
²⁷ 33 U.S.C. Sec. 2283 (h)

In Lieu Fee Programs

In-Lieu Fee programs, described in the U.S. Army Corps of Engineers/U.S. EPA 2008 mitigation rule, involve the restoration, establishment, enhancement and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements for Clean Water Act 404 permits. The U.S. Army Corps of Engineers' Los Angeles District²⁸ approves in-lieu fees for the district.

A Science-Based Integrated Planning Framework

RAMP integrates planned infrastructure or development projects and conservation planning to identify potential advance mitigation actions and sites that meet the regulatory requirements and achieve co-benefits. RAMP relies on science and methods to identify important conservation data and support the ecological health of landscapes and watersheds, and to determine estimated impacts of proposed transportation, water and energy infrastructure and other development projects. Conservation planning techniques are used to identify conservation values and direct advance mitigation investments to meet regulatory and broader conservation objectives that regulatory agencies support. Existing conservation plans developed locally can also help to direct mitigation investments to support implementation of those plans. Infrastructure assessments rely on the conservation planning to identify predicted impacts on sensitive species and habitats that help guide future mitigation assessments. Once integrated, further modeling and outreach can determine viable opportunities for advance mitigation that meet the regulatory requirements and generate support for projects that advance landscape scale and watershed health.



FHWA Integrated Ecological Framework

RAMP Planning Steps

The RAMP process can be simplified into six steps as follows. For illustrative purposes, we use transportation as a model, but the framework can apply to other infrastructure such as water, energy projects, housing plans and projects. The methodology, first developed and published by UC Davis²⁹ has informed the methodology that Caltrans is currently using for the Advance Mitigation Program.³⁰ The stepwise process outlined here is intended to be done in coordination with the regulatory agencies to ensure the data, methods and outcomes for the conservation assessment and impacts assessment reflect their input and priorities.

²⁸ <https://www.spl.usace.army.mil/Missions/Regulatory/Mitigation.aspx>

²⁹ Thorne, James H; Bjorkman, Jacquelyn; & Huber, Patrick R. (2015). A Reference Manual for Caltrans Staff on Regional Advance Mitigation Impact Assessment Methods. UC Davis: Information Center for the Environment. Retrieved from: <http://escholarship.org/uc/item/76n8793q>

³⁰ See Caltrans Statewide Advance Mitigation Needs Assessment report methods, retrieved from <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/2020-q2-samna-report.pdf>

Determine the scope of the region for the analysis.

A critical feature of RAMP is the regional scope, allowing integrated analyses that helps identify and consider multiple infrastructure projects for advance mitigation, and incorporates the ecological health of ecoregions and watersheds to foster connected, diverse, and resilient lands and waters, and the benefits they provide to communities. The scale of a region can be ecological, such as ecoregions or watersheds, or jurisdictional, such as a sub-county, county or multiple counties.

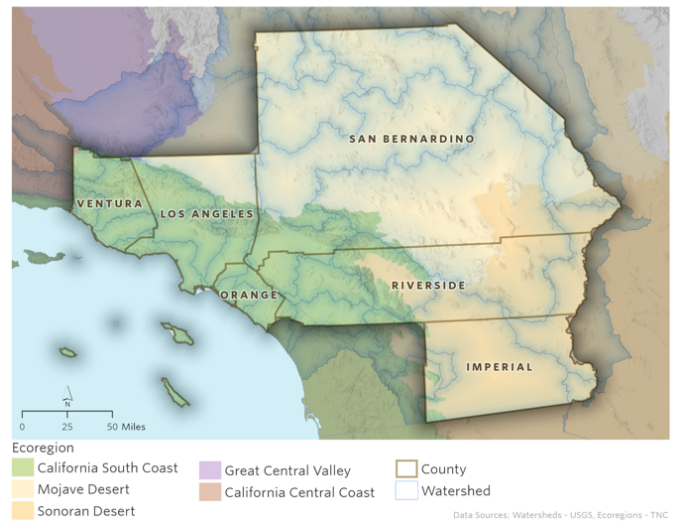
Regulatory agencies emphasize the importance of planning at ecoregional, sub-ecoregional and/or watershed scales to incorporate broader conservation goals such as habitat and aquatic connectivity and climate resilience, and for ease of identifying suitable mitigation sites.³¹ Caltrans is developing the Regional Advance Mitigation Needs Assessments at ecoregional scales.

Assemble conservation information in the region. Assembling conservation information in the selected region into a conservation assessment will provide a picture of the ecological health of the region, stressors and opportunities for investment in advance mitigation strategies that support regional conservation goals. The conservation assessment serves two main purposes: it helps project proponents understand the existing environmental conditions and future conservation goals to develop projects' plans to avoid or minimize impacts, thereby reducing the need for compensatory mitigation, and it provides a foundation on which to estimate future projects' impacts. The information assembled typically includes information on:

- Federal and/or state listed species and special-status species
- Habitat connectivity corridors and landscape permeability
- Ecologically sensitive natural communities, including as waters and wetlands
- Existing conservation plans
- Co – benefit information such as carbon sequestration, climate resilience, water, recreational access, environmental justice

Counties, Ecoregions and Watersheds

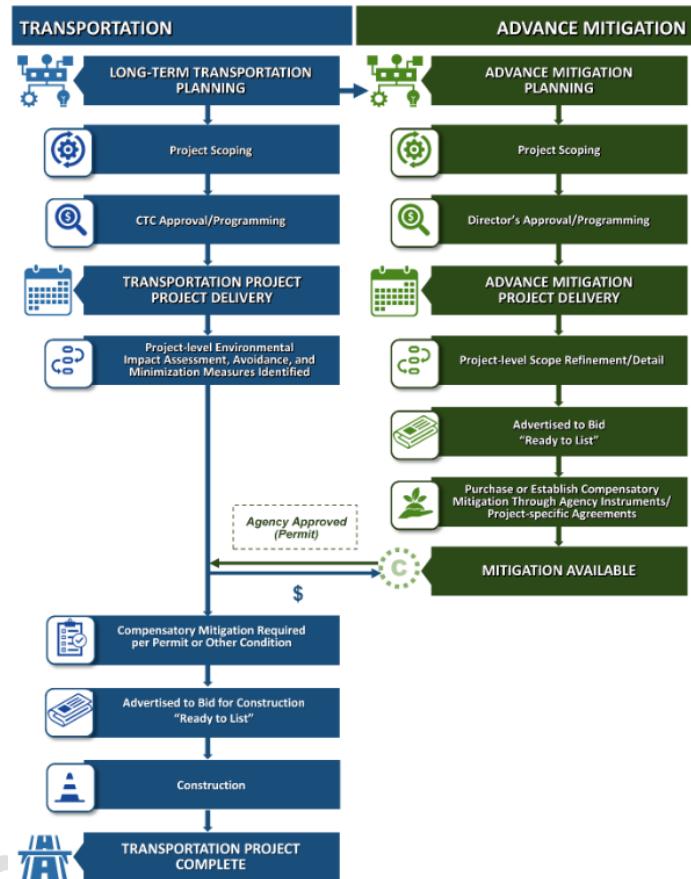
SCAG



³¹ Ibid.

Identify planned infrastructure and/or development projects in a region.

Potential infrastructure or development projects to be considered for RAMP include those that are planned sufficiently far enough in the future to be able to take advantage of *advance* mitigation (see chart to the right to see the timing of advance mitigation with transportation project delivery); and could possibly require mitigation measures. For example, projects in a Regional Transportation Plan that add transit capacity on existing infrastructure or planning projects would not be included as they would not likely have habitat impacts. The projects need to be digitized in order to run the analysis. For selected projects a footprint is estimated by applying buffers using existing models.



Timing of Advance Mitigation Process. Credit: Caltrans

Estimate potential impacts and mitigation need.

The next step is to integrate the conservation information and the list of infrastructure projects to estimate potential impacts of planned projects on covered species and sensitive habitats. This is done by overlaying project footprints on species and habitat models and identifying a range of impacts to account for estimates in the model, resulting in a range of high to low potential impacts. Once the range of impacts is identified for the relevant species and habitats, one can then apply a mitigation ratio to identify potential mitigation need. For example, if the analysis finds that the projects collectively may impact 20 acres of a species' habitat, applying a mitigation ratio of 2:1 for mitigation would result in a mitigation need of 40 acres of that habitat. Importantly, this information is for planning purposes only to give order-of-magnitude mitigation estimates and not for expected permitting actions.

Collaborate and identify existing options or suitable mitigation sites.

Once the estimated mitigation need for species and habitats is known, there are a number of ways that one can identify and consider strategic mitigation options that support the advance mitigation needs and conservation goals. These include mitigation strategies, mitigation mechanisms, mitigation sites and specific mitigation actions that meet conservation priorities and provide project proponents the more efficient project delivery outcomes. RAMP prioritizes opting-in with existing strategic advance mitigation programs that contribute to ecosystem-level and regional conservation goals such as existing NCCP/HCPs, conservation and mitigation banks, in-lieu fee programs and Mitigation Credit Agreements.

If no such strategic advance mitigation plans or mechanisms exist, mitigation credits can be created by working with partners to protect, restore or enhance habitat that meet the predicted compensatory mitigation needs for a suite of future projects. Outreach is critical to identify potential partners who could act as suppliers of mitigation, such as mitigation bankers, land trusts, conservancies, habitat agencies, open space districts and local governments. Further analysis may be helpful to identify a portfolio of potential advance mitigation sites using techniques such as Marxan³² reserve selection software to evaluate areas for potential biological suitability. See chart below for an illustration of the mitigation decision tree.

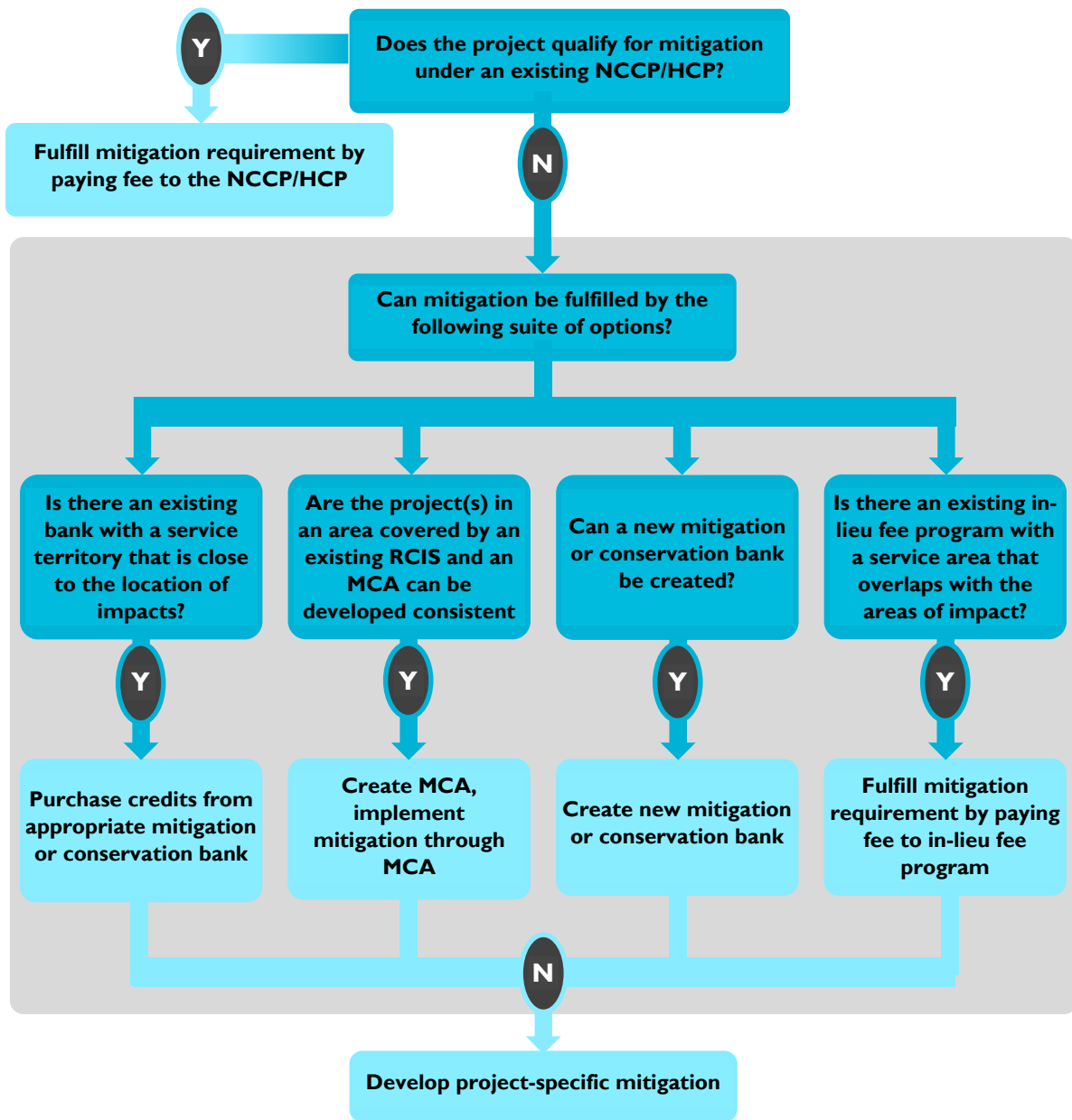
Implementation: Secure or generate mitigation credits for use in the future.

As mentioned, if a strategic advance mitigation option exists that enables project proponents to secure mitigation credits immediately, that is likely to be the most efficient option. Participating in an NCCP/HCP, purchasing credits from a bank, or purchasing/using available credits from an MCA will satisfy compensatory mitigation needs.

If no such option exists, project proponents can invest in advance mitigation actions consistent with regional conservation goals by using an approved RCIS to site mitigation actions in high priority conservation areas, thereby creating an MCA for a suite of advance mitigation actions, create mitigation or conservation banks, through mechanisms like a request for proposal.

To be considered RAMP investments, implementation strategies and mechanisms must be forms of advance mitigation, contribute to regional conservation priorities, implemented with the concurrence of applicable natural resource agencies, and will create mitigation credits or values before infrastructure or project impacts occur. In many cases, RAMP mitigation actions can be implemented by providing funding and support to appropriate partners, entering into agreements with the partners regarding how a mitigation action will be implemented, and enabling the partner to implement the mitigation. For example, RAMP managers or project proponents could issue “requests for proposals” that invite partner organizations and entities to submit proposals for habitat or aquatic resource conservation actions for future predicted mitigation needs that align with RAMP goals. RAMP managers or project proponents could create mitigation values or mitigation credits by contributing funding and support for large-scale conservation actions implemented by RAMP partners, including but not limited to habitat protection or wetland restoration actions, creating mitigation values or mitigation credits from only a portion or phase of the larger conservation action. This approach can both increase the efficiency of RAMP implementation and increase the ecological success of the large-scale conservation action and the RAMP mitigation action.

³² <https://marxansolutions.org/>



Mitigation Prioritization Decision Tree. Credit: East Bay RAMP Sub-Regional Assessment

Science and Methods

The following outlines the methods for developing conservation assessments and estimating potential impacts of infrastructure projects, focusing on transportation given that there are established methods in current use. The basic approach for identifying estimated impacts is the intersection of modeled infrastructure project footprints and natural resource spatial layers, with co-benefit information providing information on impacts to and benefits of potential RAMP investments to help with prioritization.

Conservation Assessments

Science-based conservation assessments include data and analysis that describes and maps the distribution of conservation values and co-benefits across a region. Once developed, a conservation assessment can provide an objective, science-based process, and suite of data on which to estimate future development projects' impacts and to provide a tool to assist RAMP stakeholders in prioritizing lands for restoration, protection and enhancement for advance mitigation purposes. Models exist for conservation assessments, such as conservation reserve designs in NCCP/HCPs, Caltrans' Regional Advance Mitigation Needs Assessments³³, the Conservation Assessment of Orange County³⁴ created to support OCTA's M2 Environmental Mitigation Program, and Biodiversity in Los Angeles (BAILA)³⁵.

Incorporated in conservation assessments are essential strategies to protect biodiversity. These strategies can guide development of conservation assessments and help identify priority mitigation actions. As described in the *Draft Pathways to 30x30 in California* report, those strategies include:

- Protect areas that are adjacent or linked to existing conserved areas to support large, interconnected landscapes and seascapes
- Ensure conservation of habitats that represent the full diversity of California's ecosystems, especially rare or remnant habitat types
- Restore degraded habitats, especially for rare ecosystems
- Target areas with high species richness, endemism (species only found in one place), and species rarity
- Prioritize places that support exceptional biocultural significance, which account for the interconnected nature of people and places.

OCTA's M2 Environmental Mitigation Program developed criteria to guide acquisition, restoration and management of mitigation properties³⁶. The criteria include information for biological assessments,

MITIGATION WIZARD

RAMP is a science-based process that relies on conservation and infrastructure data, models and approaches that align with regulatory agency policies and priorities. The methods require capacity, expertise and tools to conduct the analysis and process to determine mitigation demand, supply, opportunities and co-benefits. The [Mitigation Wizard](#) is a new, freely accessible tool embedded in the Bay Area Greenprint that was developed to enable RAMP opportunities in the San Francisco Bay Area. With regulatory and transportation agencies as advisors, the Mitigation Wizard is a web-based decision support tool that helps users identify the potential impacts of their projects on special-status species and sensitive habitats, and then evaluate potential conservation or restoration project areas to offset them. Users can then run the areas through the Bay Area Greenprint to understand projects' areas co-benefits, helping to make mitigation investments that support multiple benefits.

³³ <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>

³⁴ http://www.octa.net/pdf/CBIReport_final.pdf (2009)

³⁵ https://www.scienceforconservation.org/assets/downloads/BAILAreport_FINAL.pdf

³⁶ <https://www.fhbp.org/PDFs/Resources/Resources/M2/OCTA-M2-Evaluation-Criteria.pdf>

information to ensure alignment with land use and support from local governments, communities and regulatory agencies, information to help leverage co-benefits, and potential constraints.

At a basic level, data is assembled that represents biodiversity in the region, the conservation goals and objectives and existing conservation plans. Those data include: habitat, threatened and endangered species, special-status species, natural communities, habitat connectivity and climate resilience.

Regulatory agencies should be consulted when identifying data for a conservation assessment to ensure the assessment incorporates the agencies' relevant data, policies and priorities. Examples of data to support RAMP conservation assessments include:

Biodiversity, habitats, species richness

- California Department of Fish and Wildlife Areas of Conservation Emphasis II
- Threatened and Endangered Species (CDFW)
- High and Very High Species Biodiversity Areas (CDFW)
- Very High and High Species Biodiversity Areas (CDFW)
- US Fish and Wildlife Service Critical Habitat
- National Marine Fishery Service Critical Habitat'
- Audubon Society Important Bird Areas
- Data from NCCP/HCPs
- Wetlands (NWI) and Vernal Pools (CDFW)
- Individual mitigation species models based on land on cover (CDFW VEGCAMP, CWRH), known occurrences (CNDDDB) and observations (eBird, iNaturalist, GBIF, HerpMapper)
- Species requiring mitigation (TNC)
- Species biodiversity rank (CDFW)

Habitat connectivity

- Habitat connectivity and critical linkages (SC Wildlands, TNC)
- Fish passage barriers (CDFW)
- Regional Habitat Connectivity (TNC)
- Resilient Connected Network (TNC)
- Wildlife movement Barrier Priorities (CDFW)

Plans and existing conditions

- Land cover data (CDFW VEGCAMP, CWHR)
- Protected Areas and conservation easements (GIN)
- Farmland Mapping and Monitoring Program (DOC)
- Conservation plan density (Huber)
- Watersheds (USGS)
- Ecoregions (US EPA)
- Native American Reservations (SCAG)

Co-benefits and Leveraged Opportunities

While RAMP focuses on actions to compensate for unavoidable impacts on special-status species, habitats, waters of the State, wetlands, and natural communities, RAMP investments to protect, restore or enhance resources can yield co-benefits that make RAMP investments attractive to communities and the regulated community. Examples of co-benefits include climate mitigation and resilience, water quality and supply, addressing past environmental harms to vulnerable populations such as Black, Indigenous and People of Color (BIPOC), access to parks and open space particularly for disadvantaged and underserved communities, public health benefits, and flood risk reduction. Multi-benefit conservation mapping tools, like greenprints, enable efficient and effective analysis for assessing the co-benefits of protecting, restoring or enhancing specific sites that have been identified as suitable for advance mitigation investments.

Water Resources: While RAMP incorporates compensatory mitigation for Waters of the State and U.S., wetlands and water quality, advance mitigation actions such as restoring riparian areas, protecting areas of high groundwater recharge and enhancing floodplains can yield co-benefits related to water availability, water quality, healthy freshwater habitats, and reduce climate risks to communities and ecosystems. Data that support water availability, conservation, quality and resilience goals include:

- Adjudicated groundwater basins (CA DWR)
- Hydrogeologically Vulnerable areas (CA State Water Board)
- Impaired waterways and waterbodies (U.S. EPA)
- Municipal drinking water supply watersheds (TNC)
- Critically Overdrafted Groundwater Basins (CA DWR)
- Priority Groundwater Basins (CA DWR)
- Water Stress (USGS)
- Water Quality Index (U.S. EPA)
- Altered streams (USGS)
- Water quality monitoring sites (USGS)
- Groundwater recharge (USGS)
- Points of diversion (CA State Water Board)
- Runoff (USGS)

Climate mitigation and resilience: RAMP investments can reduce greenhouse gas emissions through carbon sequestration and avoided conversion, support community and ecological resilience and reduce climate risks. Data that support climate mitigation and resilience include:

Carbon sequestration

- Soil carbon (Hengl et al. 2017)
- Urban above-ground carbon (UC Davis)
- Wildland carbon (CARB)

Resilient ecosystems

- Refugia (UC Davis)

- Resilient Areas for Biodiversity (TNC)

Resilient communities

- Sea level rise (NOAA, TNC)
- 100 Year Floodplain (FEMA)
- Historic Wildfires (CAL FIRE)
- Fire Hazard Severity Zones (CAL FIRE)

Environmental Justice and Equity: Environmental Justice (EJ) is about equal and fair access to a healthy environment, with the goal of protecting underrepresented and poorer communities from incurring disproportionate negative environmental impacts. The SCAG region is demographically and economically diverse and displays the extremes in household income. The region includes heavily urban and entirely rural areas, as well as terrain that in some instances make achieving air quality goals challenging. A range of economic and social impacts such as health outcomes, education, employment, housing conditions, rates of incarceration and life expectancy vary vastly in this region based on race, income, and census tract. Institutional and system racism experienced by these communities continues to impact their access to more mobile, sustainable and prosperous futures in Southern California. The history of both the United States and California shows how race has played a role in the disparities and inequities that people of color experience today. Connect SoCal is designed to create region-wide benefits that are distributed equitably, while ensuring that any one group does not carry the burdens of development disproportionately. It is particularly important that Connect SoCal considers the consequences of transportation projects on low-income and minority communities, and avoids, minimizes or mitigates disproportionately high and adverse human health and environmental impacts on low-income and minority communities.³⁷

RAMP can play a role in supporting EJ and Equity goals to the extent feasible and supported by the applicable resource agencies. RAMP processes can meaningfully involve vulnerable and underrepresented communities in advance mitigation decisions and projects; incorporate environmental justice and equity information early in impacts assessments to better allow for avoidance and minimization of impacts on low-income and minority communities; align advance mitigation investments to address EJ and equity needs such as access to open space, clean water and climate risk reduction; and prioritize location of advance mitigation projects close to the expected areas of impacts.

Models exist to incorporate EJ and equity into compensatory mitigation plans and projects. OCTA's criteria includes proximity to underserved areas and cultural and historical sites. The San Francisco Bay Conservation and Development Commission adopted policies³⁸ to better incorporate EJ and equity into mitigation decisions.

³⁷ Adapted from SCAG's Environmental Justice Toolbox: https://scag.ca.gov/sites/main/files/file-attachments/toolbox_environmentaljustice_final.pdf?1621573326

³⁸ See <https://www.bcdc.ca.gov/cm/2019/1017BPA2-17SocialEquityEnvJusticeRec.pdf>

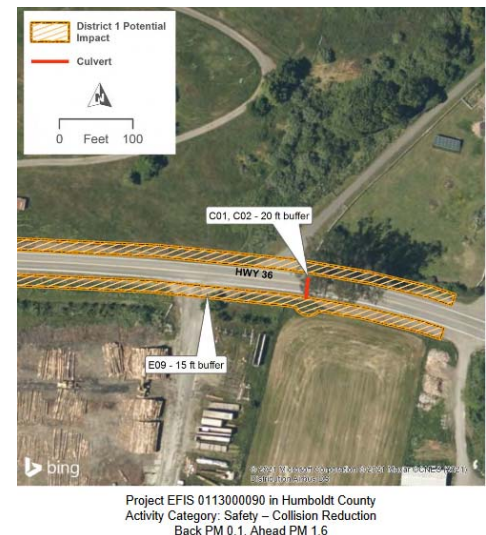
Data that support EJ and equity goals include:

- CalEnviroScreen Pollution Burden (CA EPA)
- Communities of Concern (SCAG)
- Disadvantaged Communities (CA OEHHA)
- Environmental Justice Areas (SCAG)
- Healthy Places Index (SCAG)
- Publicly accessible recreational lands (GIN)
- Water Quality Index (US EPA)
- Toxic Release Inventory Facilities (CA EPA)
- Trails (composite of county, state, national data)
- Park access equity (Trust for Public Land)
- Urban Heat Island (UC Davis)
- Sequestration of NO2 and PM2.5 by vegetation (Gopalakrishnan et al. 2018)
- Priority Landscapes for Tree Planting (TNC)
- Urban Heat Island Gap (TNC)

Infrastructure Assessments to estimate potential impacts

An important element of RAMP to guide advance mitigation investments for future projects is to estimate impacts to species, habitats, waters, wetlands, and natural communities that require mitigation. Predictive impact models – called transportation assessments -- are in use by transportation agencies, notably Caltrans, to provide an order-of-magnitude range of estimates for impacts on regulated resources. Agencies can then work to avoid and minimize potential impacts, reducing their mitigation obligation; if the impacts are unavoidable, agencies then can identify opportunities for advance mitigation that would address their future mitigation obligations. While the predictive models are most in use by transportation agencies, the approach can be adapted for other infrastructure projects and private development projects. The methods in use by Caltrans as described in Statewide Advance Mitigation Needs Assessment Report for SHOPP projects³⁹, generally follow those described by Thorne, et. al (2015)⁴⁰.

Once the scope of the region is determined, GIS files are developed of potential future projects that could possibly require mitigation. For each selected project, a footprint is estimated by applying two buffers to the project centerlines (for linear features) and center points (for features such as freeway interchanges). Project footprints are then developed using information such as location,



³⁹ <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/2020-q2-samna-report.pdf>

⁴⁰ Thorne, J. H, Bjorkman, J., Boynton, R. M, & Huber, P. R. (2015). 2015 Mitigation Needs Assessment for Transportation Projects for the Sacramento Valley Pilot Project for Regional Advance Mitigation Planning. UC Davis: Information Center for the Environment. Retrieved from <https://escholarship.org/uc/item/3cn8f3mz>

extent and type of project. The buffer widths are based on models developed by Thorne, et. al and adapted/ revised by Caltrans.⁴¹

The project footprints are overlaid with the conservation assessment/data including habitat and species models in GIS to estimate potential impacts from projects on habitats, species and natural communities. Results can be calculated for a range of potential impacts if more than one model is used as was done in the Bay Area Transportation Assessment.⁴² These methods include the assumption that all resources within the footprints would be impacted by project construction. Because avoidance and minimization efforts will be used to reduce the overall impacts but cannot be easily spatialized, it is assumed that there is some degree of overestimation associated with the impact estimations. As noted, results should be considered for planning purposes only and not for permitting purposes.

Once the potential impacts of projects on habitats and species are developed, projected mitigation demand is then calculated. Mitigation needs often include a multiplier to the actual measured impacts. These ratios are species- and context-specific and determined by natural resources agencies during the normal environmental review process. Because these are not typically known in advance of environmental assessments of proposed projects, a generalized mitigation ratio (for example, 2:1) can be applied as a placeholder to help identify mitigation demand and can be adjusted.

Once the mitigation demand is determined, software tools like Marxan can be used to identify a portfolio of mitigation sites that meet predicted mitigation needs and conservation goals. Outreach to natural resource agencies, stakeholders and potential collaborators is also important to consider potential advance mitigation opportunities that align with agencies' priorities and policies and support potential partners' goals.

SPOTLIGHT: TRANSPORTATION CORRIDOR AGENCIES

The Transportation Corridor Agencies (TCA) in Orange County has long been involved in mitigation to compensate for the impacts of the toll roads on habitats and species, and cites protecting open space areas, habitat connectivity and the wildlife within as one of the TCA's highest priorities. TCA was an early partner in and financial contributor the Orange County Central/Coastal NCCP/HCP that was approved in 1996 – one of the earliest NCCP/HCPs plans in the region. To date, TCA has conserved and restored over 2,000 acres of coastal sage scrub, wetlands, riparian and saltwater marsh at 17 different Orange County locations. It has also implemented wildlife-friendly undercrossings and fencing to protect mountain lions, deer and other species from being harmed on the roads. Today, the NCCP/HCP is managed by the [Natural Communities Coalition](#) which coordinates the land management, monitoring and research across the nearly 38,000-acre Reserve System. TCA continues to manage and restore open space and mitigation sites and monitors the use of the wildlife corridor projects.

See [TCA environment](#) for more information.

⁴¹ <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/2020-q2-samna-report.pdf> see page 5-6

⁴² Huber, P.R., 2019. *Bay Area Regional Advance Mitigation (RAMP): Impacts and Mitigation Needs Assessment Update*. Prepared for: The Nature Conservancy.

Data needed to support infrastructure assessments for potential impacts and to guide advance mitigation locations and activities include:

- GIS data that represent relevant projects to be assessed
- Conservation information included in the Conservation Assessment, such as habitat models, land cover data, species information, waters and wetlands data (see above for list).

Partners and Collaborators

One of the benefits of RAMP is that it can broaden the opportunities for engagement with potential partners and collaborators who can help identify potential advance mitigation opportunities, reduce potential risks, and build broader support for potential advance mitigation projects. It can also increase transparency of actions. In many cases, the selection of RAMP implementation mechanisms and mitigation actions will be carried out under state or federal programs that require public review and comment. For example, the development of RCISs and MCAs includes requirement for public notice, review, and comment.

In addition to public engagement, RAMP can provide an opportunity for the public to learn about the program and its implementation. In fact, it is a best practice to pro-actively engage stakeholders and the public through committees or working groups. For example, OCTA has an Environmental Oversight Committee, the Western Riverside County Regional Conservation Agency has a Stakeholders Committee and a Board of Directors, and SANDAG has an Environmental Mitigation Program Working Group to help guide implementation of their respective advance mitigation programs.

In general, partners and collaborators can be organized around the functional workings of a RAMP initiative. Engagement would depend on the potential projects, natural resources, geographically based stakeholders and potential partners. They include:

- Those who need mitigation: Infrastructure agencies (transportation, energy and water), cities and counties (public works), housing developers
- Those who approve mitigation/the regulatory agencies: CDFW, USFWS, USACOE, USEPA, NMFS, Coastal Commission, Regional Water Boards.
- Those who supply and/or manage mitigation: habitat agencies, mitigation/conservation bankers, MCA sponsors, conservancies, land trusts, open space and park districts, cities and counties.
- Interested stakeholders: Local governments to ensure consistency with local land use, community members who care about local land use decisions

Outreach conducted and feedback from partners and collaborators

SCAG and The Nature Conservancy staff interviewed potential partners and collaborators, with a focus on county transportation commissions (CTCs) given the potential opportunities and history of RAMP in the SCAG region and state. The interviews included:

- Ventura County Transportation Commission
- Riverside County Transportation Commission/Regional Conservation Authority
- Orange County Transportation Authority
- LA Metro
- San Bernardino County Transportation Commission
- Imperial County Transportation Commission
- Caltrans Districts 7 and 8
- Brightline West
- WRA/Land Veritas Mitigation Banking
- Transportation Corridor Agencies
- Friends of Harbors, Beaches and Parks

Comments and feedback from CTCs and Caltrans were largely positive toward RAMP and highlighted the potential benefits of RAMP, including:

- Addresses data gaps on conservation and potential impacts, providing input on land use, sharing data that is often hard to access and understand.
- Enhances cross-jurisdictional and cross-county collaboration and can help establish common approaches to achieving shared goals.
- Encourages continued collaboration between SCAG and CTCs to address mitigation at all scales, including project-by-project, at a county and regional where appropriate.
- Could provide incentives and more robust funding for advance mitigation.
- Provides solutions for reducing the impacts of projects.
- Increases information sharing, transparency and communications among agencies, partners, agencies and the public.
- Support for a multi-county approach, especially when collaborating across Caltrans Districts for development of conservation plans incorporating multiple species.
- Encourages collaboration with the environmental community and helps build support for projects.

Concerns expressed by CTCs and Caltrans about establishing a RAMP initiative in the region include:

- Potential duplication and/or conflicting mitigation efforts between regional, county, and local approaches.
- May hold a gap in direct application to local conditions.
- Timing on implementation of advance mitigation could be delayed or slowed based on an organization's priorities. More organizations involved can increase complexities.

Suggestions from CTCs and Caltrans on establishing a RAMP initiative in the region include:

- RAMP can be valuable across multiple sectors, not just transportation, and can help achieve the goals of Connect SoCal.

- There should be a menu of mitigation options and flexibility in approaches for counties – one size does not fit all.
- Be sure to focus on water resources in addition to biological resources.
- There should be transparent engagement with CTCs, partner agencies, and other infrastructure agencies.
- Consider different structural models depending on the scope of a RAMP initiative, including a joint powers authority.
- Consider pilot program to address specific needs where there currently is a gap in advance mitigation plans. For example, an initiative to address declining and potential listing of species and large habitats, such as mountain lions and Joshua trees (both currently candidates for listing).

Feedback from other organizations include:

- RAMP can bring private and public entities together toward a common goal.
- RAMP increases public awareness of environmental resources.
- Support for a multi-county approach, especially to address gaps in RAMP plans and advance mitigation mechanisms.
- Support for development of a credit system that could provide consistency across management of multiple mitigation banks.
- Strong interest in collaborating on advance mitigation, specifically multi-agency advance mitigation projects.
- Support for conservation assessments and greenprints to provide easy access to environmental, climate, environmental justice, and other data.

Scope, Scale and Models

SCAG's region is vast, covering six counties, 191 cities and spanning over 25 million acres. The region includes geographic diversity, with five ecoregions and dozens of watersheds. Established plans in the region are largely organized by jurisdictions and managed by local governments, with the exceptions of Caltrans' Regional Advance Mitigation Needs Assessments and the Desert Renewable Energy Conservation Plan. While many plans have jurisdictional boundaries, conservation values and dynamics often transcend jurisdictional boundaries, such as habitat connectivity, wildlife corridors, ecological climate migration, large sensitive habitats, climate risks (wildfire, flooding, sea level rise). In addition, linear infrastructure such as roads, rail lines and transmission lines, travel through jurisdictions. Thus there may be a need to consider RAMP at a larger scale, to encourage collaboration among existing plans' agencies, share information, consider partnerships, identify gaps in advance mitigation plans and provide other support.

That said, there are limitations with scope and scale of advance mitigation activities due to the regulatory nature of compensatory mitigation and established policies. Compensatory mitigation must be designed to offset unavoidable adverse impacts on habitats, species, and aquatic resources.

Regulatory agencies support equivalence, or the principle that offsets should provide habitat, functions, values, and other attributes that are similar in type (“in-kind”) and proportionate to those affected by the project. There may be some instances where “out-of-kind” offsets may be appropriate, such as when offsets can benefit a habitat type of conservation values that are of higher significance than those affected by a project, and offsets demonstrably provide a greater contribution to landscape-level conservation goals.

Given the complexity of compensatory mitigation, mitigation principles have been suggested by organizations as best practices, and many have been embedded in policies. Principles such as landscape-level approach and context, mitigation hierarchy, larger scale, equivalency, durability, assurance, additionality, scientific, location and advance mitigation are often cited as important to ensure successful mitigation.⁴³

Thus, the scope and scale of advance mitigation activities are guided by resource agency approvals and limitations but can also be flexible and designed to meet the goals of the needs.

Models

The following are models can be instructive when considering a how SCAG can support RAMP in the SCAG region.

OCTA Measure M2, SANDAG TransNet:

- Type: established RAMP programs for a defined set of transportation projects through sales tax initiatives
- Administration: managed by transportation agencies, guided by an oversight committee, or working group, final decisions on mitigation rest with regulatory and transportation agencies
- Planning: conservation assessments, conservation reserve designs for MSHCP (OCTA transitioned to an NCCP/HCP, SANDAG prioritizes investing in the MSHCP but is not bound by it)
- Funding: sales tax for transportation, set-aside for mitigation in the measures; draw-down model for defined projects in the measures

Both OCTA⁴⁴ and SANDAG⁴⁵'s advance mitigation programs were initiated by sales tax measures for the defined list of transportation projects. As mentioned earlier, OCTA set aside \$243.5 million representing 5% of the cost of the freeway improvement projects in the measure. SANDAG's TransNet measure identified \$850 million for mitigation: \$650 million for advance mitigation of regional and local transportation projects (determined by estimating the cost of mitigation for each project) and \$200 million for regional habitat acquisition, management and monitoring, based on expected cost savings (or economic benefit) from advance mitigation. Both programs and policies emphasized the benefits of buying land early at lower costs and in larger parcels and use it for future needs. Both programs achieved cost savings due to the flexibility advance funding provided them to time acquisitions for favorable real estate market conditions and avoid cost escalations, and to identify land acquisitions with

⁴³ See [NEBA Mitigation Principles](#), [TNC Mitigation Principles](#) and [USFWS ESA Compensatory Mitigation Policy 2016](#)

⁴⁴ <http://www.octa.net/About-OC-Go/OC-Go-Environmental-Programs/Environmental-Mitigation-Program/>

⁴⁵ <https://www.keepsandiegomoving.com/EMP-Group/EMP-intro.aspx>

high conservation values. Both programs take a comprehensive approach to compensatory mitigation and permitting, engaging regulatory agencies regulating species and terrestrial habitats and agencies regulating water, wetlands, and aquatic species – an important element for transportation agencies.

Western Riverside MCSHP and Coachella Valley MSHCP⁴⁶:

- Type: Natural Communities Conservation Plans/Habitat Conservation Plans
- Administration: public agencies (Western Riverside County Regional Conservation Authority and Coachella Valley Conservation Commission – joint powers agency)
- Planning: Detailed science and conservation planning to identify a conservation reserve design and priority
- Funding: state and federal planning grants for development of the MSHCPs, development fees for permitting provided by project proponents, federal and state habitat conservation funding for plan implementation (unrelated to mitigation).

As mentioned above, NCCP/HCPs are federal and state habitat conservation plans designed to achieve multi-species landscape scale conservation goals while providing streamlined environmental permitting for development projects that participate in the plan. The SCAG region includes four approved MSHCPs. In addition to the two highlighted here, the OCTA NCCP/HCP is the outgrowth of the M2 Environmental Mitigation Program, and the Orange County (Central/Coastal) NCCP/HCP was approved in 1996. Due to the decades-long regulatory coverage and scientific and management complexities, the planning and development of NCCP/HCPs is a difficult process and takes many years to complete. Once approved, though, NCCP/HCPs are the most successful, highly efficient, and effective regional advance mitigation planning tools available.

Caltrans AMP:

- Type: Ongoing program of advance mitigation for state (SHOPP) and regional transportation (STIP) projects supported by a self-sustaining revolving fund, established by SB 1 (2017) and guided by SB 103 budget trailer bill (2017).
- Administration: Caltrans Advance Mitigation Program.
- Planning: Caltrans developed its planning process by guidelines, includes a Statewide Advance Mitigation Needs Assessment and a Regional Advance Mitigation Needs Assessment that incorporates conservation information and future transportation projects.
- Funding: SB 1 established the Advance Mitigation Fund in Caltrans, funded by no less than \$30 million/year of SHOPP and STIP funding for four years.

SB 1 established an Advance Mitigation Program at Caltrans with the primary goal of “...address[ing] long-term future biological mitigation needs resulting in improved environmental, economic and project delivery outcomes.” The purpose of the legislation is to: 1) accelerate transportation project delivery; 2) enhance communications between Caltrans and stakeholders to protect natural resources through project mitigation, to meet or exceed applicable environmental requirements, and to mitigate, to the

⁴⁶ <https://www.cvmshcp.org/>

maximum extent required by law, environmental impacts from transportation infrastructure projects; ensure Caltrans consults with the CA DFW on all aspects of the program, and to enhance communications with the other natural resource agencies and other stakeholders; and to ensure that the Advance Mitigation Account is self-sustaining.⁴⁷ Caltrans and all relevant regulatory and resource agencies have signed a Statewide Advance Mitigation MOU⁴⁸ outlining processes. To date, Caltrans has developed RAMNAs for 6 districts and more are in development. The first advance mitigation project that was approved for funding is in District 8 (San Bernardino County) for 42 desert tortoise credits, 1 wetland credit and 27 desert ephemeral wash credits at a cost of \$8.1 million, expected to benefit four future transportation projects.

The legislation enables regional transportation agencies to benefit from the program, but their role is currently limited. Caltrans identifies the Geographic Areas of Interest based on potential SHOPP advance mitigation needs and does not assess regional transportation projects for potential impacts, given the sheer volume of projects and staff capacity. Caltrans is including potential STIP projects from regional transportation agencies to be included in RAMNAs. Caltrans indicates it would offer to sell advance mitigation credits to other transportation agencies only if Caltrans is unable to use them, limiting the opportunities for shared mitigation projects. Given the complexity of the program and the early nature of implementation, Caltrans continues to iterate to deliver on the goals of the program. That said, Caltrans staff note that they are already seeing benefits in achieving the goals of the program through the planning process, collaboration internally and externally with partners and stakeholders.⁴⁹

North Carolina Ecosystem Enhancement Program/Division of Mitigation for CWA 404:

- Type: State mitigation program for water resources mitigation.
- Administration: Division of Mitigation, NC Department of Environmental Quality
- Planning: Multi-scale watershed planning approach.
- Funding: State DOT funding established the initiative; today funding for mitigation actions are provided through In-Lieu Fee programs.

Prior to initiating advance mitigation, traditional project-by-project water resource mitigation obligations were shown to significantly delay projects undertaken by the North Carolina Department of Transportation (NCDOT). To address this issue, over 10 state and federal level resource agencies started to meet in 2001 to find a more programmatic approach to resolve mitigation requirements. The solution was an innovative 2003 partnership between the USACE, North Carolina Department of Environment and Natural Resources and NCDOT that established the Ecosystem Enhancement Program. Today, the Division of Mitigation Services (DMS) is a NC Department of Environmental Quality initiative that restores and protects streams, wetlands and riparian buffers while offsetting unavoidable environmental damage from economic development. DMS developed four In-Lieu Fee mitigation programs that private and public developers can use to meet state and federal compensatory mitigation requirements for water resources only: streams, wetlands, riparian buffers and nutrients. DMS uses

⁴⁷ [Caltrans AMP 2021 Report to the Legislature](#)

⁴⁸ [2021 Statewide Advance Mitigation MOU](#)

⁴⁹ Personal communication with Caltrans advance mitigation staff from Districts 7 and 8, 9/9/2021

receipts from the In-Lieu Fee programs to work with state and local partners and willing landowners to identify and concentrate mitigation resources in areas where they will have the greatest benefit to the watershed guided by a multi-scale watershed planning approach. NCDOT is a regular user of the DMS to advance their projects in a timely and cost-effective manner.⁵⁰

Colorado Department of Transportation Shortgrass Prairie Initiative (2002- 2022):

- Type: program limited to advance programmatic clearance for 20 years of highway projects in large scale shortgrass prairie habitat for three listed species and 20 species in decline, to aid in their recovery to help prevent listing.
- Administration: CDOT and Colorado Division of Wildlife.
- Planning: Ecoregional planning by The Nature Conservancy.
- Funding: CDOT provided funding for advance mitigation, established an Environmental Revolving Fund, repaid by assessing transportation projects that receive a benefit.

The FHWA, Colorado Department of Transportation, the US FWS, Colorado Division of Wildlife and The Nature Conservancy came together to design an impact assessment and advance mitigation process to aid in the recovery of declining species on Colorado’s Eastern Plains. The Initiative provided programmatic clearance for CDOT activities on the existing road network for twenty years, addressed 3 species and 20 species that were not listed as threatened or endangered, but were at threat of becoming listed in the future, and covered 90,000 acres of right-of-way in four of CDOT’s six regions. The agencies invested resources on a comprehensive and proactive conservation plan (rather than a project-by-project approach) to help alleviate the need for further listings and improve project delivery certainty. Conservation experts and the CO Division of Wildlife identified habitat conservation sites based on prior eco-regional planning. Implementation mechanisms identified in the Memorandum of Agreement included Biological Assessments, Biological Opinions, HCPs, Candidate Conservation Agreements, Conservation Banks or Safe Harbor Agreements. The project resulted in programmatic clearance with 1:1 mitigation ratio, regulatory streamlining, cost savings and more effective habitat and species preservation.⁵¹ CDOT provided funding for outside parties to acquire properties with the intent that the transportation projects would reimburse the state for mitigation credits as they were used. CDOT created an Environmental Revolving Fund which was repaid by assessing transportation projects that received a benefit from an advance mitigation project.

Regional Conservation Investment Strategies / Mitigation Credit Agreements

- Type: RCIS is a conservation investment strategy; an MCA is an advance mitigation instrument
- Administration: A public agency sponsors development of an RCIS; any entity (public or private) can develop an MCA.
- Planning: An RCIS is the planning context for conservation goals and objectives and integrates infrastructure and land use information.

⁵⁰ <https://deq.nc.gov/about/divisions/mitigation-services>

⁵¹ <https://trid.trb.org/view/726668>

- Funding: Funding is available to prepare an RCIS through the Wildlife Conservation Board; project proponents would likely fund Mitigation Credit Agreements.

As mentioned earlier, an RCIS is a voluntary, non-regulatory conservation planning tool that identifies habitat needs, conservation values, goals, and objectives in a defined region. Once an RCIS is approved by CDFW, an entity can develop a Mitigation Credit Agreement and create advance mitigation credits by implementing the conservation or habitat enhancement actions identified in the RCIS. The credits may be used as compensatory mitigation for impacts under CEQA, CESA, and the Lake and Streambed Alteration Programs. In the SCAG region, the Antelope Valley RCIS is approved, and the San Bernardino County RCIS is under development, led by the San Bernardino County Transportation Authority. There are currently three MCAs under development in California. CDFW is expected to issue draft guidelines in the coming year.

Funding and Financing

One of the benefits of RAMP is reduced costs of mitigation. Research from UC Davis summarizes the categories of potential cost savings which may be achieved through the RAMP approach, through: avoided mitigation costs (by acquiring land early avoiding escalating prices, or timing conservation actions with favorable real estate cycles); economies of scale (by bundling mitigation for larger conservation actions with fewer administrative actions); avoided procedural costs and delay.⁵² Interviewees for this White Paper also aligned RAMP’s role in enabling certainty of actions and reduced project risks with cost savings. Existing programs in Southern California have seen cost savings from RAMP approaches.

- OCTA anticipates specific transportation projects would have had to incur an additional \$700,000 to \$2.5 million (in 2018 dollars) in mitigation-related costs and unknown schedule risks had the environmental mitigation program not been in place.⁵³
- The Western Riverside County Regional Conservation Authority estimates that the plan has saved taxpayers more than \$500 million in part through expediting freeway and road projects by as many as five years and through efficiency in conservation actions.⁵⁴
- In 2013, SANDAG reported that land acquisition costs per acre were roughly half the original estimates, and that mitigation requirements were fulfilled for all the high-priority projects included in the TRANSNET Ten Year Early Action Program in six years.⁵⁵

The complexity of mitigation processes, data limitations, the variability of real estate cycles and market costs make it difficult or impossible to estimate generalized cost savings. That said, available reports on

⁵² Task 3 Report: The Business Case for Advance Mitigation in California. (2015) Final Research Report UCD-ITS-RP-15-03. Sciara, Gian-Claudia; Stryjewski, Elizabeth; Bjorkman, Jacquelyn; Thorne, Jim; Schlotterbeck, Melanie. https://escholarship.org/content/qt1v80g85w/qt1v80g85w_noSplash_8487658cf7b79c3c63b3f22af987549c.pdf

⁵³ See page 36, OCTA Measure M2 Quarterly Progress Report, Q2 of FY2021-2022 <https://www.octa.net/pdf/M2FY21-22Q2Report.pdf>

⁵⁴ <https://www.wrc-rca.org/>

⁵⁵ https://www.keepsandiegomoving.com/Libraries/Lossan-doc/2285-EMP_Brochure-Dec2013_4WEB_1.sflb.ashx

advance mitigation almost always cite cost savings (from elements such as avoided cost escalation, faster project delivery, economies of scale, reduced risk) as a major benefit of the approach.⁵⁶

Robust funding availability is an important part of RAMP given its regional and advance features. Mitigation is typically included in the cost of a project and disbursed after environmental review and mitigation requirements are identified. RAMP requires no new funding – projects’ costs include estimated mitigation funding. Funding RAMP requires a *shifting* of mitigation dollars – from funding embedded in each project to aggregated funding and available in advance. A typical (e.g., non-RAMP) mitigation funding approach is for one project (vs. aggregated projects) and at the end of a project’s development timeline (vs. in advance). In addition, infrastructure and development projects typically have several funding sources with their own rules and restrictions making funding projects a complicated art. Thus, initiating mitigation actions to support estimated impacts for a suite of projects in advance of environmental review is difficult to do, especially with existing funding streams and funding processes. This is particularly relevant for transportation projects. As such, current processes do not support RAMP effectively or efficiently. As a UC Davis research report on RAMP for Caltrans notes, “Finding the financial means to achieve successful implementation of advance mitigation is challenging and requires adapting and developing appropriate strategies and modifying organizational and legal barriers that block the capabilities of existing institutions.”⁵⁷ That said, advancements over the recent years have created opportunities and solutions to make it easier, though more work needs to be done.

Funding needs for RAMP include three cost categories: planning and administration, capital costs for mitigation actions and stewardship of mitigation lands.

Planning and administration are important activities to ensure a strong planning framework for RAMP investments, efficient and effective administration and management of the activities or program. Depending on the scope of RAMP activities and management structure, planning and administration activities may include planning documentation development or updates as necessary (such as the conservation and impacts assessments), stakeholder engagement, financial projections and budgeting, database management, template and necessary agreement creation and consultant oversight.

The costs associated with mitigation actions are typically capital costs, which include the associated activities that are required for mitigation projects. The specific needs will be determined by the type of mitigation action that is most appropriate. For example, the elements will differ if purchasing credits at an existing mitigation or conservation bank or participating in an NCCP, or agency sponsored mitigation or conservation bank, or developing and implementing a Mitigation Credit Agreement. For mitigation approaches involving an agency-sponsored, partial or full-delivery bank, costs could include (but not limited to): purchase of land or conservation easements, restoration and enhancement costs, legal and real estate documents and fees, technical memoranda/reports on the site(s), development of restoration/engineering plans and management and monitoring plans.

⁵⁶ Ibid.

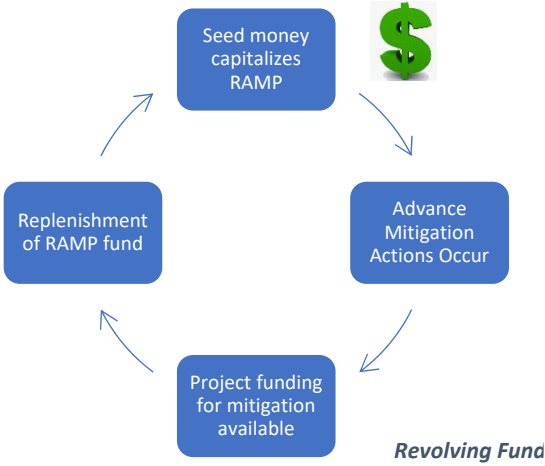
⁵⁷ Task 4 Report: Funding and Financial Mechanisms to Support Advance Mitigation. (2015) Final Research Report UCD-ITS-RP-15-04. Lederman, Jaimee; Wachs, Martin; Schlotterbeck, Melanie; Sciara, Gian-Claudia. <https://escholarship.org/uc/item/9pg390n3>

Compensatory mitigation requires stewarding the mitigation lands in perpetuity, often funded by an endowment. Without a long-term management and stewardship commitment, mitigation lands may become degraded through inappropriate uses, invasion of exotic species, wildfires, or other unanticipated events. The biological features that the mitigation sites were designed to protect can be lost without active stewardship, monitoring, and the means to implement adaptive management if needed. Endowments are the typical mechanism used to support long-term management. Income generated by endowments cover the costs of management tasks such as invasive species control programs, fence maintenance, signage, fire management, monitoring and reporting, adaptive management, and administrative expenses such as personnel, accounting, legal, and insurance. RAMP facilitates improved efficiency and lower costs, due to such factors as better understanding of needs, economies of scale, time savings, and less frequent need to make critical mitigation purchases under duress⁵⁸.

Funding Frameworks

There are three primary approaches for funding RAMP that align with regional/multiple projects and advance features: revolving fund, one-time set aside for defined projects and programmed funds. It is important to note that advance mitigation investments must be for a suite of projects and cannot be tied to specific transportation projects because that would hinder multi-project planning and would preclude mitigation for anticipated impacts years before project implementation – in other words, an advance mitigation investment for one project would be considered pre-decisional.

The first funding approach, a self-sustaining revolving fund requires a capital investment into an account that is expended for future mitigation credits. Under this scenario, mitigation properties or credits are purchased initially using seed money, then, as project environmental documents are finalized and mitigation actions are agreed upon, the project funds would cover the cost of the mitigation. Those funds would be re-deposited in the fund to purchase more mitigation for future projects. This non-depleting fund allows a sustained approach to support advance planning for long-term mitigation and conservation work. Caltrans’ Advance Mitigation Program uses this approach with capital from SB 1 (from SHOPP and STIP) to infuse an Advance Mitigation Account with no less than \$30 million over four years.



The second funding approach, a one-time set aside for defined projects requires a source of funds that is available in advance for mitigation for a suite of projects. As the mitigation is implemented, that source is reduced until it is expended. OCTA’s Mitigation Program for M2 Freeway Projects and SANDAG’s TransNet Environmental Mitigation Program employ this framework. Both OCTA and SANDAG’s programs were established by voter approved sales tax measures, which included a set aside of roughly 5 percent of the cost of defined projects in the measures. The

⁵⁸ UC Davis Institute for Transportation Studies, 2014

funding was available early in the measures' program, allowing acquisition, restoration, and management actions to be implemented in advance of project development.

The third funding approach is programming funding from future projects and making it available well in advance of project development. This is similar to the one-time set aside in that there is a defined list of projects with estimated costs of mitigation identified for the suite of projects. Since mitigation funds typically are included as part of a project, this would not require more funding; it is essentially separating the mitigation cost from a suite of projects and programming those funds as a mitigation project to be expended in advance of transportation project delivery. Caltrans uses this technique of identifying advance mitigation as a project that follows the traditional project approval process.

Potential Sources of Funding

Funding to support RAMP could come from a number of sources. Generally, though, mitigation projects, including advance mitigation, is funded either upstream or downstream by the project that is responsible for the impacts. Thus, infrastructure and development projects are the source of funding for mitigation, including advance mitigation. That said, there are many sources of funds for transportation, infrastructure and development projects, and each source has its own advantages and limitations. What follows is a general list of potential sources of funding for RAMP.

Transportation funding at all levels (local, regional, state, federal, private) are eligible for mitigation activities. However, the nature of funding advance mitigation for multiple future projects does not fit the regular mode of transportation funding approvals, so there are complications that need to be addressed. While many of the current programs have resolved some of the issues, complications continue to exist.

- Federal transportation funds are generally eligible for mitigation on a per-project, reimbursable basis making implementation of RAMP difficult. While existing federal transportation policies and statutes support RAMP eligibility, the mechanics and accounting/bookkeeping of the federal-aid highway process (again, per-project, reimbursable) prevents a solution that avoids the complications. After productive discussions with FHWA, Caltrans opted to fund advance mitigation projects using the state's Advance Mitigation Fund (state only), and projects that use the credits from an advance mitigation investment can reimburse the Advance Mitigation Fund with federal transportation funds. This way, the federal funds reimburse past investments, and the use is on a per-project, reimbursable basis that is consistent with current FHWA practices.
- State transportation programs that can be used for advance mitigation include the Advance Mitigation Program funds managed by Caltrans, for SHOPP and STIP projects, established by SB 1 (Beall, 2017). Regional and county transportation agencies can partner with Caltrans on mitigation projects by planning together and purchasing mitigation credits that Caltrans creates. In the SCAG region, Caltrans district staff often help with environmental clearances of regional projects, so coordination may be easier. Since mitigation is an eligible project expense, other state transportation accounts, such as Local Streets and Roads, Active Transportation Program, accounts that provide funding for rail and transit and other projects in SB1, could be used to

subsequently purchase established advance mitigation credits, or participate in an existing NCCP/HCP for example, on a per-project basis, or along the lines of a RAMP approach through bundling mitigation funds for multiple projects.

- Local transportation funds have been used to initiate regional advance mitigation programs through sales-tax measures as was done in Orange, San Diego, and Riverside Counties.
- Regional transportation funds can support advance mitigation planning and projects, and support collaboration and coordination with partners, collaborators, and agencies.

Water infrastructure funding can also be used to participate in advance mitigation planning and projects, as mitigation is an eligible expense for water infrastructure projects. Water agencies have developed and implemented advance mitigation programs and projects to create habitat enhancement and mitigation sites. California Department of Water Resources (DWR) has funded advance mitigation projects to support the Central Valley Flood Protection Plan⁵⁹. Currently, DWR's Delta Ecosystem Enhancement Bulk Credit Program⁶⁰ enables Reclamation Districts to acquire mitigation bulk credits at Westervelt Ecological Services mitigation bank. In another example, Reclamation District 108 sponsored the Mid-Sacramento Valley RCIS to encourage the development of Mitigation Credit Agreements that provide high quality habitat for focal species, meet important mitigation needs for state and local flood infrastructure maintaining agencies, and support local farmers in a new restoration economy.⁶¹

While conservation funding is not allowed to be used for mitigation, there may be opportunities to jointly fund a project using mitigation and conservation funds. This would allow the purchase, restoration or enhancement action that alone may exceed mitigation needs but is considered a conservation priority. A diversity of funding sources could also help fund elements of projects using different funding sources that are aligned with those purposes. For example, certain funds can be used for endowments but others (e.g., bond funds) cannot. Having a diversity of funding sources can help address certain needs. That said, a diversity of funding sources requires transparent accounting to ensure that mitigation funds are spent on mitigation needs.

External Financing relies on non-governmental organizations or private-sector parties to provide initial funds for advance mitigation actions, either in direct coordination with governmental agencies or developers or on a speculative basis. It requires the financial participant to believe that there will be a ready market for the project or the mitigation credits arising from the project⁶². The visibility of mitigation demand is critical to provide information to understand the market for future credits. Private capital is most viable to create mitigation or conservation banks, in-lieu fee programs and Mitigation Credit Agreements, which involve selling credits (for banks and potentially MCAs) and paying fees (in-lieu fee and NCCP/HCP programs) based on a known or anticipated pipeline of projects. RAMP impact

⁵⁹ [Appendix B, Advance Mitigation, Central Valley Flood Protection Plan Conservation Strategy](#)

⁶⁰ [DWR Ecosystem Enhancement Advance Mitigation](#)

⁶¹ [Mid-Sacramento Valley RCIS](#)

⁶² "Alternative Procurement, Financing, and Delivery of Advance Mitigation for Public Infrastructure Projects" (2014). Lloyd, Barbara A. and Martling, James W., Caltrans' P3 Financial Advisory Team Members

assessments, RAMNAs, Sub-regional Assessments⁶³ (as have been conducted in the Bay Area) and RCISs help to provide that transparency.

Authorities, Potential Roles and Responsibilities

SCAG, a joint powers authority covering six counties in Southern California, is designated under state law as a Regional Transportation Planning Agency and a Council of Governments and under federal law, as a Metropolitan Planning Organization. SCAG develops long-range regional transportation plans including the sustainable communities strategy and growth forecast components, regional housing needs allocations and a portion of the South Coast Air Quality management plans. The 86-member Regional Council, the governing body, represents cities and counties in the region, and includes representation from Native American tribes and Air Districts. In addition, the six County Transportation Commissions hold the primary responsibility for programming and implementing transportation projects, programs and services in their respective counties.⁶⁴ While SCAG has expertise in land use and infrastructure planning, data and tool development and provision, funding, collaboration and convening, and alignment with state and federal statutes, SCAG does not implement infrastructure or development projects – those are implemented by the CTCs, cities, infrastructure agencies and developers.

Potential roles for SCAG in a RAMP Initiative

With the above in mind, it is important to consider potential roles and responsibilities for SCAG in a regional RAMP initiative that provides support, addresses existing gaps and needs, and adds value to existing partners and members (such as CTCs, Caltrans, cities and counties), as well as to habitat agencies, the mitigation community, environmental and EJ stakeholders, and others. Guided by feedback, the following are potential roles for SCAG in a RAMP initiative. SCAG could engage in one or more of the roles, depending on need, value to the effort and guidance and support from partners. In all of the roles listed below, SCAG would collaborate with the partners and collaborators to ensure the work helps deliver on the goals of RAMP.

Information provider: Consistent with SCAG’s robust and innovative data and tool development, availability and provisioning, SCAG could provide a central location (or “one stop shop” as one interviewee called it) to host and support data and information that is necessary and supportive of RAMP, including information for the conservation and impacts assessments, multi-benefit information such as a greenprint, and tracking existing and potential advance mitigation activity. It could also develop a tool similar to the mitigation wizard in the Bay Area to enable infrastructure planners to easily engage in mitigation planning. Other information such as funding opportunities and templates could be provided.

Mitigation Planner: Given SCAG’s expertise in long range and strategic planning, and support for infrastructure and conservation planning, SCAG could develop and maintain regional mitigation plans that include information on potential mitigation demand and supply that help to identify potential future mitigation needs and opportunities for the RAMP community.

⁶³ [East Bay RAMP Sub-Regional Assessment](#) and [Santa Clara County Sub-Regional Assessment](#)

⁶⁴ Adapted from the [About Us](#) page on SCAG’s website.

Convener and coordinator: As the regional MPO and a joint powers authority composed of Southern California county and cities, SCAG hosts many working groups and collaborations with specific focus areas. The likelihood of successful RAMP outcomes is improved if existing and potential partners are engaged throughout the process. This engagement is particularly important to leverage the deep expertise that exists in the region from the many NCCP/HCPs and RAMP programs to share information, mentor emerging programs, catalyze new partnerships and potential initiatives, and provide guidance from lessons learned in the region. Critical to this effort would be efficient engagement with natural resource agencies for their guidance on the RAMP processes, data, and acceptance. Discussions could involve developing shared tools and information, identifying opportunities, supporting specific needs, exploring potential initiative or projects that transcend jurisdictional boundaries, and advocating for policies at the state and federal levels.

Hub for a mitigation marketplace: SCAG could host a ‘mitigation marketplace’ that connects those who need future mitigation (infrastructure, development) with potential suppliers of mitigation (bankers, habitat agencies, MCA sponsors, land trusts). Supporting the mitigation marketplace could be the mitigation planning, information and tools, collaboration with regulatory agencies, guidance on mechanisms and templates and access to funding.

Funder: While SCAG could fund any of the needed activities, it would be important to clearly identify the goals and objectives of a potential SCAG investment, and the gaps that such investment would close. Experience has shown that early access to robust funding is critical to ensure RAMP goals are met -- reduced costs for mitigation, larger more effective conservation, flexibility to invest during ideal market conditions, and expedited project delivery. An analysis of funding needs, sources and mechanisms would help identify opportunities, limitations, and barriers. Mitigation accounting and bookkeeping practices are important to ensure that funding is transparent and tracked to success metrics. Following the Caltrans AMP model, SCAG could establish a self-supporting revolving fund and provide seed funding to enable an ongoing program.

Uses of SCAG funding could include planning and engagement activities, advance mitigation and conservation actions. For example, funding could support existing programs in the region (such as NCCP/HCPs), capitalize RAMP projects (through mechanisms such as an MCA, banks), and close a funding gap for valuable acquisitions or restoration projects that are not entirely funded by mitigation requirements.

Mitigation sponsor: There may be opportunities for SCAG to take a more active role in advance mitigation if it is determined that there are gaps in mitigation plans, initiatives, projects or RAMP functionality in the region that could be addressed given SCAG’s expertise, access to funding, and other benefits. For example, if provided with further direction from the Regional Council, SCAG could work with partners to:

- Sponsor an RCIS that would enable MCAs in regions that are not covered by RAMP plans.
- Develop/sponsor in-lieu fee programs, MCAs or banks in areas that are lacking RAMP mechanisms.

- Pilot RAMP for emerging conservation and mitigation challenges, such as habitat connectivity and potential listings of wide-ranging species (e.g., mountain lion and monarch butterfly), or large-scale habitat (e.g., Joshua Trees), that may not be adequately addressed in existing plans and programs.

Partner Roles

A RAMP initiative would serve to leverage existing expertise from around the region to provide value and uplift to existing programs and fill gaps where they exist in capacity, planning and implementation. Staff from habitat agencies (e.g., those who administer the NCCP/HCPs), Caltrans advance mitigation, environmental planning staff from other transportation agencies, utilities and water agencies, regulatory agencies, land managers, land use planners, the conservation community, developers – each has a valuable role and expertise to play. Involvement would depend on each partner and collaborator’s needs, expertise, and capacities to ensure efficient and effective engagement.

Recommendations

While a number of regional advance mitigation planning plans and programs exist in the SCAG region, opportunities exist to address current gaps in RAMP coverage, planning tools, collaboration and coordination, capacity and funding. Given SCAG’s regional scope, its existing partnerships and relationships, its robust data and infrastructure planning expertise, and its commitment to project delivery and conservation outcomes, SCAG is well positioned to support RAMP in the region. It is important to note that there is no intention for SCAG to assume total responsibility for RAMP in the region. All activities supported by SCAG would be voluntary, and promote flexibility in options and actions. As noted by many experts, given the size and diversity of the region, one size does not fit all. As SCAG, partners and collaborators explore more deeply the possibility of a RAMP initiative in the region, specific tasks can be pursued that can help inform decisions as the conversation continues. To that end, recommendations for SCAG to consider as potential next steps include:

Finalize the draft Regional Advanced Mitigation Program Policy Framework

The research and outreach presented in this white paper provides background information to support broader policymaking around SCAG’s goals and potential role in supporting Regional Advanced Mitigation in the SCAG region. Early findings from the white paper were shared at SCAG Regional Advanced Mitigation—Advisory Taskforce Group meetings alongside presentations from implementing agencies that were engaged as part of the white paper development process. As SCAG finalizes the Policy Framework, the white paper should continue to serve as a resource for understanding the opportunities and challenges of pursuing RAMP, including the data needs and resources SCAG should consider in establishing a science-based approach and data policies to guide the development of the Greenprint tool. The Policy Framework can also guide staff in considering which of the following potential next steps are most valuable to pursue by providing clear policy direction on SCAG’s goals and role in supporting RAMP.

Identify the potential demand for advance mitigation

Initiate the planning process that will identify potential demand for advance mitigation in the region, including: 1) the resources (species, habitats, and natural communities) that may need compensatory mitigation in the future; 2) identified by county, ecoregion and watershed; and 3) advance mitigation plans and mechanisms that exist and current gaps. This would involve integrating a conservation assessment and an impacts assessment. In order to test this process, it may be prudent to limit the process by sector (e.g., transportation, or transportation and energy), by geography (e.g., a county not currently covered by a plan such as San Bernardino County to leverage its RCIS, an ecoregion or watershed) to test the approach and determine optimal scale. The result would give an order of magnitude mitigation demand and recommendations for potential RAMP projects.

Evaluate regional network and collaborative opportunities

Evaluate regional network and collaborative opportunities through a study that would identify recommendations for potential RAMP initiative partnerships, structures, models, stakeholder engagement options, and methods. There should be careful consideration for the role of regulatory agencies in the effort given their deep expertise in conservation challenges and priorities, mitigation policies and process, and their position as decision makers and approvers of mitigation.

Explore addressing gaps in RAMP plans and mechanisms

Identify gaps in RAMP plans and mechanisms and explore opportunities to close those gaps by supporting implementation agencies in developing new or partnership efforts. NCCP/HCPs, RCISs, RAMNAs (for Caltrans), in-lieu fee programs and mitigation/conservation banks currently exist in the region. Where there are gaps, consider supporting the development of plans such as RCISs to enable advance mitigation in the region.

Financial assessment and modeling

Develop a paper on options for funding and financing RAMP in the SCAG region. The scope of this white paper was limited to identifying funding approaches and potential sources of funding for RAMP in the region. Further exploration is needed to identify potential funding needs, financial modeling for the funding approaches and a potential cost model that reflects the wide-ranging real estate values in the region. The complexities associated with these assessments and modeling are significant; limiting the scope to areas of interest and promising needs may be prudent.

Consider supporting pilot project based on emerging needs

Research and conversations conducted to inform this white paper yielded many interesting ideas, one of which was to consider implementing a pilot project that may address a critical emerging need in the region that existing plans and programs are not currently equipped to handle: the possibility that wide ranging species – mountain lions and/or monarch butterflies, or Joshua Trees that exist on vast geographies in the region, may be listed as threatened or endangered. Early mitigation actions that protect such species could assist project proponents to get ahead of potential mitigation requirements and support conservation goals. A pilot project to support the health of such iconic species may also support public education goals on the benefits of RAMP. It would be important to assess interest from member agencies and transportation partners in leading a pilot supported by SCAG and to leverage

existing RAMP plans (such as San Bernardino RCIS) to test the processes and mechanisms, and secure early successes.

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