WESTERN RIVERSIDE COUNTY REGIONAL CONSERVATION AUTHORITY

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SPECIAL MEETING

WORKSHOP AGENDA*

Actions may be taken on any item listed on the agenda

Times are estimated

September 5, 2025

Temecula Creek Inn
44501 Rainbow Canyon Road
Temecula, CA 92592

In compliance with the Brown Act and Government Code Section 54957.5, agenda materials distributed 72 hours prior to the meeting, which are public records relating to open session agenda items, will be available for inspection by members of the public prior to the meeting at the RCA office, 4080 Lemon Street, Third Floor, Riverside, CA, and on the Board's website, www.wrc-rca.org.

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The start times listed on the agenda are approximate and are included for guidance only. Agenda items may be taken out of the order listed on the agenda.

PUBLIC COMMENTS ON AGENDA ITEMS – *Public Comments will be accepted for agenda items only. Each individual speaker is limited to speak three (3) continuous minutes or less. The Board may, either at the direction of the Chair or by majority vote of the Board waive this three minute time limitation. Depending on the number of speakers, the Chair may, at his/her discretion, reduce the time of each speaker to two (2) continuous minutes. In addition, the maximum time for public comment for any individual topic is thirty (30) minutes. Also, the Board may terminate public comments if such comments become repetitious. Speakers may not yield their time to others without the consent of the Chair. Any written documents to be distributed or presented to the Board shall be submitted to the Clerk of the Board.*

9:00 a.m. – 9:15 a.m. **CHAIR'S WELCOME AND WORKSHOP OBJECTIVES**

Kevin Bash, Chair
Aaron Hake, Executive Director

9:15 a.m. – 9:45 a.m. **CLOSED SESSION**

CONFERENCE WITH REAL PROPERTY NEGOTIATORS
Pursuant to Government Code Section 54956.8
Agency Negotiator: Executive Director or Designee

Property Description	Property Owner	Buyer(s)
480-100-061	Saba A. Saba and Shirley L. Saba	RCA

CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
Paragraph (1) of subdivision (d) of Section 54956.9
Case No. 5:25-cv-2008-DTN

9:45 a.m. – 10:05 a.m. **RECOMMENDATION TO AMEND THE WESTERN RIVERSIDE COUNTY MULTIPLE-SPECIES HABITAT CONSERVATION PLAN (MSHCP) AND PERMITS TO ADD CROTCH'S BUMBLE BEE (*BOMBUS CROTCHII*) AS A COVERED SPECIES**

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This item is for the Board of Directors to authorize the Executive Director to:

1) Initiate the amendment process with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) to add Crotch's bumble bee as a covered species to the Western Riverside County Multiple-Species Habitat Conservation Plan (MSHCP) and associated permits.
2) Negotiate an amendment to the existing Strategic Implementation Assessment and Action Plan (SIAAP) contract (Agreement No. 24002) with ICF Jones & Stokes (ICF) and to bring a contract amendment to the Board of Directors for approval to support RCA staff in amending the MSHCP to add Crotch's bumble bee to the MSHCP and associated permits.

10:05 a.m. – 12:00 p.m. **STRATEGIC IMPROVEMENT ASSESSMENT AND ACTION PLAN (SIAAP) FINDINGS AND POTENTIAL SOLUTIONS**

12:00 p.m. – 1:00 p.m. **LUNCH**

1:00 p.m. – 1:45 p.m. **STRATEGIC IMPROVEMENT ASSESSMENT AND ACTION PLAN FINDINGS AND POTENTIAL SOLUTIONS**

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This item is for the Board of Directors to:

1) Receive and file the draft Strategic Improvement Assessment and Action Plan (SIAAP);
2) Refer the SIAAP to the Stakeholder's Committee for review and input;
3) Direct staff to conduct an economic and financial analysis comprised of three parts: 1) initiating an economic and community benefits analysis of the MSHCP; 2) initiating a study to explore new sources of revenue to fund MSHCP land acquisition; and 3) initiating a nexus study to evaluate LDMF;
4) Direct staff to develop strategies, in collaboration with Permittees and in consultation with stakeholders, that:
    a. Expand non-monetary compensation strategies in exchange for land dedication to the MSCHP reserve;
    b. Better align areas described by the MSHCP for conservation and land use zoning designations;
    c. Incorporate more Permittee-owned land into the MSHCP reserve;
    d. Explore large-scale Criteria Refinements that could be used to increase land acquisition flexibility;
    e. Evaluate targeted changes to the MSHCP that can be strategically implemented during an amendment to the MSHCP to add Crotch's bumble bee; and
5) Direct staff to conduct a financial and human resources analysis to determine budget and staffing needs to implement the Board's direction on SIAAP-related initiatives.

1:45 p.m. – 2:00 p.m. **CONCLUDING REMARKS**

Kevin Bash, Chair
Aaron Hake, Executive Director

2:00 p.m. **ADJOURNMENT**

WESTERN RIVERSIDE COUNTY REGIONAL CONSERVATION AUTHORITY	
DATE:	September 5, 2025
TO:	Western Riverside County Regional Conservation Authority
FROM:	Aaron Gabbe, Director of Regional Conservation
THROUGH:	Aaron Hake, Executive Director
SUBJECT:	Recommendation to Amend the Western Riverside County Multiple-Species Habitat Conservation Plan (MSHCP) and Permits to Add Crotch's Bumble Bee (*Bombus crotchii*) as a Covered Species

STAFF RECOMMENDATION:

This item is for the Board of Directors to authorize the Executive Director to:

1) Initiate the amendment process with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) to add Crotch's bumble bee as a covered species to the Western Riverside County Multiple-Species Habitat Conservation Plan (MSHCP) and associated permits.
2) Negotiate an amendment to the existing Strategic Implementation Assessment and Action Plan (SIAAP) contract (Agreement No. 24002) with ICF Jones & Stokes (ICF) and to bring a contract amendment to the Board of Directors for approval to support RCA staff in amending the MSHCP to add Crotch's bumble bee to the MSHCP and associated permits.

BACKGROUND INFORMATION:

On June 18, 2019, the California Fish and Game Commission (the Commission) provided notice to the public that four bumble bee species were candidate species for listing. These species are under review with the Commission for final determination of its listing as Endangered or Threatened. The exact timing of Commission findings is not known but is anticipated within a year. Of the four, only Crotch's bumble bee has a range overlapping Western Riverside County.

California Department of Fish and Wildlife is required by law (California Fish and Game Code [FGC] 2085) to provide the same protections to candidate species as a state-listed endangered or threatened species, and CDFW has informed the MSHCP Permittees (email communication on July 18, 2024 to planning staff at the County of Riverside and cities) that projects in Western Riverside County are required to address Crotch's bumble bee as a state-listed species. This species is not covered by the Western Riverside County MSHCP, nor was it considered for coverage during the MSHCP development process in the early 2000s. This is the first time in the 20-year history of the MSHCP that a newly listed species (state or federal) was not covered by the MSHCP.

As a species not covered by the MSHCP, project applicants are not provided the streamlined permitting benefits for impacts to Crotch's bumble bee that the MSHCP provides for the 146 covered species. Thus, CDFW has alerted the RCA, the County of Riverside, and the cities that proposed projects, within or outside of the MSHCP boundaries, that have the potential to directly or indirectly impact Crotch's bumble bee should seek alternate California Endangered Species Act (CESA) authorization (i.e., CESA Incidental Take Permit) beyond the MSHCP application process.

The MSHCP (Section 6.8.3) and the Implementing Agreement (Section 11.4.5) stipulate that the Permittees amend the MSHCP to add newly listed species that are not covered by the MSHCP. At the Board's direction on November 4, 2024, the RCA Executive Director executed an amendment to Strategic Implementation Assessment and Action Plan (SIAAP) contract (Agreement No. 24002) with ICF Jones & Stokes (ICF) to 1) explore alternative permitting options; 2) conduct background analyses to prepare for a potential amendment to the MSHCP to add Crotch's bumble bee; and 3) assist RCA staff with developing an interim permitting solution.

Crotch's bumble bee and its habitat are widespread throughout the MSHCP plan area. As such, many project applicants will need to address potential impacts to Crotch's bumble bee and potentially secure individual Incidental Take Permits (ITP) from CDFW to take (impact) Crotch's bumble bee. To comply with the California ESA, project applicants may need to conduct biological surveys, and avoid, minimize, or mitigate impacts to Crotch's bumble bee to receive an incidental take permit from CDFW. This process is time consuming and inefficient for project applicants, Permittees, and CDFW, leading to fragmented and potentially ineffective conservation outcomes.

ICF evaluated four alternative long-term permitting pathways: 1) full avoidance and no take; 2) individual Section 2081 ITPs for each project that could impact Crotch's bumble bee (i.e., as is currently the case); 3) multiple project ITP; and 4) amending the MSHCP.

Each of the four alternative CESA compliance pathways present distinct opportunities and challenges.

- **MSHCHP amendment pathway.** This is staff's recommended approach based on ICF's analysis. Staff recommends amending the MSHCP and permits to add Crotch's bumble bee as a covered species. Amending the MSHCP to include Crotch's bumble bee as a covered species would provide the greatest permit streamlining benefit, programmatic mitigation, and cost and time savings for project applicants, the Permittees, and the Wildlife Agencies when compared to the three other alternatives. This pathway would also provide the best conservation outcomes by preserving large, connected habitats within the MSHCP reserve system.
- **Full avoidance/no take pathway.** This pathway prohibits any impact to Crotch's bumble bee or its habitat, including activities like pesticide use or vegetation removal. While it ensures no harm, it is highly restrictive and limits land use. Staff do not recommend this approach as it could greatly restrict land use across a large portion of the MSHCP plan area and provides little project streamlining.

- **Individual ITP pathway.** This pathway requires each developer to submit a separate application, including an impact assessment and mitigation plan. This is the current permitting process. Staff do not recommend this approach in the long term because it provides no permit streamlining, it is costly, and time-consuming for the project applicant, permittee, and CDFW staff.
- **Multiple project ITP pathway.** This pathway would group multiple development projects with similar activities—such as residential housing developments, or road construction—onto a single permit. The goal of a multiple project ITP is to create a comprehensive plan that addresses the cumulative impact of multiple projects while providing a streamlined and predictable permitting process. The permit would set common mitigation standards for all participating projects—such as specific mitigation ratios, conservation actions, and avoidance measures—that each developer must follow. Staff do not recommend this approach because project applicants would need to align multiple development projects onto a single permit application, requiring extensive coordination between developers that are on different timelines. While this could be feasible, it would only benefit a handful of projects, with many others still needing to obtain individual ITPs.

Overview of the Major Amendment Process

Amending the MSHCP to add Crotch's bumble bee will provide valuable, long-term benefits in time and money saved for the Permittees and applicants and better conservation outcomes for the Crotch's bumble bee. Amending the MSHCP, however, is not without challenges. The process can be complex and may be prolonged by the need for extensive consultation with CDFW and USFWS; thorough environmental review under CEQA/NEPA; and a formal public comment process. CDFW's procedures for processing Natural Community Conservation Planning (NCCP) amendments are not well-defined, which may create uncertainty or delays. Preparing updated biological data and ensuring meaningful stakeholder engagement adds to the process. Overall, while the amendment pathway requires an upfront investment of time and coordination, it offers lasting, programmatic permitting benefits for development and infrastructure and species conservation. The following is a high-level overview of the steps involved with a major amendment. Depending on the complexity of the amendment and availability of Wildlife Agency staff, this process can take from 3-4 years. RCA staff anticipate that this work will be conducted in three phases to align the MSHCP amendment process with the corresponding CEQA/NEPA process.

- **Step 1. Preliminary Consultation & Assessment**
  Early coordination with CDFW and USFWS to confirm amendment scope, and regulatory requirements.
- **Step 2. Amendment Request & Documentation**
  RCA/local jurisdictions submit a Major Amendment Request with species rationale, updated conservation strategy, biological data, and funding assurances.
- **Step 3. Agency Review**
  Wildlife agencies review proposed strategy and take authorization, provide feedback, and may request revisions.

- **Step 4. Public Notice & Environmental Review**
  CEQA/NEPA review, stakeholder outreach, and a 30–60-day public comment period.
- **Step 5. Permit Amendment & Findings**
  Wildlife agencies and local governments finalize environmental documents and issue amended permits with formal findings.
- **Step 6. Implementation & Compliance Monitoring**
  RCA implements updated conservation measures, conducts annual monitoring/reporting, and adjusts management through adaptive management.

ICF has already conducted some initial analyses that would be used to inform an amendment, including developing a habitat model to predict where Crotch's bumble bee could occur (and that could be used in an impact analysis and conservation benefit analysis), evaluating the capacity of the MSHCP reserve system to mitigate and contribute to the conservation of Crotch's bumble bee, and identifying standardized avoidance and minimization measures. ICF also developed an interim permitting strategy that aligns the current individual incidental take permit application process for Crotch's bumble bee with the MSHCP HANS/JPR process to guide project applicants, Permittees, and the Wildlife Agencies through the Crotch's bumble bee permitting process within the MSHCP plan area. The RCA is in the process of rolling out this interim permitting process to permittee planning departments. This interim permitting process will provide a framework for permitting impacts to Crotch's bumble bee until an amendment is completed and Crotch's bumble bee is added to the permits. It also provides a framework for how to integrate Crotch's bumble bee permitting into the MSHCP HANS/JPR with an amendment.

Processing a major amendment to the MSHCP requires specific expertise and worktime beyond RCA staff capabilities. ICF has the necessary expertise and staff to do this work. This work would be a reasonable amendment to Agreement No. 24002 because tasks under Agreement No. 24002 include necessary first steps in the major amendment process. Furthermore, an amendment to the MSHCP would require an intimate understanding of the MSHCP and how it is being implemented. ICF is doing the work to gain that knowledge under Agreement No. 24002 to conduct the SIAAP. Amending Agreement No. 24002 would efficiently and effectively enable ICF to address issues related to the Crotch's bumble bee in a timely manner.

FISCAL IMPACT:

The specific scope of work and cost to amend the MSHCP would be negotiated by the Executive Director. RCA staff anticipate the cost not to exceed $650,000 for this work. A budget amendment will be required once the cost is known. RCA staff will apply for a USFWS Section 6 Planning Grant to help fund this work.

WESTERN RIVERSIDE COUNTY REGIONAL CONSERVATION AUTHORITY	
DATE:	September 5, 2025
TO:	Western Riverside County Regional Conservation Authority
FROM:	Aaron Gabbe, Regional Conservation Director
THROUGH:	Aaron Hake, Executive Director
SUBJECT:	Strategic Improvement Assessment and Action Plan Findings and Potential Solutions

STAFF RECOMMENDATION:

This item is for the Board of Directors to:

1) Receive and file the draft Strategic Improvement Assessment and Action Plan (SIAAP);
2) Refer the SIAAP to the Stakeholder's Committee for review and input;
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5) Direct staff to conduct a financial and human resources analysis to determine budget and staffing needs to implement the Board's direction on SIAAP-related initiatives.

BACKGROUND INFORMATION:

The MSHCP is an ambitious plan, vital to supporting smart regional growth in Western Riverside County while protecting threatened and endangered species, their habitats, and natural resources for future generations of Western Riverside County residents. The MSHCP has been a success since it was approved in 2004. The MSHCP has protected over 70,000 acres of Additional Reserve Lands (ARL), out of 153,000 acres to be protected with local, state, and federal funding, at a cost of over $570 million, and has streamlined development of more than 100,000 acres of

vital infrastructure and housing. The majority of locally acquired ARL have been secured through the expenditure of Local Development Mitigation Fees (LDMFs) in accordance with the MSHCP through the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process.

The MSHCP was developed over 20 years ago with assumptions based on the best available information (e.g., total cost of land). It is impossible, however, to create such a large, 75-year plan that operates exactly how it was envisioned during plan development and for all assumptions to be accurate. A trend has been developing recently where the Western Riverside County Regional Conservation Authority (RCA), through the Development HANS process, is required to purchase land described for conservation that is extremely expensive (e.g., many orders of magnitude greater than the per acre costs assumed by the MSHCP in 2004 or the 2020 Nexus Study). The RCA Board of Directors (Board) is concerned that if this trend continues, it may not be financially feasible to achieve all the goals and objectives of the MSHCP, particularly those related to reserve assembly.

On May 1, 2023, the RCA Board directed staff to conduct a MSHCP Strategic Improvement Assessment and Action Plan (SIAAP) to evaluate existing policies, and identify opportunities to improve implementation, such as a possible Major Amendment (amendment) focused on the Development HANS. At the Board's direction provided to staff on January 8, 2024, the RCA contracted ICF Jones & Stokes, Inc. (ICF) to conduct the SIAAP study to evaluate existing policies, and identify opportunities to improve implementation, such as a possible amendment focused on the HANS process. The goal of this effort was to find ways for the RCA to maximize MSHCP implementation flexibility while maintaining financial stewardship and permit compliance. This staff report provides an overview of the findings and recommendations from ICF's SIAAP report. RCA staff used the information from ICF's SIAAP report and staff's understanding of plan implementation to develop the recommendations to the Board provided in this staff report.

SIAAP SUMMARY:

Over the years, several challenges have emerged, particularly related to HANS process and the cost of assembling the MSHCP reserve, given the extremely high prices of recent Development HANS properties that the RCA had to acquire. The Permittees are committed to fully funding this plan, in compliance with regulatory standards under the federal Endangered Species Act (ESA), California ESA, and the Natural Community Conservation Planning Act. MSHCP Section 8.6, *Adequacy of Funding*, explains that the Permittees and Wildlife Agencies will modify funding mechanisms as needed to address additional funding needs. However, the Permittees are also committed to the responsible expenditure of public funds. This study was undertaken to analyze these challenges and assess methods for increased flexibility of MSHCP implementation, to ensure long-term permit compliance, financial security, and fiscal responsibility.

The Development HANS process is a central element of the MSHCP, driving the flow of funding and the reserve assembly process to ensure compliance with the permits. This process was designed to provide a clear and streamlined pathway for development projects to mitigate impacts on Covered Species and receive incidental take coverage under the MSHCP. The HANS

process is a tool to acquire land needed for conservation when incidental take authorization cannot be extended to the landowner because it is on land described by the MSHCP for conservation while ensuring that landowners are compensated fairly for their land. One of the more significant challenges facing the RCA and other Permittees occurs when the RCA must purchase land needed for conservation that is extremely costly. While the funding and land acquisition mechanisms driving the HANS process generally operate efficiently, there is little, if any, opportunity for the RCA to make HANS land acquisition decisions based on the cost of the land.

Key Findings from the SIAAP

HANS Process Challenges

- Increasing flexibility in reserve design could allow the RCA to opt not to acquire extremely expensive Development HANS properties and instead acquire alternative properties that provide equal or greater conservation value through the Criteria Refinement process at significantly lower costs. This approach is challenging given the MSHCP's reserve design. Modifying the MSHCP reserve assembly process through an amendment to provide more flexibility is not likely to be feasible because there is not likely enough suitable habitat for the Covered Species located in different, less expensive areas of the MSHCP plan area to create a new reserve system that provides equivalent or better habitat values to the current reserve design.

- Substantive changes to the HANS process (or removing it from the MSHCP) will not address the challenges the RCA is facing, because it is the necessary tool needed to implement the reserve design and conservation strategy. The reserve design and conservation strategy are at the core of the MSHCP, the Permits, and the Implementing Agreement between the Permittees and the Wildlife Agencies. The RCA Board could achieve its desired outcomes through other avenues than changing fundamental elements of "the deal" after 20 years of MSHCP implementation.

- The cost of land described by the MSHCP for conservation that is zoned for development uses (e.g., industrial, mixed-use) can cost substantially more than land designated as open space or rural-residential. Up-zoning land described by the MSHCP for conservation to development land use designations can add millions to the cost of a property. This cost of public funds is borne by the Permittees. Keeping the Permittee's general plans and zoning designations in alignment with the reserve design prevents unnecessary increases in acquisition costs.

- The MSHCP created the reserve assembly Criteria Refinement Process (CRP) in part to enable Permittees to extend incidental take authorization to project applicants if the land described by the MSHCP for conservation is replaced with land elsewhere that provides equal or superior biological value and does not result in a net loss of conserved land (from

the required 153,000 acres of ARL). The MSHCP originally intended that the CRP would be the mechanism to enable the intended flexibility for reserve acquisition through ranges of conservation targets, where conservation in one area could be at (or even below) the low end of the range if the deficit is made up by achieving the high range elsewhere. Over time, however, much of that flexibility was used up in certain areas by development that had occurred or had been authorized by the time of MSHCP permit issuance as well as by development authorized through MSHCP implementation.

- The HANS process is the tool to acquire land needed for conservation to complete the reserve design and fairly compensate landowners, although the MSHCP envisioned that the County of Riverside (County) and cities would offer non-monetary incentives to compensate project applicants in exchange for their land when a proposed project site is partially described for conservation. The County typically conditions projects to dedicate land described for conservation to the RCA via its permitting process, but non-monetary incentives do not appear to be widely used by the cities. Greater application of incentives would reduce overall land acquisition costs for the RCA and Permittees, but to what extent is unknown.

Interviews

ICF interviewed California Department of Fish and Wildlife and U.S. Fish and Wildlife staff, RCA staff, MSHCP Board Members, and people with expertise from Plan development during the data-gathering phase of the SIAAP to gain insights into challenges with implementing the MSHCP. Some suggestions by the interviewees were determined not to be feasible because they did not adequately address the issues of the SIAAP, would not comply with the MSHCP and Implementing Agreement, or the state and federal Endangered Species Acts, or were otherwise infeasible. The following are key points made by interviewees:

- Interviewees highlighted that rising land prices and development pressure have led to land speculation, with the HANS process often benefiting landowners over conservation. An interviewee mentioned that the elements included in the HANS process that benefit landowners were included in the MSHCP by the Permittees because of stakeholder group concerns.

- The current approach to reserve assembly lacks flexibility due to land use constraints. Suggestions included clearer Area Plan guidance, adjusting targets in constrained areas, and expanding reserve design to include higher-value lands.

- Appraisals may overvalue land if they are ignoring biological constraints. Interviewees called for more transparency and flexibility in the HANS process, including negotiation options outside the formal conflict resolution process, the latter of which was inconsistent with the comments by some interviewees for more transparency.

- Development fees are not keeping up with land costs, making it more challenging for the RCA to fund Development HANS acquisitions. Many interviewees noted that a lack of engagement and support of some of the Permittees to successfully assemble the reserve is a critical barrier to improved Plan implementation. Anecdotal evidence suggests some Permittees tend to view the Plan as a regulatory burden rather than a benefit and shared responsibility, leading to inconsistencies in implementation and missed opportunities for collaborative conservation efforts and overall cost savings.

GIS Analysis of Reserve Assembly

- Habitat remains within and adjacent to the Criteria Area that could be used to increase flexibility in the reserve acquisition process. Mapping shows approximately 74,000 acres of habitat not currently described for conservation that could be evaluated to increase reserve assembly flexibility. Flexibility in the reserve assembly process could be achieved through Criteria Refinements, rather than an amendment. This analysis did not systematically evaluate the amount and location of habitat necessary for a substantial overhaul of reserve design that would be necessary to eliminate or substantially modify the HANS process (though high-level evaluations suggest that there is not enough habitat remaining for a substantial modification of the reserve design). That type of analysis was beyond the scope of the SIAAP.

Land Value Analysis

- In recent years, a few very high-cost Development HANS acquisitions have challenged the RCA's finances, reducing the RCA's ability to acquire important habitat from Non-development HANS applicants and willing sellers outside of the HANS process. As a result, the RCA has increasingly allocated a larger proportion of its available funding to these transactions. This raises important questions about the adequacy of the current funding structure to provide the revenues necessary to keep up with the rapidly increasing cost of land.

- The Land Value Analysis reviewed the RCA's recent land acquisitions, focusing on 179 transactions between July 2018 and April 2024. The analysis found that the average land value per acre has significantly increased from what was expected from the 2003 and 2020 Nexus Studies, driven by factors such as rising land values at the urban edge and general inflation.

Funding Sources and Uses Analysis

- The original MSHCP funding strategy relied on multiple local funding sources (revenues) and their use to cover implementation costs. However, by 2020, three major issues emerged with the assumptions used in the original funding strategy and 2003 Nexus Study: overestimation of fee revenues, overestimation of non-fee revenues, and underestimation of costs. The strategy assumed that 97,000 acres of land would be

protected by the Local Permittees and that 41,000 acres of that (42%) would be dedicated at zero cost. These zero-cost acres have not materialized and as a result total acres of land acquisition required, and hence the total land acquisition costs, are much higher than anticipated.

- The original funding strategy and 2003 Nexus Study heavily depended on LDMF to cover local costs. However, the 2008 Great Recession and subsequent lower levels of development led to lower levels of funding. The shift to higher-density development, which pays lower fees than lower-density development, has also resulted in less revenue than expected.

- Non-LDMF funding sources, primarily from regional transportation projects, did not materialize as expected, covering only 9% of costs instead of the anticipated 44%.

- Recent financial data show that a small number of high-cost acquisitions have created an imbalance in the RCA's revenues from LDMF vs. expenditures. Nonetheless, the RCA has been able to maintain adequate fund balances for acquisitions and reserves for acquisitions and operations. Revenue through LDMF has remained strong since Fiscal Year 2021, and through careful management and state and federal grants, the RCA has been able to acquire (and is in the process of acquiring) four very high-priced properties through the Development HANS process. These properties, however, limited the RCA's ability to acquire important habitat through the Non-development HANS process and from willing sellers and to keep pace with reserve assembly goals.

- The RCA has secured several state and federal grants that have helped with critical acquisitions with high conservation value, as well as some high-cost acquisitions; however, the amount of these grants is below the levels necessary to achieve the state and federal commitment to protect 56,000 acres within the MSHCP's reserve assembly period ending in 2044, in addition to the local commitment to protect 97,000 acres.

Potential Solutions

The SIAAP identified challenges that can be divided into three core categories: 1) lack of flexibility in the reserve assembly process limits the RCA Board's options, even when a property is extremely costly, when deciding whether to approve a land acquisition; 2) financial (lower than anticipated revenue and higher than anticipated land costs); and 3) Permittee engagement in plan implementation. The potential solutions identified by ICF in the SIAAP address these core challenges.

The SIAAP recommends potential solutions that maximize existing MSHCP tools and strategies rather than pursuing a Plan amendment because the core challenges are financial and unlikely to be resolved by an amendment, which could be costly, complex, take many years, and lead to stricter standards. The MSHCP already offers significant regulatory, economic, and permitting benefits, with success in managing high-cost acquisitions under its framework. The MSHCP

was created through extensive collaboration, negotiation, compromise, and the best science available; it is an elaborate piece of public policy with interconnected parts that cannot be separated. The MSHCP has successfully facilitated development and transportation projects throughout Western Riverside County, while successfully preserving habitat and open space for the benefit of people and among the rarest species on earth.

None of the recommended solutions in the SIAAP individually or collectively represent a magic bullet that will resolve the challenges that are inherent, and in many ways intentional, in the MSHCP. Rather, the recommended solutions provide targeted and incremental improvements to implementation that could reduce the overall cost of acquisition; increase revenue to match rising land costs and to maintain fiscal stability; and provide new tools to increase reserve assembly flexibility that could be applied in limited or specific circumstances.

The following are specific areas the SIAAP recommends for improvement within the Plan's existing authorities:

- **Improve Reserve Assembly Flexibility**
  To increase flexibility in reserve assembly, the SIAAP recommends exploring alternative reserve configurations and proactive acquisition of biologically equivalent lands not described by the MSHCP for conservation that could be used for Permittee (including RCA) initiated Criteria Refinements. Criteria Refinements are considerably more efficient and less costly than an amendment to the MSHCP. These strategies require action by the RCA and Permittees and sufficient funding to acquire land that could be used in future Criteria Refinements in addition to funding to acquire Development HANS acquisitions.

- **Strengthen Funding and Cost Management for Land Acquisition**
  In response to rising land costs, reduced zero-cost dedications, and outdated funding assumptions, the SIAAP recommends strengthening the Plan's financial foundation, including revisiting development fee structures through a new nexus study, pursuing alternative sources of revenue, expanding the use of incentives for non-monetary land contributions, maintaining land use designations consistent with the MSHCP conservation strategy, and continuing to aggressively pursue state and federal funding to support the reserve's timely and cost-effective assembly. These strategies require action by the RCA and the Permittees.

- **Increase Permittee Commitment**
  The effectiveness of the MSHCP depends on active, consistent engagement from its Permittees, yet some jurisdictions appear to view the MSHCP as a regulatory burden rather than an asset to the region, limiting the Plan's implementation and increasing costs. The SIAAP recommends conducting an economic benefits analysis and renewed outreach by the RCA to the Permittees and broader public to improve support for the plan. Increasing permittee commitment could come in the form of updating training, improving alignment of local policies with the reserve design, identify opportunities to increase public access to the reserve, promoting the Plan's economic, regulatory, and

quality-of-life benefits to foster ownership, improve coordination, and enhance long-term support for successful Plan execution. These strategies require action by the RCA and the Permittees.

Staff Recommendations

Based on the SIAAP, RCA staff recommends a suite of actions to address each of the core challenges. Some of these actions and strategies can be implemented by the RCA, but some will need to be implemented by the Permittees, as the land use agencies, with assistance from the RCA. Below, RCA staff recommend that these types of actions and strategies be developed by staff in collaboration and consultation, as needed, with Permittees and stakeholders. Some items should be implemented without further analysis, such as conducting an economic and community benefits analysis, whereas others will need to be reviewed and discussed by the Executive Committee and ultimately the Board before implementation.

This item is for the Board of Directors to:

1) Receive and file the draft Strategic Improvement Assessment and Action Plan (SIAAP);
2) Refer the SIAAP to the Stakeholder's Committee for review and input;
3) Direct staff to conduct an economic and financial analysis comprised of three parts: 1) initiating an economic and community benefits analysis of the MSHCP; 2) initiating a study to explore new sources of revenue to fund MSHCP land acquisition; and 3) initiating a nexus study to evaluate LDMF;
4) Direct staff to develop strategies, in collaboration with Permittees and in consultation with stakeholders, that:
    a. Expand non-monetary compensation strategies in exchange for land dedication to the MSCHP reserve;
    b. Better align areas described by the MSHCP for conservation and land use zoning designations;
    c. Incorporate more Permittee-owned land into the MSHCP reserve;
    d. Explore large-scale Criteria Refinements that could be used to increase land acquisition flexibility;
    e. Evaluate targeted changes to the MSHCP that can be strategically implemented during an amendment to the MSHCP to add Crotch's bumble bee; and
5) Direct staff to conduct a financial and human resources analysis to determine budget and staffing needs to implement the Board's direction on SIAAP-related initiatives.

FISCAL IMPACT:

Fiscal impacts related to a consultant performing an economic and financial analysis are anticipated to begin in FY 2026, with an initial cost of approximately $450,000. Potential costs for an economic and community benefits analysis and nexus study were included in the FY 26 budget. If additional funds are needed for a study to explore new sources of revenue to fund MSHCP land acquisition, staff will request a budget amendment.

Attachment: W. Riverside County Multiple Species Habitat Conservation Plan Strategic Improvement Assessment and Action Plan

DRAFT

W. RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN STRATEGIC IMPROVEMENT ASSESSMENT AND ACTION PLAN

PREPARED FOR:

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August 29, 2025

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Acronyms and Abbreviations

Acroynm	Definition
ARL	Additional Reserve Lands
CDFW	California Department of Fish and Wildlife
County	County of Riverside
CRD	Conceptual Reserve Design
CRP	Criteria Refinement Process
EPS	Economic & Planning Systems, Inc.
ESA	Endangered Species Act
FY	fiscal year
GIS	geographic information system
HANS	Habitat Evaluation and Acquisition Negotiation Strategy
HCPs	Habitat Conservation Plans
ITP	incidental take permit
JPR	Joint Project Review
LDMFs	Local Development Mitigation Fees
LDMFs	Local Development Mitigation Fees
MSHCP or Plan	Western Riverside County Multiple Species Habitat Conservation Plan
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Association
PCCP	Placer County Conservation Plan
PSE	Participating Special Entity
RAFSS	Riversidian alluvial fan sage scrub
RCA	Regional Conservation Authority
RCTC	Riverside County Transportation Commission
SIAAP	Strategic Improvement Assessment and Action Plan
USFWS	U.S. Fish and Wildlife Service

This report presents the results of the Strategic Improvement Assessment and Action Plan (SIAAP) for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP or Plan). In 2003, a consortium of applicants requested an incidental take permit (ITP) from the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife to take (e.g., kill, harm) endangered and threatened species by permitting development projects throughout Western Riverside County, California. This ITP was granted in 2004 on the condition that the MSHCP prepared by the permit applicants would be implemented to offset the losses to those state and federally listed species. One of the key components of the Plan to offset those impacts is the assembly of a reserve that conserves habitat for the species that will be taken.

The primary goal of the SIAAP is to identify ways to enhance the flexibility of MSHCP implementation while ensuring financial security and permit compliance, with a particular focus on evaluation of the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) Process. The HANS Process is a tool used to compensate landowners for their land when they propose to develop a project, but their land is needed for the MSHCP conservation reserve. One of the more significant challenges facing the MSHCP implementing entity, the Regional Conservation Authority (RCA), occurs when the RCA must purchase land needed for conservation that is extremely costly. Increased flexibility in reserve design could allow the RCA to opt not to acquire such properties and instead acquire alternative properties that provide equal or greater conservation value at significantly lower costs.

Key Findings from HANS Process Review

HANS Process Challenges:

- The HANS Process is the tool to acquire land needed for conservation to complete the reserve design, and fairly compensate landowners and protect their property rights, when incidental take authorization cannot be extended to the landowner because they own land described by the MSHCP (i.e., needed) for conservation. Other regional Habitat Conservation Plans (HCPs)/Natural Community Conservation Plans (NCCPs) with a more flexible Reserve Assembly process do not have a HANS or similar process.
- The cost of land described by the MSHCP for conservation that is zoned for development uses (e.g., industrial, mixed-use) can cost substantially more than land designated as open space or rural-residential. Keeping the general plan and zoning in alignment with the reserve design reduces acquisition costs.
- The MSHCP created the Reserve Assembly Criteria Refinement Process (CRP) in part to enable Permittees to extend incidental take authorization to project applicants if the land described by the MSHCP for conservation is replaced with land elsewhere that provides equal or superior biological value and does not result in a net loss of conserved land (from the required 153,000 acres of Additional Reserve Lands [ARL]). The MSHCP originally intended that the CRP would be the mechanism to enable the intended flexibility for reserve acquisition through ranges of conservation targets, where conservation in one area could be at the low end of the range if the deficit is made up by achieving the high range elsewhere. As development has occurred over time, however, much of that flexibility was used up in certain areas by development that had occurred or had been authorized

by the time of MSHCP permit issuance as well as by development authorized through MSHCP implementation.

- The HANS Process typically provides monetary compensation for properties. However, as stated in the MSHCP, "the implementation strategy relies heavily on incentives to encourage private property owners to conserve their lands" and the MSHCP envisioned that the County of Riverside (County) and cities would offer non-monetary incentives to compensate project applicants in exchange for their land when a proposed project site is partially described for conservation. The County typically conditions projects to dedicate land described for conservation to the RCA via its permitting process. Non-monetary incentives do not appear to be widely used by the cities. Greater application of incentives would reduce overall land acquisition costs for the RCA and Permittees, but to which the extent is unknown.

Substantive changes to the HANS Process (or removing it from the MSHCP) will not address the challenges the RCA is facing without overhauling the reserve design and conservation strategy through a major amendment. The reserve design and conservation strategy are at the core of the MSHCP, the ITPs, and the Implementing Agreement between the Permittees and the Wildlife Agencies. The RCA Board of Directors could achieve its desired outcomes through other avenues than changing fundamental elements of "the deal" after 20 years of MSHCP implementation. The SIAAP identified other significant challenges impeding the effective implementation of the MSHCP.

Findings from Interviews

Findings from interviews represent the perceptions of the interviewees. Perceptions of interviewees are not necessarily accurate interpretations of the MSHCP or its implementation.

- Interviewees highlighted that rising land prices and development pressures have led to speculation, with the HANS Process often benefiting landowners over conservation. Some suggested reforming or removing the process to better prioritize conservation value. An Interviewee mentioned that the elements included in the HANS Process that benefit landowners were included in the MSHCP by the Permittees because of stakeholder group concerns.
- The current approach to Reserve Assembly lacks flexibility due to land use constraints. Suggestions included clearer Area Plan guidance, adjusting targets in constrained areas, and expanding reserve design to include higher-value lands.

  Some appraisals may overvalue land if they ignore biological constraints, such as the presence of endangered species. Interviewees called for more transparency and flexibility in the HANS Process, including negotiation options outside the formal conflict resolution process.
- Development fees are not keeping up with land costs. Interviewees recommended reassessing fees and pursuing grants to close the funding gap.

Permittee and Stakeholder Engagement

- Wildlife Agency and RCA/Riverside County Transportation Commission (RCTC) staff, RCA Board members, and persons with expertise from Plan development were interviewed during the data-gathering phase of the SIAAP. In addition, information was gathered from the Stakeholder Committee. Many sources noted a lack of engagement and support of some of the Permittees to assemble the reserve is a critical barrier to improved Plan implementation. Anecdotal evidence suggests some Permittees and Stakeholders tend to view the Plan as a regulatory burden rather than a benefit and

shared responsibility, leading to inconsistencies in implementation and missed opportunities for collaborative conservation efforts and overall cost savings.

GIS Analysis of Reserve Assembly

- Updated mapping shows 234,324 acres of natural habitat remain within the Criteria Area, requiring 65% of remaining habitat within and adjacent to the Criteria Area to meet the 153,000-acre reserve target (up from 54% in 2004). This still provides approximately 35% flexibility but is limited by uneven development and habitat isolation. Up to 74,241 acres of adjacent connected habitat not currently described for conservation could be evaluated to restore flexibility

Land Value Analysis

- In recent years, very high-cost development HANS acquisitions have significantly affected the RCA's finances, reducing the RCA's ability to acquire important habitat from willing sellers outside of the HANS Process. The RCA, through the HANS Process, has recently purchased and committed to purchase several high-priced land holdings, with per-acre land values well above the averages expected from the 2003 and 2020 Nexus Studies. As a result, the RCA has increasingly allocated a larger proportion of its available funding to these transactions. This raises important questions about the adequacy of the Local Development Mitigation Fees (LDMFs) to provide the revenues necessary to keep up with the rapidly increasing cost of land.
- The Land Value Analysis reviewed the RCA's recent land acquisitions, focusing on 179 transactions between July 2018 and April 2024. The analysis found that the average land value per acre has significantly increased from what was expected, driven by factors such as rising land values at the urban edge and general inflation.
- The RCA was required to make two especially high-cost 100% Development HANS acquisitions in 2023, which alone cost $68.6 million (in nominal dollars) and provided only 512 acres to the reserve. These acquisitions significantly increased the average land cost per acre for the period.
- Additionally, the analysis found that zero-cost HANS dedications have not materialized as envisioned. Many acquisitions classified as "Donations/Other" were provided in lieu of mitigation fee payments.

Funding Sources and Uses Analysis

- The original MSHCP funding strategy relied on multiple local funding sources (revenues) and their use to cover implementation costs. However, by 2020, three major issues emerged with the assumptions used in the original funding strategy and Nexus Study: overestimation of fee revenues, overestimation of non-fee revenues, and underestimation of costs. The strategy assumed that 97,000 acres of land would be protected by the Local Permittees within 25 years and that 41,000 acres of that (42%) would be dedicated at zero cost. These zero-cost acres have not materialized and as a result total acres of land acquisition required, and hence the total land acquisition costs, are much higher than anticipated.
- The original funding strategy heavily depended on LDMFs to cover costs. However, the 2008 Great Recession and subsequent lower levels of development led to lower levels of funding. The level of development and the shift to higher-density development, which pays lower fees, have resulted in less revenue than expected.

- Additionally, non-LDMF funding sources, primarily from regional transportation projects, did not materialize as expected, covering only 9% of costs instead of the anticipated 44%.
- Recent financial data show that a small number of high-cost acquisitions have created an imbalance in the RCA's revenues from LDMFs vs. expenditures. Nonetheless, the RCA has been able to maintain adequate fund balances for acquisitions and reserves for acquisitions and operations.
- The RCA has secured several state and federal grants that have helped with critical acquisitions with high conservation value, as well as some high-cost acquisitions; however, the amount of these grants is below the levels anticipated in the MSHCP necessary to achieve the state and federal commitment to protect 56,000 acres, in addition to the local commitment to protect 97,000 acres

Comparison of MSHCP to Other Plans

The SIAAP compared the MSHCP with three similar NCCPs/HCPs to identify potential causes and solutions for issues underlying the MSHCP and the relative advantages provided by the MSHCP: Coachella Valley, Santa Clara Valley, and San Diego South County Subarea.

The MSHCP has the following benefits, compared to other plans:

- The most land available for development that can receive take coverage.
- One of the lowest mitigation to development acres ratios.
- One of the lowest reserve area to plan area ratios.
- The greatest number of covered species, providing the greatest breadth of permitting coverage for threatened, endangered, and sensitive species for the state and federal endangered species act and for CEQA mitigation for biological resources.

The MSHCP has the following challenges, compared to other plans:

- The lowest Reserve Assembly flexibility.
- The most constraining connectivity requirements for Reserve Assembly.
- The most prescriptive conservation reserve acquisition process (the HANS Process).
- A lack of zoning consistency between City and County zoning and areas needed for the reserve.

Recommendations

The SIAAP recommends maximizing existing MSHCP tools and strategies rather than pursuing a formal Plan amendment because the core challenges are financial and unlikely to be resolved by an amendment, which could be costly, complex, take many years, and lead to stricter standards; the current Plan already offers significant regulatory, economic, and permitting benefits, with historical success in managing high-cost acquisitions under its flexible framework. Below are specific areas for improvement within the Plan's existing authorities. These require action by both the RCA and Permittees:

- Strengthen Funding and Cost Management for Land Acquisition and Management.
    - In response to rising land costs, reduced zero-cost dedications, and outdated funding assumptions, the SIAAP recommends strengthening the Plan's financial foundation, including revisiting development fee structures through a new nexus study, expanding the use of non-monetary contributions, improving appraisal practices, aligning land use designations with

conservation priorities, and continuing to aggressively pursue external funding to support the reserve's timely and cost-effective assembly.

- Improve Reserve Assembly Flexibility.
    - To address the growing rigidity in Reserve Assembly, the SIAAP recommends restoring flexibility through proactive acquisition of biologically equivalent lands, improving planning tools and policies, and exploring alternative reserve configurations, all aimed at enhancing conservation outcomes, reducing costs, and maintaining the Plan's long-term viability.
- Increase Support for and Commitment to the MSHCP.
    - The effectiveness of the MSHCP depends on support from its constituents, including active, consistent engagement from its Permittees, and support from developers, stakeholders, and the general public, yet some appear to view the MSHCP as a regulatory burden rather than an asset to the region, limiting the Plan's implementation and increasing costs. The SIAAP recommends renewed outreach to improve support for the plan by the Permittees and the broader public by updating training, improving alignment of local policies with the reserve design, and promoting the Plan's economic, regulatory, and quality-of-life benefits to foster ownership, improve coordination, and enhance long-term support for successful Plan execution.

Conclusion

The SIAAP offers a focused evaluation of implementation challenges and outlines practical strategies to strengthen the Plan. Rising land costs, limited flexibility in the reserve design, and underutilized tools like the CRP are making Reserve Assembly increasingly difficult. The HANS Process itself is not the root cause, rather, it is the MSHCP's reserve design, planned development within the Criteria Area, and zoning inconsistencies that have reduced acquisition flexibility.

The RCA Board initiated this study after recognizing that these challenges are intensifying. The SIAAP determined that fewer remaining parcels and escalating land prices highlight the urgent need to increase revenue.

A major amendment to the MSHCP is not recommended at this stage. Instead, the SIAAP advises that the focus should be on fully leveraging existing tools. If needed, a targeted amendment can be pursued later. With coordinated action, the MSHCP can continue delivering long-term environmental and economic benefits to the region.

Chapter 1
Introduction

The Strategic Improvement Assessment and Action Plan (SIAAP) was conducted to evaluate and investigate opportunities for revised implementation of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP or Plan). Since its inception in 2004, the MSHCP has aimed to balance development and conservation by protecting endangered and threatened species while permitting development projects. Since 2004, the Regional Conservation Authority (RCA) has successfully achieved over 82% of the overall Reserve Assembly, predominantly comprising public and quasi-public lands. However, less than half of the planned 153,000 acres of Additional Reserve Lands (ARL) have been acquired, including 26,794 acres of the federal/state goal (48%) and 44,116 acres of the local goal (45%). The majority of locally acquired ARL have been secured through the expenditure of Local Development Mitigation Fees (LDMFs) in accordance with the MSHCP through the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) Process. However, over the years, several challenges have emerged, particularly related to the HANS Process and the financial sustainability of the Plan, given the extremely high prices of recent development HANS properties that the RCA has, and will be, acquiring.

The Permittees are committed to fully funding this plan, in compliance with regulatory standards under the federal Endangered Species Act (ESA). MSHCP Section 8.6, *Adequacy of Funding*, explains that the Permittees and Wildlife Agencies will modify funding mechanisms as needed to address additional funding needs. This study was undertaken to analyze these challenges and assess methods for increased flexibility of MSHCP implementation to ensure long-term permit compliance and financial security.

The HANS Process is a central element of the MSHCP, driving the flow of funding and the Reserve Assembly process to ensure compliance with the permits. This process was designed to provide a clear and streamlined pathway for development projects to mitigate impacts on Covered Species and receive incidental take coverage under the MSHCP. In practice, the HANS Process is a tool to acquire land needed for conservation when incidental take authorization cannot be extended to the landowner because it is on land described by the MSHCP for conservation. While the funding and land acquisition mechanisms driving the HANS Process generally operate efficiently, there is little, if any, opportunity for the RCA to make HANS land acquisition decisions based on the cost of the land.

The RCA has found that the rules governing the HANS Process and Criteria Cell-based Reserve Assembly do not provide sufficient flexibility that would enable the RCA to consider the appraised cost of a property when acquiring land though the HANS Process. There is concern that the increasing cost of land in select areas of the Plan could lead to unsustainable land acquisitions. The remaining high-quality habitat within Criteria Cells is increasingly limited, leaving fewer opportunities to acquire the necessary habitats to meet Reserve Assembly requirements and maintain rough step for some vegetation categories. Additionally, many of the Criteria Cells are highly parceled, with an average Assessor's Parcel Number size of 11.5 acres, multiplying the number of parcels and landowners the with whom the RCA must negotiate to achieve conservation objectives for each Criteria Cell. Acquiring a high number of smaller parcels has led to higher land acquisition costs. Moreover, many existing entitlements and planned developments were not considered during initial planning, further constraining the land area potentially available to meet conservation objectives.

This situation is further exacerbated by the general upward pressure on land costs over the last few years, as evidenced by appraisals in the HANS Process. This has resulted in a trend where the RCA is required to

purchase very expensive ARLs, pushing land acquisition costs out of sync with revenue from development fees, which are based on land costs broadly distributed across the Plan Area. The HANS Process, as currently implemented, leaves the RCA with few options and little negotiating power.

The following report details the methods by which this SIAAP was conducted, including interviews with participating organizations, document review, a funding and finance analysis, and comparison to similar Habitat Conservation Plans (HCPs) in California. The SIAAP then provides multiple avenues for the Riverside County Transportation Commission (RCTC) and the RCA to improve the implementation of the MSHCP and ensure continued permit compliance. Notably, the results of the SIAAP highlight the collaboration of participating agencies and strict reserve design as key limiting factors, rather than the HANS Process itself.

Chapter 2
Methods

2.1 Interviews and Meetings Methods

The SIAAP Team conducted 15 interviews with RCA, RCTC, Wildlife Agency staff, RCA Board Members, and individuals involved with the development of the Plan to candidly discuss observations, concerns, and ideas related to implementation of the MSHCP. In addition, an MSHCP Stakeholder Committee meeting was held on July 24, 2024, to review the goals and objectives of the SIAAP and solicit stakeholder input regarding the MSHCP. Results from the interviews and stakeholder meeting were analyzed and categorized into several themes. These results were used to inform our understanding of the issues and potential solutions. Insights gained from these interviews and meetings on the following topics were integrated into the final report: HANS Process, Reserve Assembly, Appraisal Process, and Permittee/Stakeholder Engagement.

2.2 MSHCP Document Review Methods

The SIAAP Team used the interviews, guidance from Dudek, the consulting firm supporting the RCA in the implementation of the MSHCP, RCA's Regional Conservation Director, and desktop review to identify key relevant documents, and specific document sections for review. The following documents were reviewed.

- MSHCP Volumes 1 and 2
- MSHCP Volume 3: Implementing Agreement
- Nexus Studies 2003 and 2020
- RCTC Right of Way and RCA MSHCP Land Acquisition Policies and Procedures
- Appraisals for acquired properties
- Annual Reports
- Fiscal Year 23 Budget Report
- HANS, Joint Project Review (JPR), and Criteria Refinement Process Flow Charts
- Presentations to the Board of Directors and Meeting Minutes
- Santa Clara Valley HCP and Natural Community Conservation Plan (NCCP) Permits and Biological Opinion
- RAND Study: Balancing Environment and Development- Cost, Revenue, and Benefit Analysis
- Legal resolution documents

2.3 Funding and Finance Analysis Methods

Economic & Planning Systems, Inc. (EPS) conducted funding and finance analyses reviewing land values and sources and uses of funding. The Land Value Analysis included 1) a review of the 2003 and 2020

Nexus Studies on land acquisition costs analyses, assumptions, and forecasts that either determined the level of funding assumed to be required to implement the MSHCP and, in turn, the mitigation fees required, and/or provided general insights into the potential challenges associated with increasing land costs over time; and 2) a review of RCA land acquisitions between 2019 and 2024 to determine whether land values have substantially increased since 2020, including the recent and expected near-term impacts of certain high-cost acquisitions on average and overall land costs.

The sources and uses analysis focused on the MSHCP overall funding strategy and the sources (revenues or funding) and uses (costs or expenditures) of MSHCP implementation. EPS analyzed the RCA's sources and uses from the past 3 fiscal years to look for incompatibility. To compare the RCA's recent financial experience with the 2020 Nexus Study, the sources and uses analysis was adjusted to focus only on Local Permittee sources and uses (i.e., funding to acquire the local share of the MSHCP reserve [97,000 acres]). Finally, EPS compared the Local Permittee sources and uses with the 2020 Nexus Study sources and uses estimates to determine whether further analysis is recommended to determine the need for changes to the funding strategy.

2.4 GIS Analysis Background and Methods

2.4.1 Historical Context and Rationale for GIS Analysis Approach

The MSHCP Reserve Assembly process was designed to provide both conservation certainty and implementation flexibility. The Plan's reserve design incorporated elements of adaptability, recognizing that conditions on the ground change over time as new development occurs and as land is acquired to assemble the reserve. The Conceptual Reserve Design (CRD) identified in the Plan is described as one of many configurations of cores and linkages that could accomplish the biological goals for Reserve Assembly of the Plan but is not the only possible configuration of the reserve. The CRD, or any other reserve design configuration that completely assembles the cores and linkages within the MSHCP target acre ranges, will meet the goals of the Plan.

The CRD and cores and linkages were overlaid with Criteria Cells in the Plan to guide the location of Reserve Assembly acquisitions based on described Conservation Criteria, while allowing for some flexibility during Plan implementation. Flexibility in the Reserve Assembly process is defined as having multiple options to acquire land to complete the reserve design (meeting both acreage targets and spatial connectivity goals). As land development and acquisition progressed since MSHCP development, the options for Reserve Assembly have decreased, reducing flexibility. The reserve design must meet two main objectives to be successful: 1) acquire enough habitat for each of the Covered Species as quantified in the MSHCP by the target ranges of habitat for each natural community type; and 2) provide sufficient connectivity for Covered Species within and between the linkages and cores, as described by the MSHCP. Any reserve design that meets these two main objectives will be successful.

The land acquisition for Reserve Assembly is driven by the availability of willing sellers with property described by the MSHCP for conservation that can be acquired by the RCA using land development fees, and project applicants with projects in the Criteria Areas that must proceed through the JPR[1] and HANS

[1] Joint Project Review (JPR) is the process by which the RCA performs a consistency review of the proposed project per the MSHCP. This occurs for projects that trigger a discretionary approval by the Permittees (cities or County of Riverside) and occurs only when the property is located within a Criteria Cell (roughly 160-acre rectangle that overlays parcels and has described conservation). See RCA MSHCP FAQs https://www.wrc-rca.org/faqs/.

Processes. The more natural habitat that is available in the Criteria Area that could contribute to a core or linkage, the more opportunities there are to use the Reserve Assembly Criteria Refinement Process (CRP), which requires equal or better replacement land from willing sellers (MSHCP Section 6.5), to realize flexibility in the Reserve Assembly process.

The CRP was included in the MSHCP to allow additional flexibility in the Reserve Assembly process. The CRP provides a way for landowners with land described for conservation to develop by finding replacement land. The CRP adjusts the reserve design by replacing land in the Criteria Cells that is described for conservation with biologically equivalent or superior land that is not described for conservation. Replacement land could be inside or outside the Criteria Cells if it meets the replacement needs, including required connectivity, through the Determination of Biologically Equivalent or Superior Preservation process.

The amount of flexibility intended when the MSHCP was prepared is substantially less now for three reasons. First, the amount of natural habitat assumed in the cores and linkages at the start of Plan implementation was based on an older (1994) land cover map that did not depict all the developed areas (or areas with development entitlements) at the time the MSHCP was completed, which means that when the Plan started to be implemented, there was already less land available than expected. Second, additional development has occurred during the first 20 years of Plan implementation in areas that could have contributed to Reserve Assembly with a Criteria Refinement in the cores and linkages but now have been converted to development. Third, land has been acquired for Reserve Assembly, leaving fewer remaining available areas of natural habitat, and those past acquisitions narrow the options for future acquisitions to provide the required connectivity through the linkages.

The geographic information system (GIS) analysis methods described in the following sections were developed to evaluate the remaining flexibility for Reserve Assembly.

2.4.2 Methods to Evaluate Current Available Acreage for Reserve Assembly

2.4.2.1 Land Cover Mapping Update

The effect of development in the Criteria Area on Reserve Assembly flexibility required an update of the land cover mapping using a GIS data layer with the best available current development. A 2021 National Oceanic and Atmospheric Association (NOAA) impervious surfaces dataset was used to identify all development that has occurred since the start of Plan implementation. The JPR/Participating Special Entity (PSE) data layer, developed by the RCA in 2024, was then used to estimate the location of additional development occurring after the date of the NOAA dataset. The JPR/PSE data layer identified land classified as "JPR Status = Active," "Proposed Land Use = Proposed Development or Public Project," and "JPR Permanent/Temporary Impact = Permanent," and these areas were used to identify recent JPR-related development areas. The land cover mapping was updated only to indicate where new development had occurred. All other land categories were unchanged and retained their original land cover vegetation classification from the 1994 data layer.

2.4.2.2 Creation of the SIAAP Updated Reserve Assembly Dataset

The RCA's JPR, PSE, and MSHCP Conserved Lands datasets were combined into a single SIAAP Updated Reserve Assembly Dataset to create the composite dataset needed for this analysis. This dataset represents the developed lands that were not accounted for in the original dataset, lands that have been

developed with take authorization from the MSHCP, and lands that have been acquired for conservation to mitigate that habitat loss. The purpose of creating this dataset is to answer questions about Reserve Assembly flexibility. The individual datasets (JPR, PSE, and MSHCP Conserved Lands) have their own separate purposes; therefore, some reconciliation was needed to override minor inconsistencies and create a SIAAP Updated Reserve Assembly Dataset that was satisfactory for use. Some data inconsistencies continue to exist in the SIAAP Updated Reserve Assembly Dataset; however, they are small and inconsequential for the purposes of this analysis.

2.4.2.3 Overlay of the SIAAP Updated Reserve Assembly Dataset with the Land Cover Mapping

A simple GIS overlay was performed to calculate the acres of each land cover type in the SIAAP Updated Reserve Assembly Dataset. This overlay was completed twice, once with the original land cover mapping and once with the updated land cover mapping. Tabular summaries were then created to evaluate the various Reserve Assembly flexibility questions included in the analysis.

2.5 Comparison with Other Conservation Plans

Three conservation plans similar to the MSHCP were identified and evaluated to understand similarities and differences in how the plans approached land acquisition and reserve design: Coachella Valley MSHCP, San Diego South County Subarea Plan, and Santa Clara Valley HCP/ NCCP. Topics of comparison included: plan area size, number of covered species, total reserve area, acres of reserve land to be acquired through development mitigation, acres of expected development to be covered by the HCP, flexibility in reserve assembly mechanisms, connectivity requirements for reserves, the type of process used to acquire land for the reserves, whether the zoning is consistent with the proposed reserve area, the type and amount of development mitigation fees or developer-responsible mitigation, and whether the plan has special habitat restoration fees. The plans' similarities for each topic were discussed.

Chapter 3
Findings from Interviews

For the purposes of this study, the investigation team interviewed persons with expertise on various facets of the MSHCP including Wildlife Agency and RCA staff, RCA Board Members, and persons with knowledge from Plan development.[2] The interviews reported several challenges and concerns related to the HANS Process and implementation of the MSHCP reserve system. Interviewees described issues such as skyrocketing property prices due to zoning inconsistencies and development pressure, which some interviewees believe led to speculators exploiting the HANS Process by proposing development in conservation areas to fetch higher prices. In addition, demands for housing have resulted in some Permittees deliberately choosing to up-zone areas described for conservation. Some suggested a solution may be to prioritize conservation value over strict adherence to the Plan or even remove the HANS Process altogether.

There were concerns about the high cost of perceived low-value lands being purchased, which could have been used to acquire higher conservation value lands. Since implementation of the MSHCP in 2003, interviewees reflected that the HANS Process appeared to be skewed in favor of property owners, fast-tracking development at the expense of conservation gains, while others suggested enhancing the HANS Process and integrating price negotiation into it for projects partially described for conservation. An interviewee mentioned that the elements included in the HANS Process that benefit landowners were included in the MSHCP by the Permittees at the behest of the stakeholder group involved with development of the MSHCP. Some interviewees suggested that the RCA have the ability to decline purchasing extremely expensive properties and require property owners to negotiate their own ESA permits.

The Reserve Assembly process was also criticized for lacking flexibility, with constraints from existing or entitled development reducing options to meet the criteria reserve design. Interviewees suggested providing more detailed guidance for Reserve Assembly at the Area Plan level, reducing percentage range targets in highly constrained Criteria Cells, and modifying the reserve design to add additional Criteria Cells with higher biological resource values.

The Appraisal Process was another area of concern, with interviewees noting that some appraisers may miss biological constraints on land use, resulting in higher property values. In Section 6.1.1, the MSHCP specifies that appraisers are "not to consider the MSHCP Criteria Area as relevant to the appraisal."[3] However, interviewees noted that appraisers may be interpreting this requirement as direction to ignore biological constraints on development of a property in the valuation, including the potential presence of endangered species or their habitats. Appraisals that ignore such biological constraints may be overestimating the value of the highest and best use of a property and inflating land values and increasing acquisition costs for the MSHCP.

Some interviewees requested a more transparent and objective Appraisal Process. Others requested less adherence to the established Appraisal Process to allow the RCA to discard unreasonably low appraisals

[2] Findings from interviews represent the perceptions of the Interviewees. Perceptions of Interviewees are not necessarily accurate interpretations of the MSHCP or its implementation.

[3] This statement only applies to properties that are fully described in the MSHCP and needed to assemble the reserve in accordance with the design. The statement does not apply to properties that are partially described for conservation.

and get a new appraisal to avoid having to enter conflict resolution and allow for negotiation between the landowners and the RCA rather than going through the conflict resolution process.

Zoning is also an important consideration when determining a property's highest and best use in an appraisal. When zoning is not consistent with the reserve design it contributes to high prices for properties described by the MSHCP for conservation. Some interviewees noted that there have been instances when appraisers and MSHCP Permittees up-zoned properties being appraised to zone types that are inconsistent with the MSHCP, which may have resulted in higher appraisal values for those properties.

Funding and finance were highlighted as significant challenges, with the current level of LDMFs being unsustainable. Interviewees suggested finding other sources of funding, such as federal or state grants, and reassessing development fees to align with current economic conditions.

Finally, Permittee commitment and stakeholder engagement were seen as lacking, with interviewees noting that Permittees often do not understand or value the conservation obligations of the Plan or fully appreciate the permit streamlining benefit of the MSHCP. Better education and training of Permittees was suggested to encourage increased engagement and commitment to the Plan's success.

3.1 Permittee Commitment and Stakeholder Engagement

Input from interviewees regarding Permittee and stakeholder engagement fell into one of three categories: engagement in implementing the Plan; understanding the purpose and value of the Plan; and appreciating and enjoying the benefits of the Plan.

Interviewees had significant concerns regarding the level of engagement Permittees currently have in Plan implementation. The perception among several interviewees was that generally the Permittees do not have a sense of ownership in the Plan as co-Permittees and equal partners in successful implementation. Instead, they see the Plan as the RCA's Plan or the Wildlife Agencies' Plan and that it has been imposed upon them. This perspective results in the Permittees seeing the Plan as something that they must comply with, but not something that they must implement to succeed. One interviewee noted the fact that many of the local jurisdictions have not aligned their general plans or zoning designations to be consistent with the CRD and conservation goals of the Plan as evidence that the Permittees are not taking the steps needed to ensure the success of the Plan.

This sentiment, that the Plan is a regulatory burden, was also expressed by stakeholders. During the Stakeholder Committee meeting, some members commented that while conserving the covered species is important, doing so should not come at the expense of development. These types of comments demonstrate a lack of understanding about the purpose of the Plan, which is to provide incidental take coverage of the covered species for the covered activities. Similar to some Permittees, some stakeholders fail to understand the primary purpose of the MSHCP, which is not to provide conservation, but instead to provide incidental take authorization. Conservation *is* the mitigation required by the Endangered Species Act and Natural Community Conservation Planning Act to offset the covered species take impacts from the covered activities.

Some interviewees observed that Permittees generally see the Plan as a development streamlining plan and perhaps do not understand or value the equally important conservation obligations of the Plan. All NCCP/HCPs are by design the Permittees' plan, and the Permittees have the ultimate responsibility in

ensuring the Plan is implemented correctly and in compliance with the permits. Doing so requires successful achievement of the biological goals and objectives. Interviewees noted that this understanding and sense of ownership and responsibility has largely been lost for some of the MSHCP Permittees. Interviewees suggested a need for better education and training of the staff and elected officials of each Permittee jurisdiction or agency to encourage an increased level of engagement in Plan implementation and commitment to the Plan's success. Once Permittees better understand how it is in their own best interest to be invested in the success of the Plan, the interviewees suggested that Permittee decisions that do not contribute to, and may detract from, the Plan's success may be minimized or eliminated (e.g., allowing development inconsistent with MSHCP descriptions for conservation, rezoning inconsistent with the descriptions for conservation, failure to ensure developer land donations and development fees are conveyed to the RCA).

Several interviewees thought the reason that Permittees and developers were not engaged in ensuring the successful implementation of the Plan was they did not have a clear understanding of the purpose and value of the Plan. RCA training has focused on teaching Permittee staff the mechanics and details of the JPR Process to explain what Permittee staff are supposed to do to process projects under the MSHCP. However, interviewees thought the training did not explain why the Plan is important and how it is also the Permittee's responsibility to help ensure that the Plan meets the conservation goals and objectives of the Plan. Trainings need to include a broader focus on the purpose and value of a regional NCCP/HCP, which is to balance development with endangered species protection.

Interviewees thought that Permittee staff, project developers, and stakeholders need to better understand the state and federal endangered species laws so they can appreciate how much easier it is to comply with these laws through the MSHCP than it would be without the MSHCP. When Permittee staff members are processing projects, they need to be able to explain and educate developers and stakeholders how the requirements of the MSHCP save them time and money in comparison to seeking their own endangered species permits if the Plan did not exist. Several interviewees noted that developers and stakeholders do not understand and appreciate the benefits they receive through the Plan. Several interviewees thought the pending state listing of Crotch's bumble bee may be a wake-up call for the Permittees, developers, and stakeholders to remember what it is like when a species is not covered by the MSHCP.

Many interviewees thought that the RCA and Permittees could do a better job of publicizing the successes of the MSHCP from a development and conservation perspective. Public outreach is crucial for the Plan's success, and interviewees thought it would be beneficial to launch a public relations campaign to highlight how MSHCP lands conserve and protect species, provide public open space, and streamline development of new housing as well as commercial and industrial projects and associated jobs. Some interviewees suggested the RCA could consider increasing the outdoor recreational opportunities through partnerships with cities and the County's parks departments as an important tool in engaging and educating the general public to appreciate the value of the MSHCP.

Chapter 4
Assessment Results

The primary focus of the SIAAP was the HANS Process; however, the underlying factor driving the perceived issues with the HANS Process is the lack of flexibility in the conservation strategy, especially assembly of the reserve network needed to offset impacts on covered activities.

4.1 HANS Process

The HANS Process is an incentive-based tool for acquiring property within the Criteria Cells that are needed for inclusion in the MSHCP reserve to meet the MSHCP conservation goals and objectives. This tool is needed because the conservation descriptions for Criteria Cells and Cell Groups are specific (i.e., cores and linkages must be in fairly specific locations that must be contiguous and minimize the edge-to-interior ratio).

The HANS Process ensures landowners are compensated and their property rights are protected when incidental take authorization cannot be extended to the landowner because their proposed project is on land described by the MSHCP for conservation. The process includes steps for initial project application reviews, detailed property evaluations, negotiation of terms and incentives, conflict resolution, and procedures for properties not intended for immediate development (Non-development HANS).

The HANS Process was included in the MSHCP to provide permitting Wildlife Agencies with the assurance that the reserve design will be achieved and to protect property/landowner rights. The HANS Process essentially creates a guaranteed buyer (i.e., the RCA) at the highest and best use price for land proposed for development that is instead needed for MSHCP conservation. While the HANS Process was designed to protect property/landowners and give a fair price for their land, in practice the HANS Process gives landowners leverage over the RCA in land price negotiations.

The HANS Process provides monetary compensation for properties 100% described for conservation. When a proposed project site is partially described for conservation, the MSHCP envisioned that the County and cities would offer non-monetary incentives to compensate project applicants in exchange for their land. While these types of acquisitions do not constitute a major part of the reserve acquisition needs and the cost-benefit of increasing the use of these non-monetary incentives is not clear, this is still a tool in the toolbox of the MSHCP to reduce acquisition costs. Non-monetary incentives could include density bonuses, development clustering, and density transfers. Greater application of these incentives could reduce overall land acquisition costs for the RCA and Permittees, but to what extent is not known.

Substantive changes to the HANS Process (or removing it from the MSHCP) will likely not address the challenges the RCA is facing, without overhauling the reserve design and conservation strategy through an amendment. The reserve design and conservation strategy are at the core of the MSHCP, the ITPs, and the Implementing Agreement between the Permittees and the Wildlife Agencies.

The intent of the original MSHCP reserve design and Criteria Cell descriptions was to provide flexibility through the CRP (see below) so that the Permittees, in coordination with the RCA, could extend incidental take authority that permits development on areas described for conservation by the MSHCP if equivalent or superior conservation could be achieved elsewhere that is not already described by the MSHCP for conservation (i.e., there were conservation options that provided the needed flexibility to ensure no net

loss from the 153,000-acre requirement to protect habitat in the reserve). However, over time, as development has occurred, this flexibility has been reduced, with fewer options for land of equal or greater conservation value, not already described by the MSHCP.

The HANS Process is a necessary tool to acquire land that is essential to meet the habitat and reserve design requirements as they are described for conservation. The recent challenges facing the RCA regarding very high appraised costs for land that the RCA is required to buy were not caused by the HANS Process, but instead by the following factors.

- The modest amount of flexibility in the reserve design.
- The reduction in habitats in the Plan Area that could provide alternative reserve designs and intended flexibility if acquired and protected through the CRP.
- Areas described for conservation that are zoned for development, resulting in high appraisal valuations.
- The higher than anticipated cost of land.

The reduction in flexibility is a result of past development that has left fewer options to meet the Conservation Criteria and the rarity and endangered status of vernal pool habitats and the Riversidian alluvial fan sage scrub (RAFSS) natural community. Modifying the development HANS Process or even replacing it entirely with a different tool to acquire land needed for conservation will not change the underlying challenges with reserve assembly.

4.2 Reserve Assembly

The Reserve Assembly process is the key challenge for MSHCP implementation. The MSHCP reserve design incorporated existing conserved lands (Public/Quasi-Public lands). A gap analysis was then performed to identify ARL needed to adequately conserve the 146 Covered Species. The gap analysis determined that 153,000 acres of ARL were needed for conservation. Combined, the MSHCP proposes to establish a total reserve of 500,000 acres.

The MSHCP Plan Area was divided into smaller planning units called Area Plan Subunits. A CRD was drawn at the Area Plan scale using the 1994 vegetation map, species occurrences, and consideration of biological issues specific to each Area Plan. The CRD was used for drafting Area Plan Criteria, proposing core and linkages to provide connectivity for the Covered Species, and developing target conservation acre ranges. The MSHCP created the Criteria Area, a grid of approximately 160-acre cells overlaid on the CRD, with specific criteria developed for each cell or Cell Group. These included core and linkage features; focal vegetation types; conservation target(s); reserve configuration and connectivity; and the geographic location and percentage of conservation. Notably, the CRD "do[es] not represent the only possible MSHCP Conservation Area that may be assembled within a particular Area Plan."

While the Plan provides criteria descriptions for cells and Cell Groups, the Plan states that the cell or Cell Group Criteria should not be applied in isolation and only at the cell or Cell Group scale. The intent of the Plan was to complete Reserve Assembly starting at the landscape level and evaluate each development project in the context of the overall reserve design as described and depicted by the cores and linkages, followed by consideration of the applicable criteria at the Area Plan and Subunits level, and finally by a review of the criteria for cells and Cell Groups. If a cell or Cell Group can, at a minimum, meet its low-range

goal, then that has been sufficient to determine that the project will not conflict with Reserve Assembly requirements. Section 3.3.1 of the MSHCP states:

> Reserve Assembly guidance provided in the MSHCP is intended to occur sequentially, beginning at the broad, landscape scale and proceeding through the individual Cell Criteria. This sequential approach is important to achieve the desired outcome, which, as noted above, is a reserve configuration that provides significant blocks of Habitat and minimizes internal fragmentation.

The RCA, in its Reserve Assembly analysis for each HANS/JPR, evaluates the proposed project at each of these spatial levels, as described by the MSHCP, and for consistency with the MSHCP's Rough Step requirements. The MSHCP dedicates over 300 pages to describing the size, spatial configuration, and location of the habitats of the reserve across the entire Criteria Area. These criteria are applied in the HANS/JPR Processes to determine whether a project site is described by the MSHCP for conservation, and if so, whether the County or City can extend incidental take authorization to the applicant. If the project site is either partially or entirely described for conservation then the County or city cannot extend incidental take to the area described for conservation, and consequently, RCA enters the acquisition phase of the HANS Process, if the landowner is willing to sell.

The Plan created the HANS Process and the CRP to achieve the intended flexibility for Reserve Assembly at the Area Plan level by giving target acreage ranges rather than fixed targets (as long as the cores and linkages are assembled as intended), and to have the Area Plan Criteria allow project-specific data to inform the Reserve Assembly.

There are two primary reasons that the flexibility of the Reserve Assembly is not being realized. First, the Criteria reserve design as described by the conservation descriptions is not very flexible. The way to deviate from the Criteria is through a Criteria Refinement; however, it appears that the CRP was not used as frequently as it could have been.

Second, the level of development within the Criteria Area leaves a lot less flexibility than was presumed during Plan development. Some of the developments were already present during Plan development but were not included in the mapped data used to inform preparation of the Plan, such that the Plan preparers did not incorporate it into the Plan. Additional development, facilitated by the MSHCP, has occurred during the 20 years of Plan implementation in critical areas resulting in less flexibility than at the beginning of Plan implementation.

4.3 Criteria Refinement

When the Plan was developed it was anticipated that there would be a need to adjust the criteria that describe lands for conservation included in the CRD. The Plan included the CRP for "cases where refinements to the criteria are desirable to facilitate Reserve Assembly, resulting in adjustments to the criteria" (MSHCP Section 6.5). It was anticipated that the Permittees would use the CRP where refinements to the Criteria are desirable to facilitate Reserve Assembly. Other anticipated purposes include using the CRP to accommodate special plans and already permitted development (i.e., permitted before the MSHCP was approved) that was not accounted for during the mapping of the baseline vegetation for the MSHCP in 1994 and for potential discrepancies in the baseline vegetation map (e.g., developed areas misidentified as habitat). The MSHCP also created the CRP to enable Permittees to extend incidental take authorization to project applicants if the land proposed for development is described by the MSHCP for conservation but is replaced with land elsewhere that provides equal or superior biological value and does not result in a net loss of conserved land.

The Criteria Area is the area described for conservation to guide assembly of the ARLs. Any proposed Criteria Refinements not determined to be biologically equivalent or superior to a project design consistent with the criteria would require a Plan amendment. If a project is in an area described for conservation, a CRP should be initiated, or the project could be found inconsistent with the Plan.

The MSHCP originally intended that the CRP would be the mechanism to realize the intended flexibility for reserve acquisition through ranges of conservation targets, where conservation in one area could be at the low end of the range if the deficit is made up by achieving the high range elsewhere. However, the reserve cannot be assembled by just meeting the low end throughout the Criteria Area. At the start of implementation, however, the low end of the range was chosen repeatedly; therefore, the high end of the target range needs to be met in many places to ensure that the overall mitigation and conservation requirements are achieved. Over time, some of that flexibility was used up by development that had occurred or had been authorized by the time of permit issuance, as well as by development authorized through MSHCP implementation.

A CRP could also be initiated by a Permittee (including the RCA) "either for purposes of correcting minor discrepancies or inaccuracies or for evaluating alternative conservation proposals involving single or multiple landowners and jurisdictions that are of equivalent or superior benefit to Covered Species." The Plan goes on to say, "such Criteria Refinements may involve changes to cores and linkages as long as it is demonstrated that the refinements would clearly benefit Covered Species and would be consistent with MSHCP policies and species conservation goals." The CRP even includes an option to include new areas outside of the original Criteria Area.

The Plan includes the following reasons why a Criteria Refinement may be desirable.

- New biological information obtained through site-specific studies.
- Updated land use information clearly demonstrates an area as unsuitable for inclusion in the MSHCP Conservation Area (primarily limited to the presence of existing development) that was unknown at the time the MSHCP Criteria were developed.
- Site-specific topographic, engineering, or design information that materially affects the development of the site and its relationship to the MSHCP Conservation Area.
- Other reasons that might be offered by a landowner or individual project proponent.

A Criteria Refinement does not require a Plan amendment. A Criteria Refinement requires Wildlife Agency notification and evaluation through the CEQA process. Any Criteria Refinement that proposes to incorporate conservation outside of the Criteria Area requires Wildlife Agency concurrence.

4.4 GIS Analysis of Reserve Assembly

The GIS analysis conducted for the SIAAP focused on evaluating potential flexibility of the Reserve Assembly process across the MSHCP Plan Area based on the remaining available habitat in the Criteria Area and immediately adjacent to the Criteria Area that could be used through a Criteria Refinement. This analysis was supported by an update to the MSHCP 1994 Baseline Vegetation, and the creation of the SIAAP Updated Reserve Assembly Dataset as described in Section 2.4, *GIS Analysis Background and Methods*.

The analysis focused on evaluating available land within and adjacent to the Criteria Area and identifying the degree of flexibility remaining for future Reserve Assembly. As described in Section 2.4, flexibility in

the reserve design process is defined as having multiple options to acquire land to complete the reserve design. In this analysis the overall available acreage of natural habitat that could be available for Reserve Assembly is a surrogate measure of flexibility. The more acres available, the more options (i.e., flexibility) remain.

The analysis considered the following items for each core or linkage.

- An estimate of the target size of each core or linkage based on the total target of 153,000 acres in the final reserve design.
- The amount of land already conserved (including ARL and lands identified as JPR Conservation presumed to be acquired).
- The remaining available natural habitat within the Criteria Area or adjacent areas that could still be available for Reserve Assembly.
- The proportion of land already developed in each core or linkage.

4.4.1 Results of GIS Flexibility Analysis

When the MSHCP permit was issued (2004) there was a presumed 285,884 acres of undeveloped habitat (based on the 1994 land cover mapping) potentially available for acquisition and inclusion in the Reserve Assembly (assuming willing sellers). The total acquisition target for the ARL land to be acquired within the Criteria Cells is 153,000 acres, which was 54% of the total area potentially available. Given that 46% of the undeveloped land in the Criteria Cells would not be needed, this appears to be a substantial amount of flexibility to assemble the reserve. The true flexibility available in 2004 was less than this amount because natural habitat was developed (or planned for development) between when the aerial photos were taken that were used to create the land cover mapping (1992/1993) and 2004. When the current estimated amount of development in the Criteria Cells is considered based on the updated land cover mapping, the total acquisition target is now 65% of the available area, which still leaves 35% of the land to potentially provide Reserve Assembly flexibility Table 1).

Table 1. Change in Developed Area and Reserve Assembly Flexibility within Criteria Cells

	Total	Developed	Natural Habitat	Target Reserve Size	Percent of Natural Habitat Needed to Reach Target
1994 Land Cover Mapping					
Acres Inside Criteria Cells	311,220	25,335	285,884	153,000	54
Percent of Total	**100**	**8**	**92**	**49**	
Updated Land Cover Mapping					
Acres Inside Criteria Cells	311,220	76,895	234,324	153,000	65
Percent of Total	**100**	**25**	**75**	**49**	

Overall, there still appears to be a significant amount of undeveloped land available to provide Reserve Assembly flexibility. However, there are two additional issues that reduce Reserve Assembly flexibility. First, the available undeveloped land is not evenly distributed across the Criteria Cells. Criteria Cells in cores and linkages near rapidly urbanizing areas have had substantially more development than those in more rural areas. Second, the spatial distribution of the undeveloped land must still provide connectivity

within the linkages and cores, and between the cores. Any undeveloped land that has become isolated by development or that is a "dead end" that does not eventually connect to other parts of the reserve should not be considered available for Reserve Assembly because it does not contribute to the completion of a functional reserve design.

Further evaluation of the cores and linkages indicates that many of them have a substantial amount of existing development such that much of the remaining natural habitat would need to be acquired to meet the overall acreage targets. Visual inspection reveals that for some of these cores and linkages there are many areas that have become isolated or otherwise can no longer contribute to the connectivity of the Reserve Assembly, which further limits that amount of natural habitat available to assemble a functional reserve system and, therefore, further limits the flexibility to do so.

In areas with sufficient current flexibility (ample remaining natural habitat with good connectivity), careful planning and Reserve Assembly should be able to complete these cores and linkages without additional measures. In areas where levels of development have substantially reduced the remaining flexibility, it may be possible to regain some flexibility by identifying adjacent areas that could be included in the Reserve Assembly through the CRP. Adjacent areas outside the Criteria Cells that have natural habitat with good connectivity back into the reserve design could be redesignated as being "newly described for conservation" thus providing new areas to assemble the reserve design. This analysis has identified over 70,000 acres of natural habitat that is adjacent and connected to the cores and linkages but not currently described for conservation. These additional areas provide opportunities to increase the Reserve Assembly flexibility in the future but will require more focused evaluation of their ability to contribute to Reserve Assembly for each of these few constrained areas of the core and linkage reserve design.

4.5 Funding and Finance Analysis

4.5.1 Land Value Analysis

Funding for the MSHCP Local Permittee Plan implementation obligations, including land acquisition, comes from several different sources. LDMFs on new development is one of the most important. A 2003 Nexus Study, conducted just prior to permit approval (2004), identified the LDMFs schedule (amounts) needed to cover the Local Permittee's portion of the Plan implementation costs that were not expected to be covered by land dedication or other funding sources. Subsequently, a 2020 Nexus Study was conducted to update the estimates of the Local Permittee's portion of the Plan implementation costs, expected land dedication, and other funding, and identify the needed LDMFs increase.

Over the last few years, a key concern has arisen regarding the sufficiency of MSHCP funding to cover its land acquisition costs and obligations. In particular, the RCA, through the HANS Process, has recently purchased and committed to purchase several high-priced land holdings, with per-acre values well above the averages expected from the 2003 and 2020 Nexus Studies. As a result, the RCA has increasingly allocated a larger proportion of its available funding to a small number of transactions, which, as a result, may slow the pace of the RCA's land acquisition and limit its ability to purchase additional land from willing sellers. This raises important questions about the ability of the current funding system to provide the revenues required for successful financial stewardship and Reserve Assembly for the MSHCP.

For the purposes of the SIAAP, a new Land Value Analysis was conducted to assess the cost of recent RCA land transactions, determine the extent to which land costs have increased since 2020, and assess the role

of the relatively small number of high-priced land holdings. The Land Value Analysis began with a review of RCA's recent land acquisitions. Table 2 provides an overview of the 179 RCA land transactions between July 2018 and April 2024 in nominal dollar terms.

Table 2. RCA Acquisition by Transaction Type (July 2018–April 2024) (2024 dollars)

Transaction Type	No. of Transactions	No. of Acres	% Land Acres	Acquisition Cost	Per Acre Avg Cost	Per Acre Median Cost
Arms-Length Transactions	99	7,627	70%	$187,966.215	$26,642	$9,485
Lack of Information	12	214	2%	$17,038,828	$79,621	$102,954
Tax Purchases	34	668	6%	$1,483,673	$2,221	$4,005
Tax Sales	1	-5	0%	-$30,000	-$30,000	$-30,000
Dedications/Other	33	2,332	22%	$0	$0	$0
Total	**179**	**10,837**	**100%**	**$2,060,458,716**	**$19,052**	**$5,871**

4.5.1.1 Per-Acre Land Costs

The 2003 Nexus Study estimated land values at an average of $13,100 per acre in 2002 dollars ($23,000 in 2024 dollars). The 2020 Nexus Study looked at the RCA's land acquisition experience between 2012 and 2017 and found an average land value of $14,300 per acre in 2019 dollars ($17,900 per acre in 2024 dollars). Since the 2020 Nexus Study was conducted, land acquisition costs have significantly escalated, an increase that is likely to continue into the future.

The SIAAP Land Value Analysis (conducted in 2024) reviewed and analyzed RCA acquisitions between July 2018 and April 2024. Data provided by the RCA (Table 3) found the following.

- A total of 179 acquisitions occurred, including Arms-Length Transactions, tax lien acquisitions, and different types of dedications/mitigations. These included acquisitions purchased with RCA funding as well as state/federal funding.
- Of the 179 transactions, the Land Value Analysis focused on 99 "Arms-Length Transactions." Arms-Length Transactions are land acquisitions that are market transactions between two independent parties (e.g., the RCA and a private landowner) that are not affected by other factors (e.g., tax liens, philanthropic aims, tax benefits, or other issues that mean the transaction does not provide a good indicator of market prices). The other types of land acquisitions, the purchase of tax delinquent properties, land dedications, or parcels with key data missing or unavailable (e.g., zoning information), were excluded from the Land Value Analysis.
- RCA staff identified 33 land transactions that are collectively referred to as "Dedications/Other." These transactions included zero-cost HANS dedications, zero-cost donations, and a broad range of other land dedications that were part of other mitigation requirements, including RCTC mitigations as well as mitigations in-lieu of payments. The zero-cost HANS dedications are important to the overall estimate of land acquisition costs, as the prior Nexus Studies have assumed the RCA would receive substantial land dedications through this process.

The 99 Arms-Length Transactions occurred from 2018 through 2024. To remove the effects of inflation and compare them equally in today's dollars, all land transactions were inflated to 2024 dollars and used

to develop 2024 per-acre land value estimates. The acquisition acres and costs were organized by land use designation category, consistent with the prior 2003 and 2020 Land Value Analyses. Land use designation categories are the allowable land use types for the land and include "open space," which can be used for conservation, water management, recreation, "rural" used for low-density residences of 1 dwelling per 5–10 acres, and Community Development used for residential, commercial, industrial, public facilities purposes.

Figure 1 provides a graph of per-acre land values (in 2024 dollars) by time of transaction with color coding to distinguish the three land use designation categories. The scale shows per-acre land costs of between $0 and $200,000 per acre. Please note, one transaction, the Toscana acquisition discussed in more detail below, was $670,000 per acre and was excluded from the graph for clarity and scaling purposes.

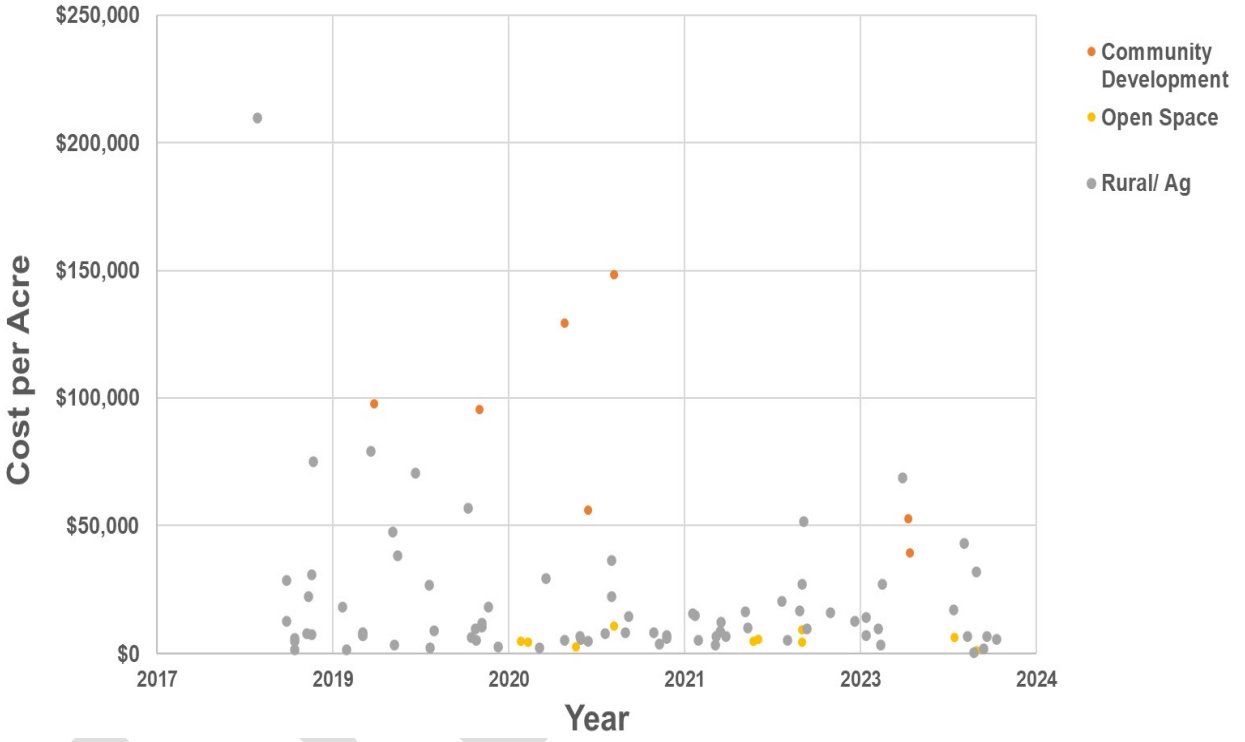

Figure 1. Arms-Length Land Acquisition by Land Use, Cost, and Year (Excluding the Highest Cost Transaction)

Table 3. RCA Arms-Length Land Acquisitions by Land Use Category (July 2018–April 2024) (2024 dollars)

Land Use Category	No.	Acres	% Acres	Acquisition Cost	% Costs	Per Acre Median Cost	Per Acre Average Cost	2020 Nexus Study Per Acre Average Cost
Community Development	8	744	10%	$91,398,361	49%	$96,556	$122,847	$78,459
Rural/ Agricultural	81	5,540	73%	$86,724,924	46%	$9,095	$15,655	$11,417
Open Space	10	1,344	18%	$9,842,930	5%	$4,870	$7,324	$4,779
Total	**99**	**7,627**	**100%**	**$187,966,215**	**100%**	**$9,485**	**$26,642**	**$17,922**

Source: RCA Acquisition Information; Economic & Planning Systems, Inc.

Key observations from Table 3 include:

- **Acquisitions by Land Use Designation.** Prior forecasts in the 2020 Nexus Study, for the amount of each land use designation type estimated approximately 10% of the lands acquired would be Community Development lands. That forecast is consistent with the amount of Community Development land most recently acquired, which was also 10%.
- **Per-Acre Land Values by Land Use Designation.** The average per-acre costs in all land use categories were substantially higher in recent years (2024 dollars) than they were between 2012 and 2017 (2024 dollars), as documented in the 2020 Nexus Study. The average cost of Community Development land, for example, was about $123,000 per acre compared to the estimated $78,000 per acre from the 2020 Nexus Study. The per-acre costs of rural/agricultural land and open space land also increased significantly. The higher average per-acre land costs relative to the median per-acre land costs indicate that in all land use categories, a small number of higher priced acquisitions pushed the average cost higher.
- **Overall Average Land Value per Acre**. The increase in per-acre cost of land acquisitions from the 2020 Nexus Study to 2024 resulted in a higher overall average land cost than seen in 2020. The average land cost increased from $17,900 per acre (2024 dollars; 2020 Nexus Study) to ~$24,600 per acre (2024 dollars), an increase of about 37%. This may pose a problem for the RCA because the prior average is used as the current basis for calibrating MSHCP implementation funding.

4.5.1.2 Impact of Recent High-Cost Land Acquisitions

There are different reasons why HCPs in California experience rapid accelerations in land costs over relatively short periods of time. Commonly cited reasons include:

- Increasing scarcity of land suitable for protection.
- Increasing land values at the rural-urban edge as regional infrastructure and development push out to the edge and beyond urban areas, often resulting in changes to land use designations.
- General upward pressure on land values due to demand for housing outpacing supply (sometimes exacerbated by upswings during business cycles).
- General inflation.

In addition to these common reasons for increased land acquisition costs, the COVID-19 pandemic resulted in increased land values for lands designated for use as single-family homes and industrial/logistics development, and unusually high inflation.

The substantial increase in the recent land acquisition costs experienced by the RCA points to the important role of MSHCP-specific factors. More specifically, the combination of the MSHCP's reserve design and conservation obligations has led to the RCA's purchase of some high-priced land with Community Development land use designations, as required by the MSHCP. To identify the effects of these acquisitions on recent as well as future land costs, sensitivity analysis was conducted to review average land values with and without these transactions.

Of the 99 Arms-Length Transactions, the RCA was required to make two especially high-cost acquisitions in 2023 for high-value Community Development land. These two transactions alone cost a combined $70.5 million in 2024 dollars (about 37.5% of the total acquisition costs) between 2018 and 2024. At the same time, they only provided 512 acres for the reserve (or 7% of the total amount of land acquired during this analysis period), for an average of about $137,400 per acre. These acquisitions were:

- **Toscana Marketplace.** This was a 69.1-acre acquisition at a cost of $46.1 million in nominal dollars, about $670,000 per acre. The land was in a manufacturing commercial service zone of unincorporated Riverside County. The land was considered to have a highest and best use as an industrial/business park and was considered a strong industrial property.
- **EHOF Lakeside.** This was a 443-acre acquisition at a cost of $22.5 million, about $51,000 per acre in nominal dollars. A large portion of this area was designated as open space, mountainous, and held limited development potential. However, while 75 acres were primarily designated for low-density residential, a tentative tract map for 373 dwelling units was processed in 2014. As a result, this land was valued as medium-/high-density residential and the residential lot values generated the large majority of the land value.

To understand the impact of these two acquisitions on recent land acquisition costs, Table 4 shows the outcomes of the Land Value Analysis when these two transactions are excluded from the analysis.

Table 4. Summary of Arms-Length Land Acquisition Transactions from July 2018 to April 2024

Land Use Category	No.	Acres	% Acres	Acquisition Cost	% Costs	Per Acre Median Cost	Per Acre Average Cost	2020 Nexus Study Per Acre Average Cost
Community Development	6	231	3%	$20,920,938	18%	$96,556	$90,566	$78,459
Rural/ Agricultural	81	5,540	78%	$86,724,924	74%	$9,095	$15,655	$11,417
Open Space	10	1,344	19%	$9,842,930	8%	$4,870	$7,324	$4,779
Total	**97**	**7,115**	**100%**	**$117,488,692**	**100%**	**$9,485**	**$16,513**	**$17,922**

Source: RCA Acquisition Information; 2020 Nexus Study; Economic & Planning Systems, Inc.

Key observations from Table 4 include:

- The overall average land value per acre decreases from ~$24,700 per acre (Table 3) to ~$16,500 per acre (Table 4).

- The size and cost of these two acquisitions alone increased the average land cost per acre by about 50%.
- Without these two land acquisitions, the overall average cost per acre of $16,500 would have been below the inflation-adjusted land costs forecasted in the 2020 Nexus Study ($17,900, 2024 dollars).
- This reduction in land cost per acre is driven by a partial reduction in the average per-acre land cost of the Community Development transactions from ~$122,800 per acre (Table 3) to ~$90,600 per acre (Table 4), without these two transactions. If RCA had not acquired these two properties, the proportion of acres acquired with the Community Development land use designation would have been 3% (Table 4) instead of 10% (Table 3).
- Without these two transactions, the overall RCA expenditures on land acquisitions would have fallen from $188 million (Table 3) to $117.5 million (Table 4), or about one-third of the total land acquisition cost.
- The impact of these acquisitions is even greater in the years when they must be acquired. Based on the 2020 Nexus Study, the MSHCP was calibrated to generate about **$28 million** in annual funding for land acquisitions. These two land acquisitions alone subsumed 2 years' worth of land acquisition funding for the whole MSHCP.

4.5.1.3 Dedications/Other Land Acquisitions

When the MSHCP was first drafted, "zero-cost" HANS dedications (i.e., from development projects in Criteria Cells that would dedicate this land at zero cost and also pay the mitigation fee) were expected to provide substantial acres of land protection at no direct cost to the RCA. The 2003 Nexus Study assumed 41,000 acres for ARL (42%) would come from zero-cost HANS dedications. The 2020 Nexus Study assumed that 10,000 acres for ARL (17.5%) would be provided through zero-cost dedications. However, these types of HANS dedications have not materialized as envisioned. As shown in Table 5, from 2018 through 2024, while 22% of the acquisitions were classified as "Dedications/Other", many of them were received by RCA in lieu of mitigation requirements/fee payments and, therefore, were not truly zero cost.

Table 5 provides a breakdown of a broad set of land transactions that fall under the "Dedications/Other" acquisitions, including the zero-cost HANS dedications described above, land dedications for mitigation, and pure donations.

Table 5. RCA Dedications/Other Acquisitions by Type (July 2018–April 2024)

Dedication/Other Type	Transactions	Acres	% Land Acres
Zero Cost HANS Dedications	11	405	17%
RCTC Mitigation	7	255	11%
Other MSHCP Mitigation/Fee Credits	8	1,176	5%
Mitigation for Other Species	2	415	18%
Pure Donations	5	81	3%
Total	33	2,332	100%

Key observations from Table 5 include:

- Over 60% of the "Dedications/Other" acquisitions (1,431 acres) represent land dedications in place of other mitigation requirements (e.g., fee payment, other required payments). This includes "RCTC

Mitigation" and "Other MSHCP Mitigation/Fee Credits" that provided land dedications in lieu of mitigation requirements, including mitigation credits.

- Of the remaining "Dedications/Other" acquisitions, 17% (405 acres) were zero-cost HANS dedications, where land was dedicated without a mitigation fee requirement offset. These acres constituted 3.7% of the total land protected during this period. This is well below the original 2003 Nexus Study assumption of 42% and below the 2020 Nexus Study assumption of 17.5%.

The other categories that arguably provide zero-cost land (that is not in lieu of other mitigation funding) include: 1) the 81 acres in "Pure Donations" provided for philanthropic/tax benefit reasons (less than 1% of total acquisitions); and 2) the 415 acres of dedications associated with mitigation for non-Plan species that still contribute to ARL goals. These, combined with the 405 acres of zero-cost HANS dedications, total 901 acres, which is well short of the 10,000 acres expected.

The recent history of the combined zero-cost HANS dedications, pure donations, and non-MSHCP species mitigation dedications suggests that about 8.3% of the total land protected has been obtained at no cost and with no mitigation funding offsetting by the RCA. Excluding the acres associated with mitigation for other species (that is not expected to continue), the zero-cost dedication/donation proportion is about 4.4% of total land protected.

Unless there is an unforeseen change in this trend, MSHCP funding sources will need to be expanded to cover the costs of acquiring lands that were previously expected to be dedicated at zero cost.

4.5.1.4 Immediate Implications of Increased Land Values

- **Sustained Increased Land Costs Exceed 2020 Nexus Study Estimates.** The 2020 Nexus Study estimated a total Local Permittee cost of $660 million for land needed to be acquired to assemble the reserve (2019 dollars) or $840 million (2024 dollars). Applying the recent average land value estimate of $24,600 per acre to the 46,800 acres of required land acquisition remaining in 2020 indicates a total land cost estimate of $1.15 billion (2024 dollars). As a result, if average land costs remain as high as they have been in recent years, there is an overall land acquisition funding deficit of about $315 million (2024 dollars), about 37.5% above the estimated funding requirement in the 2020 Nexus Study.
- **Underfunding of Total Land Acquisition Funds based on Increased Land Costs and Reduced Zero Cost Donations**. If the assumption of zero-cost donations is decreased from the expected 10,000 acres (17.5%, from the 2020 Nexus Study) to the recent experience (about 4.4% of land), then the insufficiency of funding for land acquisition increases further. The 2020 Nexus Study assumptions meant that of the 56,800 acres of Local Permittee land acquisition still required, 46,800 would need to be funded. Reducing this assumption to 4.4% (2,500 acres), means that 54,300 acres would need to be funded (an increase of 7,500 acres). Applying the recent average land cost of $24,600 per acre to this land results in a total land acquisition cost of $1.34 billion (2024 dollars). Under this scenario, there is an overall land acquisition funding deficit of about $500 million (2024 dollars), about 60% above the estimated funding requirement in the 2020 Nexus Study.
- **Average Annual Land Cost/Funding Requirement.** When considered on an annual level, the 2020 Nexus Study was calibrated to provide an average of $27.5 million (2019 dollars) in land acquisition funding annually, about $35.0 million in 2024 dollars. Under the revised increased average land value scenario above, the annual land acquisition funding would instead need to be about $48.0 million, requiring an additional $13 million in annual land acquisition funding. Under the scenario that included the reduced dedications and increased average land value, the annual land acquisition

funding would need to be about $55.7 million annually, requiring an additional $20.7 million in annual land acquisition funding.

4.5.1.5 Future Land Cost Expectations

A key question is whether the two high-value Community Development land acquisitions were anomalies or represent the type of acquisitions that will be seen increasingly over time as part of MSHCP implementation. To the extent these two transactions represent unusual exceptions in terms of cost per acre and overall acquisition costs, their effects on MSHCP funding could be short-lived and diluted over time. However, if this is now expected to be a more common occurrence and represents a new phase in the types of land acquisitions the RCA will need to purchase, substantial increases in MSHCP funding will be required to support MSHCP implementation.

On a broad level, the 2006 RAND© study reported that the nature of the MSHCP and its requirement to purchase habitat linkages, often through or close to urban areas, would ultimately result in a substantial increase in per-acre land costs as MSHCP implementation occurred over time. While this increase did not happen as quickly as RAND expected, due to the Great Recession and slower pace of land protection than planned, the recent acceleration in land costs is consistent with the RAND forecasts. Such land increases were forecast to remain, and if anything, continue to escalate over time. These increases were directly tied to the inflexibility of options in terms of certain types of land acquisitions and less specifically to the specifics of the HANS Process.

In addition, there is already evidence that high-value land acquisitions will be an ongoing requirement throughout the Criteria Area and are not limited to linkages. It is important to note that the Toscana and EHOF Lakeside acquisitions were in cores, not linkages. Furthermore, the RCA has already been required to approve the acquisition of two additional high-value Community Development lands for the reserve over the next 4 years:

- **Silo Hills.** This is a 74.5-acre acquisition at a cost of $20.4 million, about $275,000 per acre. The land is predominantly zoned as Light Industrial and Heavy Industrial and is in the City of Hemet. It was considered to have a highest and best use as an industrial business park.
- **Dilworth.** This is a 65.2-acre acquisition at a cost of $17.0 million, about $261,000 per acre. The land has a zoning of Heavy Industrial and is in the City of Hemet. It was considered to have a highest and best use as an industrial business park.

These two acquisitions alone are expected to cost $37.4 million, providing 139.7 acres at an average cost of $268,000 per acre, and consuming a large proportion of the MSHCP's near-term mitigation fee revenues.

4.6 Sources and Uses Analysis

The original MSHCP funding strategy envisioned the use of multiple local funding sources to cover the Local Permittee's share of MSHCP implementation costs. Local Permittee implementation costs were estimated, forecasts of non-fee funding sources were netted out, and LDMFs (mitigation fees) were set to cover the remaining implementation costs based on assumptions about future development in the Plan Area. The funding strategy assumed that all Local Permittee land protection obligations (about 97,000 acres) would be accomplished within 25 years of MSHCP approval (in other words between 2004 and 2029).

4.6.1 Three Major Funding Issues

Like all large, complex HCPs, the original funding strategy of the MSHCP was based on a range of assumptions and forecasts of many variables, several of which were highly dynamic and uncertain. The best available information was used to develop the funding strategy; however, factors affecting the underlying assumptions had evolved. By 2020, three issues had emerged with the original MSHCP funding plan, discussed in bullet points below. To address this issue, the RCA Board adopted the Nexus Study on December 7, 2020, while recognizing the challenging economic conditions.

- **Overestimate of Fee Revenues**. Like many other multi-species, multi-jurisdiction HCPs in California, the MSHCP established a mitigation fee on new development to help cover Local Permittee implementation. The payment of these fees helps fund the mitigation of the impacts of this new development on state and federally listed species and mitigation of impacts on biological resources under CEQA. Even when costs are accurately forecasted, mitigation fees are established based on an assumption about an average amount of development each year. As a result, any reduction in the amount of development can create challenges for MSHCP funding.

  The original 2003 MSHCP Nexus Study established mitigation fee levels based on recent history and the expectation of an average of 13,400 housing units of development annually. Importantly, the Great Recession in the late 2000s saw annual housing development fall to 2,000 to 4,000 housing units of development annually, creating a substantial underfunding of MSHCP implementation during that time. After the Great Recession, the amount of annual housing development never returned to the pre-recession level, meaning that mitigation fee revenues were constantly below the expected levels even during economically balanced or strong years.

- **Overestimate of Non-Fee Revenues.** The original MSHCP funding strategy for Local Permittee implementation costs depended heavily on funding from non-fee funding sources that did not emerge. The funding strategy assumed that 44% of total MSHCP implementation costs would be covered by non-fee funding sources, primarily regional transportation and other infrastructure project-related funding. As of 2020, it was estimated that these non-fee funding sources only covered 9% of costs, leaving a substantial funding gap.

- **Underestimate of Costs.** The original MSHCP funding strategy and Nexus Study assumed that 41,000 acres, or 42% of the 97,000-acre ARL acquisition requirement, would be dedicated at zero cost in association with the mitigation obligations of new developments in the Criteria Area. As of 2020, only 2.5% of Local Permittee land protection was provided through these types of dedications. This resulted in an underestimate of the land acquisition costs.

4.6.2 All Recent Sources and Uses

Table 6 shows the revenues/sources summary from the RCA financial documents for the 3 most recent financial years. As shown, variations in annual revenues/sources were driven by fluctuations in many funding sources, including LDMFs, state and federal grants, contributions and donations [4], interest payments, and operating transfers. The following initial observations can be drawn. Over the 3 years, a total of about $173.1 million in revenues is expected to be received ($57.7 million per year on average). LDMFs ($91.9 million), state and federal grants ($29.5 million), and the value of land contributions and donations ($22.1 million) are the largest sources of funding. Generally, the value of land contributions and

[4] This term represents the value of donated property. No dollars actually flow, but, per accounting requirements, the value of the donated land must be recorded.

donations is just the value of the donated land as is not spendable funds. However, in FY 2023/2024, approximately $7 million was a contribution related to a settlement and the funds were spent to acquire lands allowed by the settlement. Also, as this is an aggregate number it may also include contributions to the permanent endowment fund. The average annual revenue from LDMFs is estimated at $30.6 million each year. The state and federal grant funding over the last 3 years is primarily made up of the significant funding in fiscal year (FY) 2023/2024.

Table 6. Revenues/Sources of Funds, Last Three Financial Years

Revenue Category	FY 2021/22 Actuals	FY 2022/23 Actuals	FY 2023/24 Actuals
Local Development Mitigation Fees	$25,987,284	$30,642,486	$35,316,274
State and Federal Grants	$2,068,000	$53,260	$27,390,945,
Contributions & Donations	$3,055,000	$9,422,300	$9,618,789,
Tipping Fees	$3,830,741	$3,665,863	$3,612,874
TUMF	$1,140,435	$1,061,947	$1,276,820
Other Fee Revenue	$1,408,249	$1,593,848	$1,401,894
Other Revenue	$185,881	$531,166	$396,724
Reimbursement for Services	$152,018	$72,956	$324,386
Interest	($1,453,382)	$2,230,294	$5,278,293
Operating Transfers In	$634,467	$1,150,000	$1,015,000
Total	**$37,008,693**	**$50,424,120**	**$85,631,999**

Source: RCA Budget Reports

Table 7 shows the expenditures/uses summary from the RCA financial documents for the 3 most recent financial years. As shown, annual uses of funds have varied significantly, driven primarily by substantially different annual expenditures on habitat acquisition[5]. Over the 3 years, a total of $149.3 million was spent across all cost categories ($49.8 million per year was expended on average), with $119.0 million (over 75% of the total) spent on habitat acquisition. In the last year (FY 2023/2024), about 79.7% of the total 3-year spending ($149.3 million) was on habitat acquisition.

Table 7. Expenditures/Uses of Funds, Last Three Financial Years

Expenditure Category	FY 2021/22 Actuals	FY 2022/23 Actuals	FY 2023/24 Actuals
General Administration	$238,780	$315,635	$153,926
Contracts	$6,861,162	$8,214,453	$8,903,396
Legal Services	$397,770	$335,925	$232,065
Refunds	N/A	N/A	N/A
Rent/Lease Building	$204,421	$207,141	$211,293
Principal Payment	$1,000,000	N/A	N/A
Interest Payment	$3,025	N/A	N/A
Assessments and Fees	$64,797	$65,911	$73,037
Habitat Acquisition	$10,356,433	$18,182,455	$90,498,315

[5] This is the total value of all land acquired, including money spent on purchases as well as the value of donations and dedications. Contributions and Donations (Table 6) are a subset of this larger number.

Expenditure Category	FY 2021/22 Actuals	FY 2022/23 Actuals	FY 2023/24 Actuals
Other Capital Charges	N/A	N/A	N/A
Operating Transfers Out	$634,467	$1,150,000	$1,015,000
Total	**$19,760,855**	**$28,471,520**	**$101,087,032**

Source: RCA Budget Reports

Very high-cost Development Hans acquisitions can be challenging, particularly if they become more frequent. Comparing the recent sources to the recent uses, on average, the RCA is receiving more funds ($57.7 million per year) than it is expending ($49.8 million per year). However, when looking at the actuals for a single year, FY 2023/2024, the RCA's sources of funding came to approximately $85.6 million but their expenses totaled $101.1 million, resulting in a shortfall of $15.5 million. This demonstrates the effect that very high-priced acquisitions can have on the RCA finances and begs the question of how many more very high-cost Development HANS acquisitions the RCA could manage within a few years. Nonetheless, the RCA has been able to maintain adequate fund balances for acquisitions and reserves for acquisitions and operations. Revenue through LDMF has remained strong since FY 2021, and through careful management and state and federal grants over the last five years, the RCA has been able to acquire (and is in the process of acquiring) four very high-priced properties through the Development HANS process. These properties, however, limited the RCA's ability to acquire important habitat through the Non-development HANS process and from willing sellers and to keep pace with reserve assembly goals.

4.6.3 Local Permittee Only Sources and Uses

The financial information shown above in Table 8 and Table 9 reflects all funding sources and uses, including state and federal funding, the value of land contributions, as well as operating transfers in and out. As the purpose of this analysis is to highlight situations where specific revenue or cost categories have differed substantially from the forecasts in the RCA's prior financial and Nexus Studies, we will now constrain our analysis to only Local Permittee revenues (sources) and expenditures (uses).

Table 8. Local Permittee Revenues/Sources of Funds (adjusted)

Revenue Category	FY 2021/22 Actuals	FY 2022/23 Actuals	FY 2023/24 Actuals
Local Development Mitigation Fees	**$25,987,284**	**$30,642,486**	**$30,648,681**
Other Local Sources			
Tipping Fees	$3,830,741	$3,665,863	$3,703,159
TUMF	$1,140,435	$1,061,947	$1,159,734
Other Fee Revenue	$1,408,249	$1,593,848	$1,467,997
Other Revenues (2)	$337,899	$604,122	$554,377
Subtotal	**$6,717,324**	**$6,925,780**	**$6,855,267**
Total	**$32,704,608**	**$37,568,266**	**$37,533,949**

(1) Excludes operating transfers in (consistent with exclusion of operating transfers in, value of contributions and donations, State and federal funding (netted out of expenditures), and interest.
(2) Includes reimbursement for services and other revenues

Table 8 shows the adjusted Local Permittee revenues/sources summary for the 3 most recent financial years. Variations in revenues/sources are more modest in this adjusted table than in Table 6, with fluctuations primarily driven by differences in annual mitigation fee revenues. The 3-year annual average

of Local Permittee revenues/sources is $37.5 million, which includes an annual average of $30.6 million from mitigation fee revenues and an annual average of $6.9 million from other funding sources.

Table 9 shows the adjusted Local Permittee expenditures/uses summary for the 3 most recent financial years. Substantial variations in annual spending are primarily driven by differences in land acquisition spending and increases in contracts spending. Recognizing the annual differences, the 3-year annual average is $38.7 million, which includes an annual average of $29.8 million on Land Acquisition and an annual average of $8.8 million in other annual costs.

Table 9. Local Permittee Expenditures/Uses of Funds (adjusted)

Expenditure Category	FY 2021/22 Actuals	FY 2022/23 Actuals	FY 2023/24 Actuals	Average Annual
Land Acquisition Costs				
Total Land Acquisition	$10,356,433	$18,182,455	$90,498,315	$39,679,068
Minus State/Federal Land Funding	$2,068,000	$53,260	$27,390,945	$9,837,402
Net Local Acquisition Costs (1)	$8,288,433	$18,129,195	$63,107,370	$29,841,666
Admin., Prof Services, Monitoring, and Other Costs (2)				
General Administration	$238,780	$315,635	$153,926	$236,144
Contracts	$6,861,162	$8,214,453	$8,903,393	$7,993,004
Legal Services	$397,770	$335,925	$232,065	$321,920
Rent/Lease Building	$204,421	$207,141	$211,293	$207,618
Assessment and Fees	$64,797	$65,911	$73,037	$67,915
Subtotal Other Costs	**$7,766,930**	**$9,139,065**	**$9,573,717**	**$8,826,571**
Total (1)	**$16,055,363**	**$27,268,260**	**$72,681,087**	**$38,668,237**

(1) State and federal funding for land acquisitions netted out to focus on Local Permittee-funded spending.
(2) Excludes the following costs included in the RCA budget table: operating transfer out; principal and interest payments; refunds and other capital charges.
Source: RCA Budget Reports; EPS

Comparing the average annual Local Permittee sources/revenues to the uses/expenditures, spending is outpacing the funding by about $1 million ($38.7 million in spending compared to $37.5 million in funding). Since the mitigation fee funding is supposed to primarily cover land acquisitions, it is important to compare those sources and uses. Average land acquisition costs were lower than mitigation fee revenues by $0.8 million ($29.8 million on land acquisition spending compared to $30.6 million in mitigation fee funding). The remaining funding sources are primarily dedicated to administrative and monitoring and land management costs but fell short by almost $2 million ($8.8 million in annual costs compared to $6.9 million in non-mitigation fee funding sources).

4.6.3.1 Comparing Recent Local Permittee Sources and Uses to Previous RCA Forecasts

The 2020 Nexus Study estimated the overall average annual sources (revenues) that would be required to cover the forecasted average annual uses (costs). Substantial differences between the average adjusted RCA sources and uses over the last 3 years and the forecasts in the 2020 Nexus Study could indicate additional funding challenges if they cannot be explained by temporary factors. It is important to note that the 2020 Nexus Study numbers are in 2019 dollars and have not been inflated to compare directly with the RCA averages using 2021–2024 dollars.

Table 10. Average Annual Uses of Funds (Nexus Study and Recent RCA)

Revenue Category	2020 Nexus Study (2019 dollars)	Recent RCA Avg. Annual	Recent as % of Nexus Study
Local Development Mitigation Fees	**$36,832,825**	**$30,648,681**	
Minus Allocations to Endowment Fund (15%)	$6,541,714	$4,597,302	
Net Local Development Mitigation Funds	**$30,291,111**	**$26,051,379**	**86%**
Other Local Services			
Tipping Fees	$3,986,326	$3,703,159	
TUMF	$979,637	$1,159,734	
Other Fee Revenue	$1,192,225	$1,467,997	
Other Revenues (2)	$693,341	$554,377	
Subtotal	**$6,851,529**	**$6,885,267**	**100%**
Total Funding (non-endowment)	**$37,142,640**	**$32,936,646**	**89%**

Source: RCA Budget Reports; 2020 Nexus Study; EPS

Table 10 compares the adjusted average annual RCA revenues (Local Permittees only) over the last 3 years with the annual revenues assumed in the 2020 Nexus Study. As shown, a portion of the LDMF revenues are now allocated to the Endowment Fund with the net local funding sources comprising the remaining mitigation fee revenues and the other funding sources. These total net local funding sources were intended to cover the total annual local costs. As shown, average net annual total revenues of $32.9 million are short of 2020 Nexus Study expectations of $37 million and represent about 89% of the estimated required net local funding from Nexus Study.

Importantly, the level of net local funding ($32.9 million) is well below the local annual expenditure of $38.7 million. This underfunding is driven by the total mitigation fee revenue collection that has averaged $30.6 million compared to the expected $36.8 million (before allocation of revenue to endowment) as well as the large amount spent on land acquisition in FY 2023/2024. Those purchases were offset by the use of fund balance. Other local funding sources have provided similar funding to that expected in the 2020 Nexus Study. As a result, additional funding will be required from increased mitigation fees or other sources, even if MSHCP implementation costs do not increase (which they will).

Table 11. Average Annual Uses of Funds (Nexus Study and Recent RCA)

Expenditure Category	2020 Nexus Study (2019 dollars)	Recent RCA Avg. Annual
Land Acquisition Costs (Local)	$27,854,441	$29,841,666
Other Costs		
RCA Staff	$2,288,495	
Professional Services & Supplies	$1,466,062	
Management	$2,267,546	
Monitoring	$1,389,786	
Land Transaction Costs	$1,392,722	
Other Costs	$483,587	
Subtotal Other Costs	**$9,288,198**	**$8,826,571**
Total (1)	**$37,142,639**	**$38,668,237**

(1) Excludes the required endowment fund investment which is netted out of Local Development Mitigation Fees in the sources/revenue table.

Table 11 compares the adjusted average annual RCA costs (Local Permittees only) over the last 3 years with the estimated costs assumed in the 2020 Nexus Study. Because the RCA Budget Reports and the Nexus Study provide different subcategories, it is necessary to compare subtotals of costs. As shown, the average annual expenditure on land acquisitions over the last 3 years by the RCA of $29.8 million is likely to be similar to that assumed in the 2020 Nexus Study of $27.8 million (once inflation is accounted for). However, as described in the Land Value Analysis, this level of spending has not been achieving the assumed level of land acquisition in terms of acres. As a result, if the recent cost per acre of land acquired does not moderate, additional revenues will be required to fund the required amount of land acquisition.

The recent other use costs (excluding endowment) are similar to those estimated in the 2020 Nexus Study. However, non-land costs have been steadily increasing over the last 3 years. Some of this increase is related to a required increase in the allocation of funding to MSHCP program oversight and management to ensure it is implemented consistently with the required MSHCP processes and procedures. RCA staff has also indicated that there is likely to be an increase in the costs of management and monitoring due to inflation in the coming years and the expanding size of the RCA reserve (i.e., more land to manage and monitor).

Overall, increasing per-acre land acquisition costs and numbers of required acquisitions, increasing program management and oversight costs, and pending increases in management and monitoring costs are all expected to push MSHCP implementation costs higher.

4.6.4 Mitigation Fee Examination

Given the importance of mitigation funding and the observation that it has fallen short of the expectations of the Nexus Study, this section explores the reasons for this recent "underfunding." Annual mitigation fee revenue generation is based on 1) the level of development in that year; and 2) the mitigation fee levels. This section reviews the data on the amount of fee-paying development and the mitigation fee revenue.

Table 12. Development Forecast Comparisons

Development Type/Fee Category	2020 Nexus Study	FY22	FY23	FY24	Annual Average
Residential (Units)					
Low	6,125	4,506	3,878	5,467	4,617
Medium	1,750	566	741,	973	760
High	875	1,238	2,881	3,512	2,544
Total Units	**8,750**	**6,310**	**7,500**	**9,952**	**7,921**
Commercial/Industrial (Acres)					
Non-Res. Acres	**693**	**573**	**554**	**332**	**487**

As shown in Table 12 , the average development in FY 2022, FY 2023, and FY 2024 was below the average annual amount of development forecast by the 2020 Nexus Study. The average annual residential development during these 3 years was 7,921 units, which is below the 8,750 units forecast. In addition, these data show a recent shift towards higher-density forms of development, which pay lower fees. These two factors combined explain why mitigation revenues were below expectations in FY 2023 and FY 2024

and further explain the lower fee revenues in FY 2022. Finally, the level of commercial/industrial development averaged 487 acres, which was also below the forecasted 693 acres, which further reduced the level of revenue generation.

Table 13. Annual Fee Revenue Comparisons

Development Type/Fee Category	2020 Nexus Study	FY22	FY23	FY24	Annual Average
Residential Development	$25,502,266	$17,048,414	$19,179,182	$27,976,399	$21,401,332
Average Per Unit Developed	$2,915	$2,702	$2,557	$2,811	$2,702
Commercial/Industrial Development	$11,336,094	$8,119,861	$9,849,719	$6,331,659	$8,100,413
Average per Acre of Development	$16,358	$14,170	$17,764	$19,066	$16,649
Total	$36,838,360	$25,168,275	$29,028,901	$34,308,058	$29,501,745

As shown in Table 13, the 2020 Nexus Study identified the need for an estimated $36.8 million annually from LDMF revenues to provide sufficient funds for MSHCP implementation and endowment investment. The new residential development was expected to provide $25.5 million in average annual mitigation revenues and commercial/industrial development about $11.3 million annually. However, in FY 2022, FY 2023, and FY 2024 both residential and commercial/industrial development fees fell short of expectations. There are two reasons for this outcome. One, in FY 2022, the mitigation fee levels were still being incrementally increased, and the level of residential and commercial/industrial was below the forecast. Two, in FY 2023 and FY 2024, the mitigation fee levels were as established in the 2020 Nexus Study (with inflation adjustments) though the development levels remained below the forecast levels, and the mitigation revenue collected per unit was also lower due to the stronger than expected proportion of high-density residential development.

Moving forward, a key question is whether the types and amounts of development, seen from FY 2022 through FY 2024 reflect a better forecast for the future than the 2020 Nexus Study. If this level of lower development and the shift to higher-density development are expected to continue, upward adjustments in the mitigation fee levels or other sources of funding will be necessary to ensure revenues can cover the necessary MSHCP implementation costs.

4.7 Comparison of the MSHCP with other NCCPs/HCPs

Among the HCPs analyzed, the MSHCP covers the greatest number of species, the largest plan area, and the most planned development by a considerable margin. Covering such a large number of species, over such a large area, for so much development is a huge task and presents challenges. However, the Plan also has one of the lowest ratios of mitigation acres to development acres and reserve area to plan area, which provides a compelling value proposition for developers and their proponents. To put it simply, this means that the Plan offers an excellent cost-benefit alignment where the benefits to developers outweigh the costs compared to other plans.

Nevertheless, the MSHCP is a challenge to implement. The flexibility of MSHCP's Reserve Assembly process is reduced by prescribed conservation criteria for specific areas within the Plan Area. These

criteria prescribe how much of each land cover type must be added into the reserve to meet the biological goals and objectives for the Plan. Other plans have more options of land to choose from to assemble their reserves and most are not required to make a purchase within a specific amount of time, as dictated through the development HANS process (see below).

Another factor that makes the MSHCP a challenge to implement compared to the other plans is the connectivity requirement of the reserve. The MSHCP's reserve design requires a high level of connectivity compared to the other plans, which limits potential decisions about whether or not to buy parcels proposed for development. In contrast, the other plans do not have nearly as many habitat linkages.

An added dimension of the challenge for implementing the MSHCP compared to the other plans is the use of the HANS Process. When a private landowner wants to develop their property and that property's criteria prevent take authorization, the HANS Process is deployed if a Criteria Refinement is not pursued. The MSHCP is required to use the HANS Process to help protect private property land ownership rights when take authorization cannot be extended and the parcel is needed to contribute to the reserve design. The only other plan that has a HANS Process is Coachella Valley, and they limit its use to one rare ecosystem type. All other land acquired through that plan and the others is purchased from willing sellers.

A further contributing element of the challenge of implementing the MSHCP is the conflict in certain areas between zoning designation and areas described by the MSHCP for conservation. While a large amount of the Criteria Area is zoned consistent with conservation, there is a minority of properties that are inconsistently zoned. These inconsistently zoned properties have an outsized effect on the MSHCP acquisition costs, see sections 4.5 and 4.6 above. The other plans with which the MSHCP was compared have undertaken efforts to align their zoning with the plan reserve design to help ensure Reserve Assembly.

Finally, comparison of fees, fee structure, and other methods for accomplishing development revealed few differences. Three out of the four plans used developer mitigation fees, whereas the fourth plan used developer responsible mitigation (where the developer pays for and implements the mitigation themselves). For the plans with fees, we found that the fees did not vary significantly per acre when accounting for the variation in land costs in each plan area. It is worth noting that a similar, recently permitted HCP/NCCP (in 2020) not evaluated here, the Western Placer County Conservation Plan (PCCP), has considerably higher local development mitigation fees ($30,440/acre for FY 24/25) in the portion of the plan area where most commercial and residential development is expected to occur. The estimated per acre cost of land used to develop the PCCP mitigation fee ranged from $7,685 - $13,250 depending on the habitat type of the land.

While the MSHCP offers a uniquely favorable cost-benefit ratio for developers, covering the most species, largest area, and greatest development potential with a relatively low mitigation burden, it has been difficult to implement. This difficulty arises from the relatively low amount of flexibility in the Reserve Assembly process, stringent connectivity requirements, reliance on the HANS Process, lack of alignment between local zoning and conservation priorities compared to the other HCPs, and underfunding, as described in Sections 4.5 and 4.6. Despite these implementation challenges, the MSHCP delivers substantial value to the development community, making it a powerful but demanding conservation tool.

Chapter 5
Recommendations

5.1 Recommendations Overview

The SIAAP represents a comprehensive evaluation of both current implementation challenges and potential changes to improve the implementation of the MSHCP. Our assessment examined all feasible alternatives, including the possibility of a formal Plan amendment. After careful consideration, we conclude that the core issues at hand are fundamentally financial in nature and will not be resolved through an amendment alone. Instead, the most effective course of action is to strengthen implementation within the current Plan framework.

Currently, Permittees operate under highly favorable conditions established by the Plan. The mitigation requirements are unusually low, with a ratio of approximately 0.2 acres of mitigation required for every acre of development. At the same time, the Plan provides high allowances for take. In this context, Permittees enjoy substantial regulatory flexibility and economic benefits, yet these advantages are often underappreciated or misunderstood by both the Permittees and key stakeholders.

Regional HCPs, including this one, offer significant economic and operational benefits across sectors. For developers, the HCP provides a consistent and predictable permitting framework, replacing the more fragmented and uncertain project-by-project approach. This predictability translates into faster approvals, allowing development timelines to be shortened by several months to years, an outcome that often leads to millions of dollars in savings. Moreover, the HCP reduces compliance costs through standardized mitigation requirements, which is especially beneficial for large-scale development projects.

Infrastructure planning also benefits significantly under the regional HCP. By including major public works, such as transportation corridors and water infrastructure, as covered activities, the MSHCP removes key regulatory obstacles that often delay project delivery. This was clearly illustrated in Western Riverside, where more than $2.2 billion in infrastructure projects advanced under the MSHCP, avoiding an estimated $278 million in delay-related costs.[6]

Public agencies, both local and regulatory, experience improved efficiency through the streamlined permitting and reduced administrative burden provided by the Plan. For state and federal wildlife agencies, the shift away from individual permit review results in substantial savings in staff time. Local jurisdictions also gain more control over permitting processes, and the ability to better integrate conservation with broader land use and transportation planning goals.

Despite these clear benefits, some have considered whether amending the Plan might offer a more direct solution to current challenges. However, there is no single, straightforward fix to the issues the Board is facing, and a Plan amendment is not a simple or guaranteed solution.

Amending the Plan would require broad consensus among 18 Permittees, along with the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS). The process

[6] Economic & Planning Systems Inc. 2014. "Economic Effects of Regional Habitat Conservation Plans." Accessed April 18, 2025. https://www.nhcpcoalition.org/wp-content/uploads/sites/12/2018/05/Economic-Benefits-White-Paper-CHCPC.pdf.

would also trigger a lengthy and complex environmental compliance process, including new formal findings under the NCCP Act, ESA, CEQA, and National Environmental Policy Act (NEPA).

Even if such an amendment that meets regulatory permit issuance criteria could be negotiated, the likely outcomes are not necessarily favorable. An amendment would likely lead to increased mitigation ratios, reduced take allowances, and stricter implementation standards. Developing an amendment would also impose substantial financial and administrative costs, requiring considerable staff time and legal resources. Furthermore, many of the same cost challenges, such as acquiring high-value properties, would remain. These issues are not new, and the Plan has addressed them in the past. All high-cost properties identified in previous years were or will be completely acquired within 4 years, and every acquisition aligned with the original reserve design. The Plan does not provide acquisition options based on property cost, but it has proven resilient and adaptive within its current structure.

Based on this analysis, our primary recommendation is to focus on fully utilizing the tools already available under the existing Plan. We advise that all strategic improvements be explored and implemented within the current framework before considering an amendment. This includes acting on the opportunities identified in this document, monitoring their effectiveness over time, and making data-informed adjustments as needed. If, in the future, specific solutions are identified that cannot be implemented without amending the Plan, then an amendment may be pursued as a second step.

Looking forward, a Plan amendment remains an option but only after all internal improvements have been maximized. The following sections of this report outline a series of actionable strategies designed to improve implementation effectiveness under the existing Plan and ensure that the regional HCP continues to deliver long-term environmental and economic value.

5.1.1 Strategic Improvements Within Existing Plan Authority

This section outlines a series of recommended strategic improvements that can be implemented under the current authority of the Plan. These actions aim to strengthen financial sustainability, improve flexibility in Reserve Assembly, and enhance land acquisition outcomes without requiring a formal amendment to the MSHCP.

5.1.1.1 Strengthen Funding and Cost Management

Under Section 10(a)(1)(B) of the ESA, non-federal entities may receive an ITP if they develop an HCP that meets specific issuance criteria. One key requirement is that the plan must be “fully funded” to ensure its successful implementation. According to the implementing regulations at 50 Code of Federal Regulations § 17.22(b)(2)(iii)(B), the USFWS must find that the applicant will “ensure that adequate funding for the plan will be provided.” This means applicants must demonstrate not only that sufficient financial resources are available, but also that mechanisms are in place to guarantee funding throughout the life of the permit. To that end, the MSHCP provides strategies and contingencies for the Permittees to address fiscal constraints (Section 8.6 of the MSHCP and Section 12.3 of the Implementing Agreement).

Successful implementation of the MSHCP depends on securing sufficient funding to support timely acquisition of land and long-term habitat management. Over the past several years, escalating land values, shifts in development patterns, and changes in available funding have created substantial strain on the existing funding framework.

Recent acquisition data show that RCA land purchases have increasingly involved parcels with community development or industrial zoning, which command significantly higher prices than anticipated. Two high-

cost HANS transactions in 2023 alone consumed approximately $68.6 million to acquire 512 acres, driving the average per-acre cost far above expectations. Additionally, the rate of zero-cost dedications has fallen well below initial projections, with many "donations" actually occurring in lieu of mitigation fees.

To address these challenges, several options could be explored:

- **Conduct a Nexus study** using recent land cost data and acquisition trends to develop multi-year projections. These projections would help the RCA anticipate future funding needs.
- **Reevaluate and recalibrate development fee structures** to reflect updated land cost data and revised assumptions about the proportion of land that can be acquired at zero cost. If the current trend of high-cost acquisitions continues, increases in mitigation fees, creation of zones with different fees amounts, or identification of additional funding sources will likely be necessary to ensure financial sufficiency.
- **Pursue new sources of revenue** to supplement LDMF and other fees. These could include a sales tax measure, a bond measure, or public-private partnerships to supplement mitigation fees.
- **Encourage the use of non-monetary compensation strategies** by Permittees, such as density bonuses, streamlined permitting, or flexible development credits, where appropriate, to support conservation without increasing direct expenditures.
- **Diversify state and federal funding sources** by identifying and pursuing new state, federal, and private grant opportunities, with particular attention to programs that support biodiversity, climate resilience, and recreational open space.
- **Analyze appraisals** to determine whether biological constraints are being considered in the valuation of properties. If some appraisals are not considering biological constraints on the development of a property, including presence of endangered species or their habitats, consider updating the RCA appraisal guidance to ensure consistent fair market valuation, with consideration of biological constraints. The RCA may want to consider working with appraisal professionals and agency partners to develop appraisal review standards that more accurately reflect the regulatory and biological context of acquisition parcels, if necessary.
- **Align land use zoning designations and the reserve design** by encouraging cities and the County and respective planning commissions to better align general plan and zoning designations MSHCP conservation areas.

These steps could improve the financial sustainability of the MSHCP, enhance RCA's ability to acquire high-priority lands in a timely manner, and ensure that Reserve Assembly proceeds in a manner consistent with the Plan's goals and permit obligations.

5.1.1.2 Improve Reserve Assembly Flexibility

The success of the MSHCP depends on assembling a biologically and ecologically effective reserve that achieves the Plan's conservation goals while retaining the flexibility to adapt to changing land use conditions. Although the MSHCP was originally designed to allow for flexibility in how the reserve is assembled, in practice, this flexibility has diminished over time. This loss of flexibility is now one of the most significant barriers to efficient and cost-effective Reserve Assembly.

Reserve Assembly was intended to be guided by a landscape-scale strategy, using the CRD to define broad conservation priorities across core and linkage areas. Specific criteria for each 160-acre cell or cell group provide detailed guidance, including conservation targets, habitat requirements, and configuration goals.

However, as Plan implementation has progressed, flexibility has eroded due to several factors. Many planning decisions early in implementation opted for the lower end of conservation target ranges, leaving fewer options for future acquisitions. In some locations, high levels of existing development and previous development authorizations further reduced the available land base. In these areas, the remaining parcels available for conservation are often small, fragmented, or of significantly higher cost.

Additionally, the Criteria Refinement process, originally envisioned as the primary tool to adjust conservation priorities and respond to site-specific constraints, could have been used more frequently. To further strengthen implementation, the RCA should pursue opportunities to expand flexibility in how reserve lands are assembled. We recommend the development of a proactive Reserve Assembly strategy using replacement lands to facilitate Criteria Refinements. Under this concept, the RCA could purchase replacement parcels in advance of development proposals, similar to the operation of a private mitigation bank, using either increased development fee revenues or external grant funding. These lands would be identified and evaluated in advance for potential biological and ecological equivalency for use in future Criteria Refinements. Finding and acquiring biologically equivalent or superior habitat that is not described by the MSHCP for conservation is the primary factor limiting the utility of the CRP. If the RCA could acquire and bank suitable land that meets Criteria Refinement requirements, the RCA could dramatically reduce the primary constraint limiting the utility of Criteria Refinement and provide more flexibility to the Reserve Assembly process.

This strategy would require the development of a robust tool or framework for identifying and vetting candidate replacement lands. This tool should ensure that such lands meet defined standards for location, habitat type, species value, and ecological function. Tracking systems would also need to be established to reserve and manage these properties until they are assigned to a qualifying development project.

Policy flexibility would be required to allow developers to use these pre-acquired lands for mitigation purposes, by coordinating Criteria Refinements as part of the JPR Process. In this scenario, the RCA could complete the necessary Criteria Refinements in partnership with applicants, further streamlining approvals and maximizing conservation outcomes.

To further address Reserve Assembly constraints and restore a greater degree of flexibility to the Reserve Assembly process, the following strategies could be considered:

- **Proactively identify and acquire areas for potential Criteria Refinements**, especially where conservation targets appear infeasible or prohibitively costly based on available land and recent development patterns. This could allow the RCA and Permittees to secure potential opportunities before specific projects arise.
- **Conduct property appraisals earlier in the permitting process** to give the RCA and Permittees the opportunity to evaluate potentially costly parcels for potential Criteria Refinements before making JPR findings. This would provide information to Permittees to determine, in those unique circumstances, when acquisition is not cost-effective and land is readily available for a Criteria Refinement. This would enable the Permittee to extend incidental take authorization.
- **Restore habitat**, particularly rare types like RAFSS, to help meet rough proportionality requirements and increase future development flexibility for Permittees. This approach can increase the amount of RAFSS habitat within the reserve, reducing the need to purchase costly parcels in the Criteria Area solely to maintain rough proportionality.

Together, these actions could help the RCA and Permittees better navigate Reserve Assembly challenges and adapt the Plan to changing conditions without undermining the biological integrity of the reserve or the commitments established through the MSHCP.

5.1.1.3 Increase Support for and Commitment to the MSHCP

A successful MSHCP depends not only on streamlined permitting benefits but also a clear conservation strategy with adequate funding and support from Permittees, elected officials, stakeholders, developers, and the public. One contributing factor is the perception that the MSHCP is primarily a regulatory requirement imposed by the RCA or the Wildlife Agencies, rather than a tool that delivers long-term benefits to the Permittees themselves. As a result, the conservation goals of the Plan may be seen as secondary to project streamlining, with limited attention given to the full range of implementation responsibilities.

Consistent and proactive engagement by the Permittees in Plan implementation is crucial for the success of the MSHCP. Even though all local jurisdictions are Co-Permittees and share legal responsibility for implementing the Plan, there are signs that many Permittees have become disengaged from implementation or lack a strong sense of ownership of the MSHCP. For example, Permittees do not always align general plans and zoning with the MSHCP's CRD, which increases both the cost and complexity of land acquisition. Inconsistent application of Plan procedures, lack of alignment between local land use policies and the reserve design, and limited participation in Plan governance all point to a need for renewed Permittee engagement.

To help address these issues, the RCA could revise its training and outreach strategy to place greater emphasis on the advantages of the Plan. The MSHCP offers substantial permitting benefits by streamlining compliance with the ESA, CESA, and CEQA. It reduces the need for individual consultations, provides legal certainty, and supports regional infrastructure development. These benefits can be more clearly communicated to Permittee staff, elected officials, stakeholders, developers, and the public to foster greater appreciation for the Plan's value. RCA training programs could be updated to go beyond JPR mechanics and address how the Plan protects permittees from legal and procedural risks associated with species protection regulations. Training should also include guidance for Permittee staff who directly engage with developers requesting take authorization to equip Permittee staff with messaging and resources to explain the Plan's benefits, helping to improve permit-level communication and reinforce support.

The RCA may also want to develop communications materials to the public that highlight the Plan's public and environmental benefits, such as protected open space, public access and recreation, water quality protection, and contributions to regional climate resilience. To that end, the RCA should consider increasing the outdoor recreational opportunities in the MSHCP reserve. This is beyond the scope of the RCA but could happen through partnerships with cities and the County's parks and opens space departments as an important tool in engaging and educating the public to appreciate the value of the MSHCP. This could help emphasize the recreational and quality-of-life benefits provided by conserved lands, helping to broaden public support and build community pride in the MSHCP. Together, these efforts could support public understanding and appreciation of the Plan and result in an increase in political support for its implementation. In turn, this could reinforce the importance of Permittee participation and support elected officials in aligning local policies with the MSHCP.

To improve understanding of and appreciation for the MSHCP, the RCA should consider hiring outreach staff with a technical background in conservation and environmental science. Communication staff with a

conservation and environmental science background will be able to present the great benefits of the reserves and natural history of the Covered Species and their habitats.

To promote more consistent implementation, the RCA could consider establishing a reporting framework to track basic metrics of Permittee participation and compliance. These metrics might include project-level JPR processing, timely fee conveyance, land dedications, and land use consistency with the Plan. Such a framework could help identify implementation gaps, target technical support, and provide a basis for discussions about performance. Where needed, the RCA and Wildlife Agencies could use this information to guide future improvements or support corrective action. However, the focus should remain on collaboration, capacity building, and mutual accountability.

To address these constraints and increase Permittee commitment to the Plan, to improve implementation, the following strategies could be considered:

- **Incorporate Permittee-owned lands into the MSHCP reserve** to increase Reserve Assembly flexibility and reduce acquisition costs. Lands already described for conservation can be easily added to the ARL, while other Permittee-owned parcels can be contributed through Criteria Refinements, decreasing reliance on costly private acquisitions.
- **Align zoning designations with the reserve design** by collaborating with Permittees to adjust zoning designations over time or maintain zoning designations when they align with the MSHCP conservation strategy.
- **Promote non-monetary incentives for developers**. The RCA could also encourage the use of non-monetary incentive strategies by Permittees, such as density bonuses, streamlined permitting, or flexible development credits, where appropriate, to support conservation without increasing direct expenditures.
- **Update the cost-benefit analysis of the Plan** to demonstrate the Plan's economic and regulatory advantages to support a broader outreach and education campaign. The last analysis was completed in 2014, and renewing this effort will provide a foundation to clearly communicate the Plan's long-term value. This would help build understanding and public support for the Plan by demonstrating its purpose and long-term value.

By reinvigorating engagement with Permittees and reinforcing shared ownership of the MSHCP, the RCA can help ensure that the Plan continues to function as a reliable, efficient, and forward-looking conservation and development tool.

5.2 Changes Not Recommended at This Time

Throughout the course of the SIAAP, several additional potential changes to the MSHCP were considered, including major structural or regulatory revisions. While some of these ideas addressed real challenges or frustrations with Plan implementation, they would require significant changes to the Plan's foundational structure or legal framework and are not recommended at this time. In many cases, these proposals would introduce additional risk, cost, or complexity without offering clear or feasible solutions to the most pressing challenges. Instead, the recommended strategy is to pursue internal improvements within the current Plan framework, monitor their effectiveness, and revisit other structural options only if necessary.

A major amendment could be undertaken to address the problems that currently face the RCA. The main purpose of the amendment would be to reimagine the reserve design (see Appendix A, Section A.3.1, *Reimagine the Reserve Design*). Additionally, changes could be made to ensure the necessary amount of mitigation for the Covered Species is taking place.

Undertaking a major amendment must be carefully considered as doing so would require renegotiating the mitigation in exchange for take authorization with the federal and state Wildlife Agencies, for compliance with both the ESA and the California NCCP Act. It is important to acknowledge that the NCCP Act does not have guidelines for how to do an amendment, which will increase the complexity of undertaking one. In addition, a major amendment would require CEQA and NEPA review.

In order to meet permit issuance criteria, Permittees will likely need to give additional concessions (e.g., add more conservation and/or restoration). These concessions could be significant (e.g., a decrease in take allowance, increase in conservation to development mitigation ratio, or both). If restoration is required, the costs could be extremely expensive. The land for conservation may need to be acquired upfront, to provide the Wildlife Agencies with sufficient assurances, resulting in significant commitment and financial investment from the Permittees.

The following concepts were evaluated but are not included in the current set of recommendations:

- **Initiating a Plan amendment** could theoretically allow for greater reserve design flexibility or policy updates, however, the process is lengthy, complex, and politically difficult. An amendment would require unanimous agreement among 18 Permittees and concurrence from both CDFW and USFWS. It would also trigger full environmental review under CEQA, NEPA, the NCCP Act, and ESA. Even if an amendment could be successfully adopted, the likely outcome would include stricter permitting conditions, increased mitigation ratios, and reduced take allowances. Given these constraints, a Plan amendment is not recommended unless all internal strategies are exhausted, and a critical issue remains unresolved.
- **Eliminating or overhauling the HANS Process** is not recommended because the process is deeply embedded in the Plan's approach to ensuring fairness, legal defensibility, and Reserve Assembly consistency. Simply eliminating HANS without a larger amendment to the reserve design would not resolve core challenges. Instead, this report recommends actions to reduce reliance on high-cost HANS acquisitions by increasing Reserve Assembly flexibility and improving Permittee coordination.
- **Redefining core and linkage boundaries** is not suggested because such a change would require a major Plan amendment. Many of the Plan's regulatory assurances and biological goals are tied to these boundaries. This report instead recommends maximizing flexibility through improved interpretation and refinement of the criteria that define Reserve Assembly priorities within those boundaries.
- **Requiring applicants to demonstrate project viability** early in the permitting process is not advisable. This could involve coordination with Permittee planning departments to establish policies that define and verify "legitimate" development projects. However, it will be difficult to impossible to determine the intent of the landowner.

In all cases, these deferred options could be revisited in the future if improvements within the existing Plan authority prove insufficient. However, at this stage, they are not recommended as a first choice due to legal complexity, cost implications, or implementation challenges. The SIAAP recommends making the most of existing Plan tools and restoring flexibility, engagement, and financial sustainability through practical, achievable actions.