

The Economics of Land Use



Final Report

Western Riverside County Multiple Species Habitat Conservation Plan Nexus Fee Study Update

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Western Riverside County Regional Conservation Authority

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1. INTRODUCTION AND KEY FINDINGS

This Updated Nexus Study (2020 Nexus Study) provides the technical justification for changes to the Local Development Mitigation Fee schedule that applies to Local Permittee participants in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP or Plan). These changes are necessary to ensure adequate funding of the obligations of the Local Permittees under the MSHCP and the associated Incidental Take Permit and Implementing Agreement. The resulting increased fee revenues will support the continued implementation of the MSHCP and the streamlining of endangered species incidental take permitting for new Western Riverside County development provided under the MSHCP. This Nexus Study is consistent with the requirements of California Government Code 66000 et seq. (the Mitigation Fee Act) that requires specific findings (as well as administration and implementation procedures) for “any action establishing, increasing, or imposing a fee as a condition of approval of a development project by a local agency.”

Background

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP or Plan), originally adopted in 2004, is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on the conservation of species and their associated habitats in Western Riverside County. The MSHCP was developed in response to the need for future growth opportunities in Western Riverside County while addressing the requirements of the State and federal Endangered Species Acts. The MSHCP serves as an HCP pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 as well as a Natural Communities Conservation Plan under the NCCP Act of 2001. The MSHCP streamlines these environmental permitting processes by allowing the participating jurisdictions to authorize “take” of plant and wildlife species identified within the Plan Area. At the same time, Plan implementation provides a coordinated MSHCP Conservation Area and implementation program to preserve biological diversity and maintain the region’s quality of life.

The MSHCP and the associated Implementing Agreement and Incidental Take Permit collectively determine a set of conservation actions that must be taken to meet the terms of the Incidental Take Permit and benefit from the regulatory streamlining and other benefits of the MSHCP. This includes the identification of the responsible parties, including the responsibilities of the Local Permittees.¹ One of the key requirements of the MSHCP, Implementing Agreement, and Incidental Take Permit (consistent with the requirements of the federal Endangered Species Act) is the provision of adequate funding by Local Permittees to the Implementing Entity (the Western Riverside County Regional Conservation Authority²) to conduct their portion of the conservation actions identified in the MSHCP.

¹ Local Permittees include the Western Riverside cities, the County of Riverside, County Flood Control and Water Conservation District, County Regional Park and Open-Space District, County Department of Waste Resources, and Riverside County Transportation Commission.

² The Western Riverside County Regional Conservation Agency is a Joint Powers Authority established in 2004 to implement the MSHCP.

Section 8.0 of the MSHCP outlines the MSHCP funding/financing approach. It also identified best estimates of Plan implementation costs at the time of Plan adoption, including the local funding commitment that represents a portion of the overall land acquisition, management and monitoring, and Plan administration costs. The Local Funding Program included a mix of funding sources to provide “an equitable distribution of the cost for local mitigation under the MSHCP.” The proposed funding sources included Local Development Mitigation Fees (and land dedications), regional infrastructure project public contributions (including contributions to mitigate for transportation infrastructure, regional utility projects, local public capital construction projects, and regional flood control projects), and landfill tipping fees.

Participating cities and the County were each required to implement a Local Development Mitigation Fee under California Government Code Section 66000 et seq. (the “Mitigation Fee Act”) and supported by the separate “Final Mitigation Fee Nexus Study Report for the Western Riverside County Multiple Species Habitat Conservation Plan,” July 1, 2003 (Original or 2003 Nexus Study). The MSHCP funding chapter notes the need for frequent evaluations of the performance of the funding mechanisms and assessments of the funding plan and the need to make any necessary modifications to the funding mechanisms. The MSHCP also notes that the mitigation fee will need to be “reevaluated and revised should it be found to insufficiently cover mitigation of new development.”

In addition to the common practice of updating mitigation fees periodically to account for changing circumstances, the Western Riverside County Regional Conservation Authority (RCA) has determined that significant changes have occurred and/or circumstances have arisen that justify an update to the mitigation fees. These changes include, but are not limited to, the following:

- The need to acquire more land than originally forecast due to the lower than expected land dedication.
- The lower-than-expected levels of non-fee funding from local and regional funding sources.
- The lower than expected levels of residential development.
- The need to diversify land acquisitions away from a focus on the larger, more remote parcels to also acquiring parcels closer to urbanized areas, consistent with the reserve assembly requirements of the MSHCP.

Original and Existing Fee Schedule

All local jurisdictions participating in the MSHCP and obtaining coverage for public and private take in their jurisdictions were required to adopt and implement the 2004 Mitigation Fee Schedule through ordinance and resolution and then to pass through the fee funding (except for any additional administrative charges added by the jurisdictions) to the RCA to fund MSHCP implementation. The ordinances allowed for periodic inflationary increases based on the annual change in the Consumer Price Index for the Los Angeles-Anaheim-Riverside area. In 2018 the Bureau of Labor Statistics implemented a geographic revision, establishing Riverside as its own Core Based Statistical Area. As a result, Riverside was removed from the Consumer Price Index encompassing Los Angeles and Anaheim. Going forward, inflationary increases will be based on the annual change in the Consumer Price Index for the newly established Riverside-San

Bernardino-Ontario area. As outlined in the 2003 Nexus Study (Original Nexus Study), all new development in Western Riverside County is required to pay the mitigation fee.

Table 1 shows the original 2004 Local Development Mitigation Fee schedule and the current 2021 Fee Schedule that reflects periodic inflationary fee adjustments using the indexing process that collectively increased the fees by 35 percent between 2004 and 2020 (this was below the overall inflation index increase over this period).

Table 1 2004 and 2021 MSHCP Fee Schedule

Fee Category	2004 Fee per unit or per acre	2021 Fee per unit or per acre ³
Residential: Up to 8.0 dwelling units per acre (DUAC)	\$1,651	\$2,234
Residential: 8.0-14.0 DUAC	\$1,057	\$1,430
Residential: 14.0+ DUAC	\$859	\$1,161
Commercial (per acre)	\$5,620	\$7,606
Industrial (per acre)	\$5,620	\$7,606

Updated Mitigation Fee Schedules

This 2020 Nexus Study has estimated the increased fee level that would be required to provide sufficient revenues, based on the best available forecasts of future growth, to support the full implementation of the MSHCP, including the completion of all land acquisition and the establishment of the necessary endowment, by 2029 (Year 25 of Plan implementation).⁴ Because, as shown below, this would require a major increase in the fee levels, three other scenarios are also considered where different time extensions provide more time for land acquisition.⁵ These extensions allow for the costs of Plan implementation (including land acquisitions) to be spread across more development and, as a result, moderate the level of mitigation fee increase required. In addition, the longer extension scenarios require a pace of land acquisition that is more consistent with what has proven to be achievable. All of these fee

³ Note it is RCA procedure to refer to fees during, for example, Fiscal Year 2020/2021, as the 2021 fee. The 2021 fee became effective July 1, 2020, and applies for the fiscal year of 2020-21 (i.e., until June 30, 2021 when the 2022 Fee begins).

⁴ The MSHCP provided a 25-year period of the required land acquisition with the larger 75-year permit term. This is labelled the “No Extension” or “Baseline Scenario” in this Update Study.

⁵ The baseline scenario as well as the extension scenarios assume that all land acquisition as well as the full endowment will be completed/ established by the end of the specified implementation/ land acquisition period. Interest from the non-depleting endowment will fund all ongoing costs thereafter.

increases would be consistent with the Mitigation Fee Act and the MSHCP and associated Incidental Take Permit and Implementing Agreement.

The mitigation fee levels shown for each extension scenario are the fee levels required to cover the appropriate portion of the Local Permittee MSHCP implementation costs based on the best information available at this time. The revised mitigation fee levels reflect changes in estimated costs, expected levels of land dedication, and non-fee funding. Consistent with the MSHCP and Original Nexus Study, it is assumed that all new development in Western Riverside County will pay the mitigation fee because, as noted in the MSHCP, “new development affects the environment through construction activity and cumulatively through population bases that result from such development.”⁶ Importantly, the revised mitigation fee levels also reflect the decision to determine the mitigation fee that applies to different land uses on a consistent per gross acre basis. This approach is considered to provide a clear, consistent, and proportionate method for determining mitigation fees on new development.⁷ The 2020 Nexus Study does convert the overarching per gross acre fee into per unit residential fees for different density ranges; this conversion was conducted to provide implementation/administrative consistency for member jurisdictions.

Table 2 Updated MSHCP Implementation Costs and Per Acre Mitigation Fees

Fee Per Acre	No Extension	5-Year Extension	10-Year Extension	15-Year Extension
Net Cost	\$912,756,583	\$902,353,150	\$892,767,438	\$883,987,805
Acres of Development				
Residential	14,026	21,818	29,611	37,403
Nonresidential	<u>6,239</u>	<u>9,705</u>	<u>13,171</u>	<u>16,637</u>
Total	20,265	31,523	42,782	54,040
Mitigation Fee per Acre	\$45,041	\$28,625	\$20,868	\$16,358

Sources: Southern California Association of Governments; Western Riverside County RCA; Economic & Planning Systems, Inc.

⁶ Consistent with the Original Nexus Study and the technical analysis in this study update (and as described in more detail in the Fee Implementation Handbook), certain types of public improvements/ infrastructure projects will make mitigation payments calculated as a percent of total improvement cost. All projects are required to make a mitigation payment/contribution (except where exempted as specified in the Ordinance); where no mitigation payment process is specified, the project will pay the updated per acre mitigation fee.

⁷ This is the approach taken by the majority of regional Habitat Conservation Plans in California, including the Coachella Valley Multiple Species Habitat Conservation Plan mitigation fee.

As shown in **Table 2**, the required mitigation fee per gross acre of development varies substantially based on level of extension as follows:

- **No Extension.** Under the current structure, where all land acquisition must occur by the end of Year 25 of MSHCP implementation (2029), a mitigation fee of **\$45,041 per acre** of development would be required.
- **5-Year Extension.** With a 5-year extension, where all land acquisition must occur by the end of Year 30 of MSHCP implementation (2034), a mitigation fee of **\$28,625 per acre** of development would be required.
- **10-Year Extension.** With a 10-year extension, where all land acquisition must occur by the end of Year 35 of MSHCP implementation (2039), a mitigation fee of **\$20,868 per acre** of development would be required.
- **15-Year Extension.** With a 15-year extension, where all land acquisition must occur by the end of Year 40 of MSHCP implementation (2044), a mitigation fee of **\$16,358 per acre** of development would be required.

For residential development, the per gross acre fee is translated into per residential unit fees by density category to provide for a fee framework that is consistent with the current fee structure. The per residential unit fees are calculated by dividing the per gross acre fee by an assumed typical/ average density for each of the three density ranges (low, medium, and high).⁸ The full mitigation fee schedule (for each extension scenario) is shown in **Table 3**, including the per unit residential fees by density category and per gross acre fees for non-residential development. The typical/ average residential densities used to calculate the per-unit residential fees are the same as the density assumptions in the Original Nexus Study.⁹

⁸ For example, the \$3,635 per unit Residential – Low fee under the 15-year extension is derived by dividing the overall per gross acre mitigation fee of \$16,358 (shown in Figure 2) by the assumed typical/average density of Residential Low of 4.5 units/acre.

⁹ The Fee Implementation Handbook provides more specifics on how to determine a project's residential density and therefore the appropriate per unit residential fee that applies.

Table 3 Updated Mitigation Fee Schedule by Extension Scenario

Fee Per Unit	Current Fee 2021 ¹	No Extension	5-Year Extension	10-Year Extension	15-Year Extension
Residential - Low (Up to 8.0 DUAC) ^{2,3}	\$2,234	\$10,009	\$6,361	\$4,637	\$3,635
Residential - Medium (8.0-14.0 DUAC) ^{2,3}	\$1,430	\$4,170	\$2,650	\$1,932	\$1,515
Residential - High (14.0+ DUAC) ^{2,3}	\$1,161	\$1,846	\$1,173	\$855	\$670
Commercial / Industrial (per acre)	\$7,606	\$45,041	\$28,625	\$20,868	\$16,358

1. Western Riverside County Multiple Species Conservation. Local Development Mitigation Fee Schedule for FY 2020-21 (Effective July 1, 2020 – June 30, 2021), annually adjusted using the Consumer Price Index.

2. Per acre mitigation fees translated into per unit fees based on the following residential densities: for low density, 4.5 units per acre; for medium density, 10.8 units per acre; for high density, 24.4 units per acre, consistent with the assumptions used in Appendix E of the original Nexus Study.

3. DUAC stands for Dwelling Units per Acre.

Sources: Southern California Association of Governments; Western Riverside County RCA; Economic & Planning Systems, Inc.

Key Drivers of Fee Change

The change in Local Development Mitigation Fee is the result of a number of different contributing factors (“moving parts”), fully documented and detailed in **Chapters 2** through **7**. This Nexus Study is based on the most current information available including, for some inputs, recent years of experience from MSHCP implementation. The factors that have had the most significant effect on the Local Development Mitigation Fee calculations are summarized below.

1. Lower-than-expected land dedications substantially increase the Local Permittee habitat acquisition cost component of MSHCP implementation. The MSHCP assumed that 41,000 of the 97,000 acres (42 percent) to be conserved by Local Permittee action/funding would be provided at no cost through land dedication associated with development inside the Criteria Cells. Through the first sixteen years of Plan implementation, less than 1,000 acres of the Local Permittee habitat conservation obligations have been generated through these dedications. An additional 10,000 acres of land dedication requirements have been required as part of proposed developments that have yet to occur. Beyond the dedication associated with previously proposed projects, additional land dedication is not expected.¹⁰ As a result, the 2020 Nexus Study assumes the noted 10,000 acres of land dedication is formalized over the next eight years (an average annual land dedication of 1,250 acres per year) prior to the end of the current land acquisition period. No additional land dedication is assumed, even if the acquisition period is extended. As a result, at the end of the current habitat acquisition period (Year 25 of Plan

¹⁰ In September 2016, the RCA revised its fee credit and waiver policy, limiting the likelihood of projects paying fees and dedicating land.

implementation), total land dedication is expected to represent about 11,000 acres and about 11 percent of the Local Permittee land conservation requirement. The RCA therefore needs to directly acquire an additional 30,000 acres of land relative to the expectations of the Original Nexus Study.

- 2. Lower than expected regional infrastructure public contributions have reduced the non-fee funding available, increasing the costs to be funded through the mitigation fee.** The MSHCP assumed a substantial level of funding from regional infrastructure project public contributions, including transportation infrastructure, regional utility projects, local public capital construction projects, and regional flood control projects, as well as from landfill tipping fees. While the Measure A sales tax has provided substantial funding as expected, other revenue sources, on aggregate, have provided (and are expected to continue to provide) substantially less funding than forecast in the 2003 Nexus Study. As a result, mitigation fees will need to cover about 91 percent of Local Permittee MSHCP implementation costs relative to the original assumption of about 56 percent.
- 3. The change towards a consistent “per gross developed acre” fee basis provides a more consistent approach for all land use development types.** The 2003 Nexus Study used an “Equivalent Benefit Unit” approach to distributing mitigation costs between different land use categories. This Nexus Study adjusts the fee calculation to the more commonly used per gross acre basis. Under this approach, the new Local Development Mitigation Fees are all based on one “across the board” per gross acre fee determination. Non-residential development then pays this per acre fee, while per unit residential fees by density category are derived from this common per gross acre fee.¹¹ This change evens out some of the prior differences in mitigation fee levels.
- 4. The estimates of average per acre land values have not changed substantially, so they have had a limited effect on the change in mitigation fees.** The original MSHCP implementation cost estimate was based on an average land value of about \$13,100 per acre. This was based on research on land transactions of parcels with different land use designations and sizes in 2001/2002. The land valuation analysis conducted for this Nexus Study estimated a planning-level land value of about \$14,300 per acre based on land transactions primarily in the 2014 to 2017 period (inflated to 2019-dollar terms). As a result, land value estimates have not changed substantially in nominal dollar terms since the Original Nexus Study. This estimated per acre land value is above the cost of most RCA transactions to date, though the average land values of future RCA land acquisition are expected to increase due to the increasing need to purchase more expensive land in “linkage” areas.

¹¹ Similar to the Original Nexus Study, all new development in Western Riverside County is required to pay the mitigation fee (or otherwise provide the necessary mitigation). The conversion from per gross acre to per unit fees for residential development is conducted to provide administrative continuity for member agencies.

Organization of Report

This Nexus Study includes several chapters. **Chapter 1**, this chapter, describes the purpose and need for this Nexus Study, the recommended changes in the Local Development Mitigation Fee, and the key drivers of these changes. **Chapters 2 through 7** provide the technical analysis that supports the updated fees and nexus findings. **Chapter 2** summarizes the purpose of and basis for the MSHCP, the conservation requirements of the MSHCP, and the financing strategy and approach developed to implement the MSHCP in 2004. **Chapter 3** describes the conservation achievements to date, identifies the remaining conservation requirements, and identifies expected land dedication. **Chapter 4** provides the development forecast used in the calculation of the updated mitigation fees. **Chapter 5** provides the estimates of MSHCP implementation costs, including land acquisition, management and monitoring, program administration, and endowment. **Chapter 6** describes the historical levels of non-fee revenues available to help fund Local Permittee MSHCP implementation costs. **Chapter 7** brings together the technical analysis in **Chapters 2 through 6** to estimate the updated 2020 Local Development Mitigation Fees. **Chapter 8** provides the nexus findings required under the Mitigation Fee Act as required to establish the updated fees. Finally, **Chapter 9** highlights some of the administration and implementation requirements under the Mitigation Fee Act, recognizing that the Fee Implementation Handbook provides more specific guidance to the RCA and its partner agencies on the implementation of the mitigation fee program.

2. MSHCP POLICIES, GOALS, AND FINANCING STRATEGY

MSHCP Purpose, Basis, and Goals

In response to the need to maintain future growth opportunities in Western Riverside County while addressing the requirements of the state and federal Endangered Species Acts, the County and the Riverside County Transportation Commission initiated the Riverside County Integrated Project (RCIP) in 1999. The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is one part of the RCIP that includes:

- **Updated County General Plan.** Addresses the required general plan elements such as land use, circulation, housing and open space, and conservation and includes programs to implement the MSHCP, enhance transit alternatives, and encourage development of mixed-use centers.
- **Community and Environment Transportation Acceptability Process.** Identifies future transportation corridors in Western Riverside and provides needed environmental documentation to allow preservation of future right-of-ways.
- **MSHCP.** The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP or Plan) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on the conservation of species and their associated habitats in Western Riverside County. The MSHCP conserves vulnerable plant and animal species and their associated habitats in Western Riverside County and supports economic development.

The MSHCP was adopted in 2003 by the Riverside County Board of Supervisors. Subsequently, all of the Western Riverside cities, the County of Riverside, County Flood Control and Water Conservation District, County Regional Parks and Open-Space District, County Department of Waste Resources, Riverside County Transportation Commission, California Department of Transportation, California Department of Parks and Recreation, California Department of Fish and Game, the US Fish and Wildlife Service and the RCA signed an Implementing Agreement for the MSHCP. The Implementing Agreement includes terms to ensure MSHCP-implementation, defines remedies and recourses should any of the parties of the Agreement fail to perform obligations, and provides assurances that, as long as the MSHCP is being implemented, the Wildlife Agencies will not require additional mitigation from the Permittees.¹²

The MSHCP serves as an HCP pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 as well as a Natural Communities Conservation Plan under the NCCP Act of 2001. The MSHCP streamlines these environmental permitting processes by allowing the participating jurisdictions to authorize “take” of plant and wildlife species identified within the Plan Area. At the same time, Plan implementation provides a coordinated MSHCP Conservation Area and implementation program to preserve biological diversity and maintain the region’s quality of life.

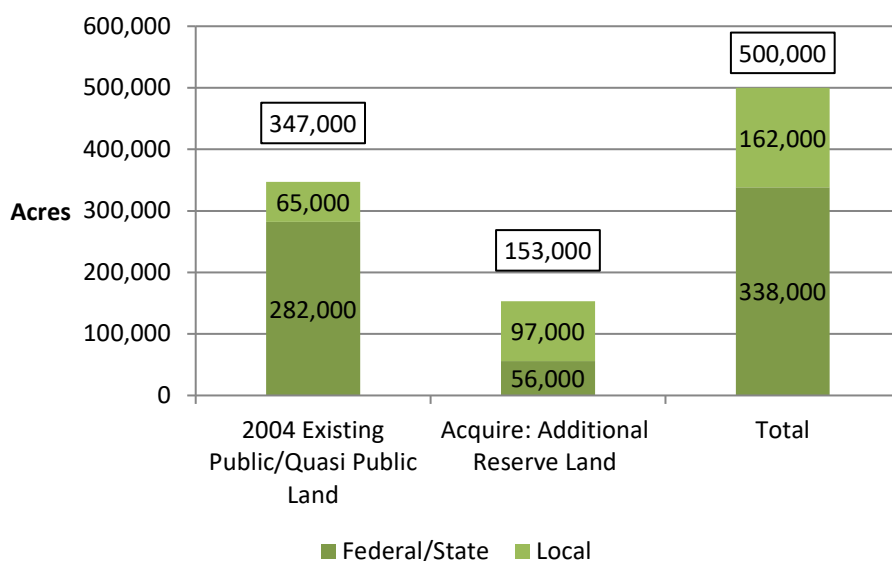
¹² The Wildlife Agencies include the US Fish and Wildlife Service and the California Department of Fish and Wildlife and the Permittees include all of the other parties to the Implementing Agreement.

The MSHCP and the associated Implementing Agreement and Incidental Take Permit collectively determine a set of conservation actions, and the associated responsible parties, that must be taken to meet the terms of the Incidental Take Permit and benefit from the regulatory streamlining and other benefits of the MSHCP. This includes the identification of the responsibilities of the Local Permittees.¹³

MSHCP Conservation Requirements

The goal of the MSHCP is to enhance and maintain biological diversity and ecosystems processes while allowing future economic growth. The MSHCP calls for an MSHCP Conservation Area of 500,000 acres and focuses on the conservation of 146 species.

Figure 1 State of Conservation in 2003: Conserved Land, Additional Reserve Land to be Acquired, and Total MSHCP Conservation Area Needed



As shown in **Figure 1**, when the MSHCP was adopted, existing public and quasi-public conservation lands covered 347,000 acres, leaving a need for 153,000 acres of land, called Additional Reserve Land (ARL), to meet the goals of the MSHCP (see **Figure 1**). The MSHCP specifies that responsibility for the conservation of the 153,000-acre Additional Reserve Lands is shared by the local development process (97,000 acres) and state and federal purchases (56,000).

¹³ Local Permittees include the Western Riverside cities, the County of Riverside, County Flood Control and Water Conservation District, County Regional Park and Open Space District, County Department of Waste Resources, and Riverside County Transportation Commission.

Table 4 MSHCP Goals by Area Plan

Area Plan	Total Area of Criteria Cells	Low End of Goal	High End of Goal	Midpoint
Cities of Riverside and Norco	1,756	90	240	165
Eastvale	665	145	290	220
Elsinore	28,946	11,700	18,515	15,110
Harvest Valley / Winchester	820	430	605	515
Highgrove	1,452	345	675	510
Jurupa	5,476	890	1,870	1,380
Lake Mathews / Woodcrest	11,673	3,215	5,470	4,340
Lakeview / Nuevo	14,682	6,650	10,235	8,445
Mead Valley	7,703	1,885	3,635	2,760
Reche Canyon / Badlands	26,000	10,520	15,610	13,065
REMAP	78,423	41,400	58,470	49,935
San Jacinto Valley	32,828	11,540	19,465	15,500
Southwest Area	66,076	22,500	36,360	29,430
Sun City / Menifee Valley	2,059	1,120	1,585	1,355
Temescal Canyon	10,007	3,485	5,800	4,645
The Pass	22,652	8,540	13,925	11,230
Total	311,218	124,455	192,750	158,605

The MSHCP includes methods to determine whether the goals of the Plan are being met. One of the methods is measuring the extent to which conservation acquisitions are moving toward acquisition goals by each Area Plan.¹⁴ Area Plans are established in the County's General Plan and are used in the MSHCP as a common geographic unit in Western Riverside County. The MSHCP established low, high, and midpoint acquisition goals for each Area Plan based on biological needs. The midpoint acquisition goals for each Area Plan range from 165 to nearly 49,935 acres, as shown in **Table 4**. The midpoint goals sum to 158,605 which represents 5,605 acres more than are needed to fulfill the MSHCP goals. As a result, acquisitions in some Area Plans can fall below the mid-point targets while the total ARL can still achieve the 153,000-acre goal.

MSHCP Financing Strategy

One of the key requirements of the MSHCP, Implementing Agreement, and Incidental Take Permit (consistent with the requirements of the federal Endangered Species Act) is the provision of adequate funding by Local Permittees to the Implementing Entity (the Regional Conservation Authority) to conduct the conservation actions identified in the MSHCP as the responsibility of the Local Permittees.

¹⁴ Other geographic units include Rough Steps, city jurisdictions, and Area Plan subunits. For the purposes of this analysis, Area Plans have been selected as the primary unit of analysis because they are the middle-sized unit (smaller than Rough Steps and larger than Area Plan subunits) and have not changed over time (unlike jurisdictions, several of which have incorporated since the adoption of the MSHCP).

Section 8.0 of the MSHCP addresses “MSHCP Funding/Financing of Reserve Assembly and Management.” This section provides best estimates of Plan implementation costs at the time of Plan adoption, including the local funding commitment – the portion of Plan implementation costs that represents the Local Permittees’ portion of the overall land acquisition, management, monitoring, adaptive management, and Plan administration costs. Section 8.5 describes the Local Funding Program. The Local Funding Program included a mix of funding sources to provide “an equitable distribution of the cost for local mitigation under the MSHCP.” The proposed funding sources included Local Development Mitigation Fees, density bonus fees, regional infrastructure project public contributions (including transportation infrastructure, regional utility projects, local public capital construction projects, and regional flood control projects), and landfill tipping fees. Key components of the overall MSHCP implementation and funding strategy are highlighted below:

- The Regional Conservation Authority would implement the MSHCP with funding from different sources.
- The permanent protection of 97,000 acres in Additional Reserve Lands by Year 25 of the Plan (2029) would be achieved through direct purchase of habitat lands by the RCA using local funding and through the HANS dedication process.¹⁵
- Local funding sources would fund the ongoing management and maintenance costs of the local portion of the Additional Reserve Lands acquired through local funding (97,000 acres by end of acquisition period).
- Local funding sources would fund monitoring activities on the pre-Plan local conservation and all the new Additional Reserve Lands (500,000 acres by end of acquisition period).
- The permanent protection of 56,000 acres in Additional Reserve Lands by Year 25 would be achieved using state/federal funding sources or contributions.
- State and federal funding sources would fund the management and maintenance costs of the State/federal portion of the required Additional Reserve Lands.
- Local Development Mitigation Fees (on private development) would fund the Local Permittee MSHCP implementation costs that were not funded by other local/regional funding sources or public contributions for public development project mitigation.
- The overall permit period was set at 75 years. Once habitat acquisition was completed by Year 25, remaining funds along with newly created revenue sources were to be used to fund

¹⁵ Section 6.1.1 of the MSHCP describes the HANS process. The Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process applied to any property owner applying for a discretionary permit for land within a Criteria Area/Criteria Cell. Under the process, the County determined whether portions of the property are needed for conservation and then may send their evaluation to the RCA for Joint Project Review (JPR). During JPR, the project applicant negotiated the terms of the development and conservation of the project. The applicant also paid fees on the new development. This approach was refined when a new fee credit policy, adopted in 2016, provided for fee credits where appropriate lands are dedicated.

monitoring and management as well as to fund the establishment of an endowment to cover ongoing post-permit costs (beyond Year 75).

Importantly, the MSHCP funding chapter notes that frequent evaluations of the performance of the funding mechanisms and assessments of the funding plan will occur and that any necessary modifications to the funding mechanisms will be developed.

MSHCP Implementation Costs and Funding Sources

The original estimated costs and proposed funding sources were documented in the MSHCP and are summarized in **Table 5**. These were developed based on research and analysis conducted as part of MSHCP development.

As shown, Plan implementation costs over the first 25 years of implementation were estimated at about \$950 million in 2004-dollar terms. Key assumptions driving the implementation cost estimates included:

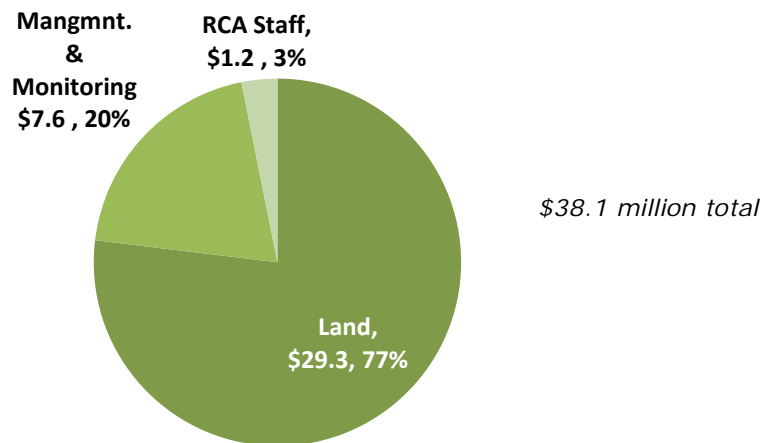
- **Dedications.** Direct acquisition using local funding sources would be required to acquire 56,000 acres, with 41,000 acres (or 42 percent) of the required local habitat protection coming through HANS dedication.
- **Land Cost.** Average land value of \$13,100 per acre for Additional Reserve Lands purchased by the RCA.
- **Management and Monitoring:** Management and monitoring costs included three key components as follows: Reserve Management, Adaptive Management, and Biological Monitoring.¹⁶
- **Program Administration.** RCA program administration costs would average about \$1.2 million each year in 2004 dollars during the 25-year period where land acquisition was required.
- **Cost Distribution.** Overall, land acquisition costs were estimated at 77 percent of total implementation costs, with management and monitoring at 20 percent, and program administration at 3 percent (see **Figure 2**).

¹⁶ See Chapter 5 of the MSHCP for a description of these activities.

Table 5 2004 Estimates: MSHCP Implementation Costs and Funding Sources

Item	Total for 2004 - 2028 (Years 1 - 25)	Average Annual	% of Total Cost/ Funding Need
Local Permittee Land Requirements			
Preservation Requirement	97,000 acres	3,880 acres	na
HANS Dedication	<u>41,000</u> acres	<u>1,640</u> acres	na
Local Permittee Acquisition	56,000 acres	2,240 acres	na
Local Permittee MSHCP Implementation Costs			
Land (1)	\$733,600,000	\$29,344,000	76.91%
Management & Monitoring	\$190,200,000	\$7,608,000	19.94%
RCA Staff	\$30,000,000	\$1,200,000	3.15%
Other Costs	na	na	na
Endowment	<i>not included</i>	<i>not included</i>	na
Total Costs	\$953,800,000	\$38,152,000	100.0%
Local Revenues			
Private Development Mitigation Fees	\$539,600,000	\$21,584,000	50.1%
Density Bonus Fees	\$66,000,000	\$2,640,000	6.1%
Regional Transportation Infra. (2)	\$250,000,000	\$10,000,000	23.2%
Local Roads (Measure A)	\$121,000,000	\$4,840,000 (3)	11.2%
Tipping Fees (4)	\$100,000,000	\$4,000,000	9.3%
Miscellaneous Revenues (5)	<u>\$0</u>	<u>\$0</u>	0.0%
Total Revenues	\$1,076,600,000	\$43,064,000	100%
<p>(1) Average land value per acre assumed to be \$13,100 per acre. (2) Public contributions at specified % of new road construction. (3) \$121 million to be provided over 10 years, so \$12.1 million annually over that period. (4) Includes \$90 million from El Sobrante Landfill and \$10 million from other County landfills. (5) Other potential revenues, including public contributions from other public projects, tipping fees from Eagle Mountain Landfill, and potential new voter-approved regional funding were noted but not estimated.</p>			
Source: Chapter 8 of MSHCP; Economic & Planning Systems.			

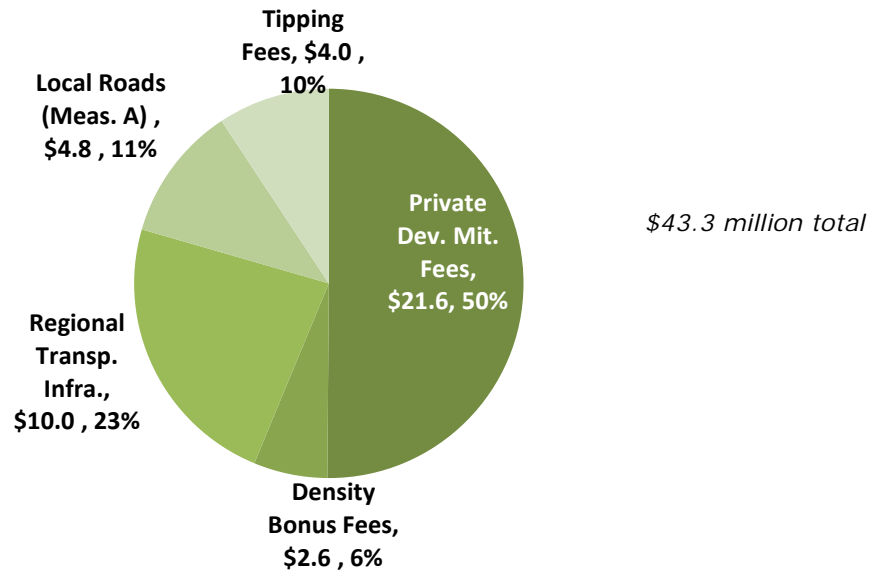
Figure 2 MSHCP Estimated Annual Costs in Millions, 2004 Dollars



As also shown in **Table 5**, MSHCP funding from local/regional sources was estimated to be about \$1.0 billion in 2004 dollars through Year 25, sufficient to cover the implementation costs over this period. Key assumptions driving the funding estimates included:

- **Measure A.** Measure A (local sales tax transportation funding measure) would provide \$121 million over 10 years in 2004-dollar terms.
- **Regional Transportation Funding.** Public contributions from regional transportation infrastructure projects would provide an average of \$10 million each year or \$250 million through Year 25.
- **Tipping Fees.** Landfill tipping fees would provide about \$100 million in revenue over 25 years, about \$4 million each year, primarily from the El Sobrante landfill.
- **Mitigation Fees.** Private development fees, including private development mitigation fees and density bonus fees, would generate over \$600 million over the first 25 years, about \$24 million annually.
- **Development Forecast and Participation.** The forecast of private development fees was based on a preliminary fee schedule and the forecast of 336,000 new residential units (13,440 units each year) and 371 acres each year of commercial and industrial development. All new development was assumed to pay the private development mitigation fee with a portion paying the density bonus fee.
- **Other Funding Options.** Potential additional funding might come through contributions from other local/regional public entities, other landfills, or new voter-approved funding initiatives.
- **Funding Distribution.** Overall, about 55 percent of the estimated funding was expected to be generated by private development fees, with 45 percent from other funding sources.

Figure 3 MSHCP Estimated Annual Revenues in Millions, 2004 Dollars



Development Mitigation Fees and Calculation

The MSHCP notes that “new development affects the environment directly through construction activity and cumulatively through population bases that result from Development.” As a result, the cities and County are required to implement a Local Development Mitigation Fee that was expected to represent one of the primary sources of funding for the implementation of the MSHCP. The MSHCP indicates that the Local Development Mitigation Fee will be adopted under California Government Code Section 66000 et seq. (the “Mitigation Fee Act”) that “allows cities and counties to charge new development for the costs of mitigating the impacts of new development.”

The MSHCP identified preliminary estimates of Local Development Mitigation Fees and indicated that these mitigation fees were expected to generate the majority of funding for Local Permittee obligations. The MSHCP noted that, under the Mitigation Fee Act, “a nexus study is required to demonstrate that the proposed fee is proportionate to the impacts of new development.” The Mitigation Fee Act also includes a number of reviewing and reporting requirements. The MSHCP also notes that the fee will need to be “reevaluated and revised should it be found to insufficiently cover mitigation of new development.”

A nexus study entitled “Final Mitigation Fee Nexus Study Report for the Western Riverside County Multiple Species Habitat Conservation Plan” was completed on July 1, 2003 (2003/Original Nexus Study). This nexus study conducted a detailed analysis of the costs of implementing the Plan, identified the Local Permittee funding obligations, determined the portion to be funded through the Local Development Mitigation Fee, and made the necessary nexus findings under the Mitigation Fee Act. The MSHCP and 2003 Nexus Study both indicated that all new development in the Western Riverside County Plan Area affects covered species and habitat and so the Local Development Mitigation Fees would apply to all new development in participating jurisdictions in Western Riverside County.

Mitigation Fee Schedule and Adjustments

All local jurisdictions participating in the MSHCP and obtaining coverage for public and private take in their jurisdictions were required to adopt and implement this mitigation fee schedule through ordinance and resolution and then to pass through the fee funding (minus any additional administrative charges) to the RCA to fund MSHCP implementation. Indexed-increases based on the annual change in the Consumer Price Index for the Los Angeles-Anaheim-Riverside area were provided for in the ordinances to allow modest adjustments in mitigation fees to respond to inflationary cost increases. Due to the geographic revision implemented by the Bureau of Labor Statistics, going forward indexed-adjustments will be based on the annual change in the Consumer Price Index for the Riverside-San Bernardino-Ontario area.

Table 6 shows the original 2004 Local Development Mitigation Fee schedule and current 2021 Fee schedule that reflects periodic inflationary fee adjustments using the indexing process.

Table 6 2004 and 2021 MSHCP Fee Schedule

Fee Category	2004 Fee per unit or per acre	2021 Fee per unit or per acre
Residential: Up to 8.0 dwelling units per acre (DUAC)	\$1,651	\$2,234
Residential: 8.0-14.0 DUAC	\$1,057	\$1,430
Residential: 14.0+ DUAC	\$859	\$1,161
Commercial (per acre)	\$5,620	\$7,606
Industrial (per acre)	\$5,620	\$7,606

3. HABITAT PROTECTION TO DATE AND FUTURE CONSERVATION SCENARIO

The RCA has achieved substantial levels of habitat protection to date using the funding sources established and the associated variable flows of incoming revenues. The level of habitat protection achieved, because of lower levels of funding and land dedication than expected, has however fallen behind the pace of protection forecast in the Original Nexus Study. This chapter summarizes the achieved protection to (1) establish both the scale of future acquisitions required to meet the overall Additional Reserve Land (ARL) goals, (2) consider the annual pace of habitat protection through acquisitions and dedications in absolute terms and relative to the original MSHCP forecasts, and (3) inform the development of the Conservation Scenario that forms the baseline (project description) for estimating future MSHCP implementation costs and associated funding requirements and updated mitigation fees.

Habitat Protection Accomplishments Through 2019

Between the start of the MSHCP program and the end of 2019, the most recent full calendar year, about 40 percent of the 153,000-acre ARL target has been achieved, totaling almost 62,000 acres in acquisitions, easements, or dedications (see **Table 7**).¹⁷ As shown of the 97,000 acres in Local Permittee ARL obligation about 40,200 acres had been protected by the end of 2019. Of the 56,000 acres in State/Federal ARL obligation, about 21,600 acres have been protected to date.

Table 7 Conservation Through End of 2019

Party	Need	Conserved 2000-2003	Conserved 2004 - 2019	Total Conserved 2000 - 2019	Remaining Need 2020-2043
Local	97,000	4,531	35,681	40,212	56,788
State + Fed	56,000	12,408	9,200	21,608	34,392
Total	153,000	16,939	44,881	61,820	91,180

Sources: Western Riverside County Regional Conservation Authority MSHCP Annual Reports; RCA information on 2019 purchases; Economic & Planning Systems, Inc.

Conservation Goals and Progress

The MSHCP anticipated that acquisition would take place for 25 years, through the end of 2029, with 97,000 acres conserved through local means and 56,000 acres conserved with State/federal funding. To achieve this goal, an average of 6,120 acres of conservation is required each year,

¹⁷ Note that while the MSHCP was adopted in 2004, certain conservation which took place between 2000 and 2003 was counted toward the MSHCP reserve.

including an average of 3,880 annually from local funding sources/dedications and 2,240 annually from State and federal conservation.

Figure 4 illustrates how steady progress would result in achievement of the ARL goals by 2029. **Figure 5** shows actual progress toward the goals, through 2019. More than 21,000 acres have been conserved through State/federal means, and over 40,000 acres have been conserved through local actions. These totals sum to about 40 percent of the total ARL goal of 153,000 acres. As shown in **Figure 5**, with 16 years of the 25-year acquisition period completed, the ARL acquisitions have fallen behind the pace forecast in the Original Nexus Study. Protection through the end of 2019 represents 63 percent of the original forecast (65 percent for Local obligations and 60 percent for State/federal obligations). For the Local Permittee obligations, as discussed further below, the lower level of land dedication relative to the original forecasts account for much of the habitat protection gap that has emerged over the last 16 years.

Figure 4 MSHCP Conservation Goals, 2019 and 2029 Goals Highlighted

MSHCP Goals, 2019 and 2028 Highlighted

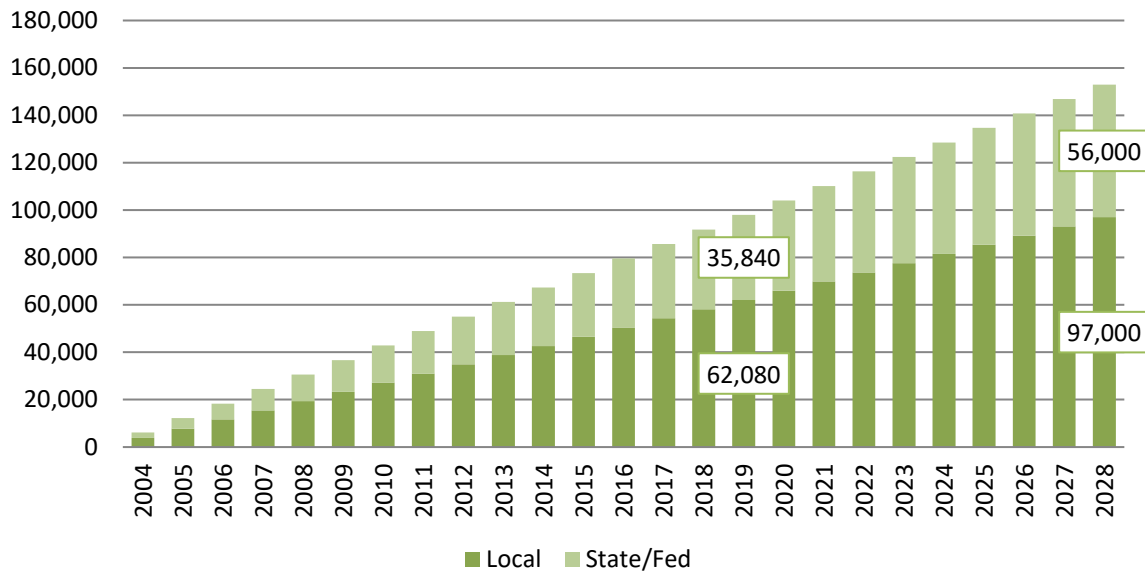
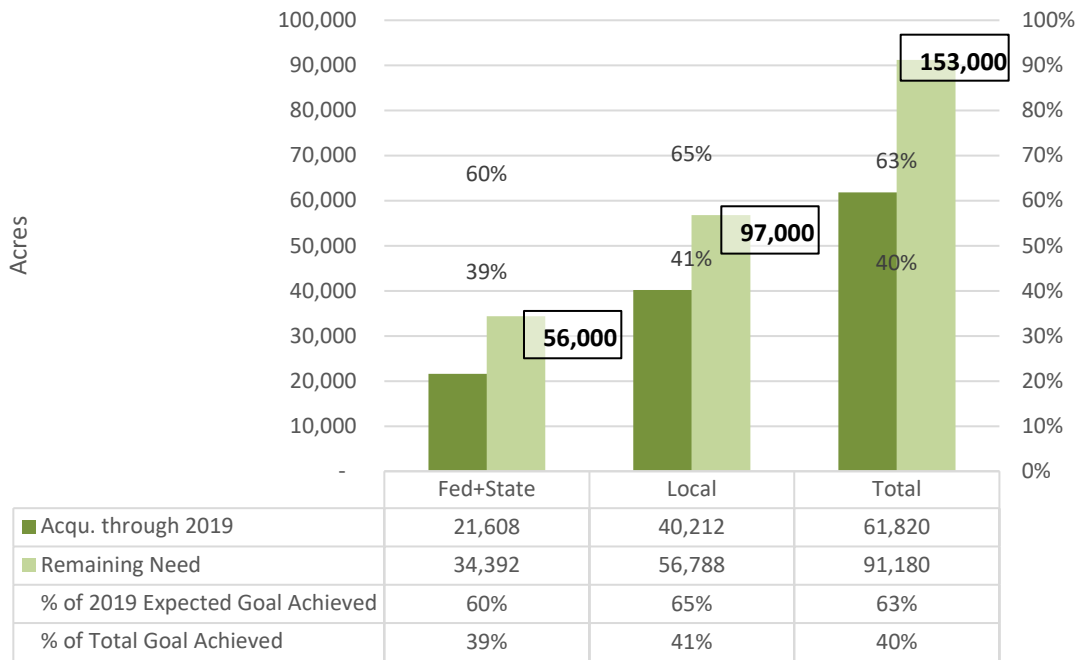


Figure 5 Progress Towards ARL Through End of 2019



Sources: Western Riverside County Regional Conservation Authority; Economic & Planning Systems, Inc.

Land Dedications

The MSHCP envisioned a conservation program where land and easements would be purchased by the RCA and land would be dedicated to the RCA through the development process.¹⁸ In addition, the potential for no-cost and low-cost donations for tax benefit purposes was also created. The MSHCP did not assume donations or conservation easement acquisitions as part of its financial analysis (this is appropriate given the limited number of such transactions). The MSHCP did, however, anticipate that 41,000 acres would be conserved through dedications, 56,000 acres through purchases on behalf of local permittees, and 56,000 acres through purchases conducted by or funded by federal and State agencies/sources for a total of 153,000 acres.

For the local portion of the goal (97,000 acres), this translates into about 42 percent of the goal conserved via dedications associated with the development review process—called Habitat Evaluation and Acquisition Negotiation Strategy (HANS)—and the other 58 percent purchased by the RCA from willing sellers. The level of dedication is a key assumption for the MSHCP implementation cost estimate as each acre dedicated through HANS is one fewer acre which must be conserved through land acquisitions at market values.

The HANS process was established to apply to developments proposed within the Criteria Cells of the MSHCP Study Area. The Criteria Cells represent areas with high conservation values relative to the areas outside of the Criteria Cells. The HANS process was designed to indicate what conservation (dedication) may be needed from new development from a biological needs

¹⁸ This process is known as the Habitat Evaluation and Acquisition Negotiation Strategy (HANS).

perspective. Subsequent to that technical analysis, applicants could then proceed to the Joint Project Review (JPR) process during which the parties negotiate an implementation plan for the project, consistent with the HANS findings. The applicants would also pay mitigation fees on the actual development. To date, a modest amount of land (less than 1,000 acres) has been conserved via the HANS/JPR method compared to the 26,000 acres that was forecast to have occurred by this point in the MSHCP implementation.

While very little land has been dedicated to the RCA through HANS/JPR, several projects went through the HANS/JPR process and have agreements in place for dedication/conservation of lands, but the start date (if any) for these projects is unknown (i.e., may be far in the future). These projects cover about 35,000 acres in the Criteria Cells and, under the JPR agreements, have set aside about 30 percent of that total or about 10,000 acres for conservation/dedication.

The adoption of Resolution No. 2016-003 in September 2016 revised the RCA's fee credit and waiver policy. This resolution indicated that MSHCP fee credit should be provided in exchange for land that contributes to reserve assembly. As a result, after the adoption of this resolution, new development is not be expected to pay mitigation fees and dedicate land in the manner originally envisioned in the MSHCP limiting the likelihood of the types of dedications envisioned in the Original Nexus Study.

Future Conservation Scenario

This updated financial analysis, nexus study, and mitigation fees estimate require a base description of the additional habitat protection required. In subsequent chapters, cost estimates are developed in reference to, and in application to, this conservation scenario to develop the overall implementation costs and the associated funding required, both in aggregate and through time during the land acquisition period of the program. Four questions are of particular importance:

1. **Remaining Habitat Protection.** The amount of habitat protection required to meet the MSHCP requirements.
2. **Dedications.** The amount of land dedication assumed to occur through the HANS/JPR process over the habitat protection period and the associated amount of habitat that must be acquired.
3. **Time Frame.** The period over which habitat protection goals must be met.
4. **Land Characteristics.** The characteristics of the land to be protected to meet MSHCP requirements (e.g., goals by Area Plan, habitat cores and linkages etc., land use designations and parcel sizes).

The answers to question 1 are provided in the data above (see **Table 7**). The answer to question 4 is provided in the subsequent chapter on land costs, with illustrative answers coming from RCA data and GIS analysis. The answer to question 2 is addressed below and is based on information on accomplishments to date (described above), discussions with RCA staff, the current Fee Waiver and Credit Policy, and an assessment of realistic opportunities and expectations. Finally, question 3 raises the issue of whether an extension to the MSHCP land acquisition implementation period should be provided. As described below, three different

extension scenarios (5-, 10-, and 15-year extension scenarios) are evaluated, as well as the baseline, "No Extension Scenario," to indicate the outcomes under different scenarios.

Habitat Protection, Land Dedication, and Conservation Scenarios

As shown in **Table 8**, there is a total of about 91,200 acres of land protection still required to complete the land protection obligations under the MSHCP and to bring the Additional Reserve Lands to 153,000 acres. Of this, the State/federal requirements is for about 34,400 acres, while the Local Permittee requirement is for about 56,800 acres.

The experience of the last 16 years indicates that the MSHCP was overly optimistic in terms of land dedications, assuming that 41,000 acres would be dedicated to the RCA. As noted above, about 10,000 acres of potential future land dedication is associated with a range of previously proposed projects. Based on historical information on actual, dedications agreements on proposed projects, current RCA policy, and consultations with RCA staff, minimal additional dedication is expected or assumed. This analysis, therefore, assumes that the prior agreement concerning dedications, summing to about 10,000 acres, will be secured over the next eight years and prior to the end of the current habitat protection period. Even if the implementation period were extended, no extra land dedication is forecast to occur.

As a result, and as shown in **Table 8**, a total of about 46,800 acres of Additional Reserve Land acquisition is required by Local Permittees for MSHCP implementation once the forecast of dedications is incorporated. As shown in **Table 8**, the required average annual pace of habitat protection varies considerably under the different acquisition period extension scenarios, as described below: ¹⁹

- **Baseline/No Extension Scenario.** As currently structured, RCA is required to complete land acquisition by the end of Year 25 of Plan implementation in 2029. This provides nine (9) years to protect the 47,000 acres through direct land acquisition (distinct from the assumed dedications), an average annual acquisition pace of about 5,200 acres each year.
- **5-Year Extension.** With a 5-year extension to the acquisition period, the RCA would be required to complete land acquisitions by the end of Year 30 of Plan implementation in 2034. This provides fourteen (14) years to protect the 47,000 acres through direct land acquisition (distinct from the assumed dedications), an average annual acquisition pace of about 3,300 acres each year.
- **10-Year Extension.** With a 10-year extension to the acquisition period, the RCA would be required to complete land acquisitions by the end of Year 35 of Plan implementation in 2039. This provides nineteen (19) years to protect the 47,000 acres through direct land acquisition (distinct from the assumed dedications), an average annual acquisition pace of about 2,500 acres each year.

¹⁹ As a point of reference, the historical pace of Local Permittee-driven habitat protection has been somewhat above 2,000 acres each year with availability of funding being an important determinant of the pace of acquisition. The pace of State/federal-driven acquisition has averaged about 1,000 acres each year.

- **15-Year Extension.** With a 15-year extension to the acquisition period, the RCA would be required to complete land acquisitions by the end of Year 40 of Plan implementation in 2044. This provides twenty-four (24) years to protect the 47,000 acres through direct land acquisition (distinct from the assumed dedications), an average annual acquisition pace of about 2,000 acres each year.

Table 8 Required Acquisition Acres to Achieve ARL Goals

Entity/Item	Through 2019	2020-End of Acquisition Period	Years Remaining	Annual Conservation Acres Required	Total Acres
NO EXTENSION					
State/Federal	21,608	34,392	9	3,821	56,000
Local					
HANS Dedication (1)	715	10,000	9	1,111	10,715
Net Local Acquisition	39,497	46,788	9	5,199	86,285
Total Local Conservation	40,212	56,788	9	6,310	97,000
State/Federal + Local = ARL Goal	61,820	91,180	9	10,131	153,000
5 YEAR EXTENSION					
State/Federal			14	2,457	56,000
Local					
HANS Dedication	<i>See above</i>		14	714	10,715
Net Local Acquisition			14	3,342	86,285
Total Local Conservation			14	4,056	97,000
State/Federal + Local = ARL Goal			14	6,513	153,000
10 YEAR EXTENSION					
State/Federal			19	1,810	56,000
Local					
HANS Dedication	<i>See above</i>		19	526	10,715
Net Local Acquisition			19	2,463	86,285
Total Local Conservation			19	2,989	97,000
State/Federal + Local = ARL Goal			19	4,799	153,000
15 YEAR EXTENSION					
State/Federal			24	1,433	56,000
Local					
HANS Dedication	<i>See above</i>		24	417	10,715
Net Local Acquisition			24	1,950	86,285
Total Local Conservation			24	2,366	97,000
State/Federal + Local = ARL Goal			24	3,799	153,000
20 YEAR EXTENSION					
State/Federal			29	1,186	56,000
Local					
HANS Dedication	<i>See above</i>		29	345	10,715
Net Local Acquisition			29	1,613	86,285
Total Local Conservation			29	1,958	97,000
State/Federal + Local = ARL Goal			29	3,144	153,000

1. About 10,000 acres of potential future land dedication is associated with a range of previously proposed projects. Based on historical information on actual, dedications agreements on proposed projects, current RCA policy, and consultations with RCA staff, minimal additional dedication is expected or assumed beyond these agreements. This analysis, therefore, assumes that the prior agreements concerning dedications will occur with future dedications summing to about 10,000 acres. The precise timing of these dedications is uncertain, but are assumed to occur over the next eight years. Average annual numbers in this table are shown distributed across the full remaining acquisition period of each extension scenario.

Shading indicates acreage to be acquired with fee revenue.

Sources: Western Riverside County Regional Conservation Authority; and Economic & Planning Systems, Inc.

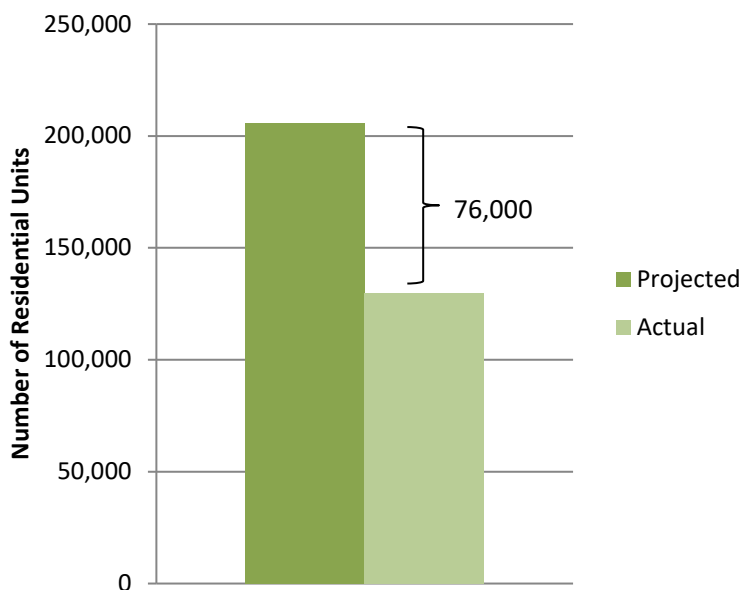
4. FORECASTS OF DEVELOPMENT, DEDICATION, FEE PAYMENT

Future development within Western Riverside County will both reduce land available for conservation while also serving as a primary funding mechanism for habitat acquisitions. This chapter identifies forecasts of future growth in Western Riverside County and develops an associated forecast of land development that is a key component of the fee calculation.

Historic Development and HCP Fees

The MSHCP anticipated that 13,000 to 14,000 residential units and about 370 commercial and industrial acres would be developed on average annually. Specifically, between 2005 and 2019, 206,000 residential units were expected in the Plan Area. A review of new units in the Plan Area indicates about 130,000 units were developed over the period (see **Figure 6**), about 37 percent below the forecast.²⁰ While the substantial volatility in the real estate market over the period (including the housing boom, deep recession, and modest recovery) may explain some of this difference, the slower pace of development means that fee revenues have been similarly constrained relative to the original revenue projections.

Figure 6 Residential Unit Development, Western Riverside County, 2005-2019



Source: California Department of Finance; MSHCP Projections

²⁰ Actual units developed have been derived from the California Department of Finance (DOF), Demographics Unit information through January 1, 2019. Note that the DOF reports data by city and for the entire Riverside County unincorporated area. Western Riverside's portion of the total unincorporated area has been derived based on the area's historic share of unincorporated County, taking into account the incorporations of new cities that occurred in Western Riverside County since MSHCP Plan adoption (Eastvale, Jurupa Valley, Menifee, and Wildomar).

Growth Projections

SCAG Forecasts in Context

The Southern California Association of Governments (SCAG) is a Metropolitan Planning Organization (MPO)²¹ representing six counties, 191 cities and more than 18 million residents. MPOs, such as SCAG are charged under California Senate Bill 375 with developing Sustainable Community Strategies (SCSs) as part of regional transportation plans. SCAG's SCS includes population, household, and job projections through 2040 by city and unincorporated area. SCAG consults with local governments within the region, including the Western Riverside Council of Governments (WRCOG) which represents Western Riverside County, to develop the projections. SCAG adopted the 2012-2040 Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS) in 2016. The 2016 RTP/SCS forms the basis of the SCAG projections; EPS extrapolated an annual growth rate from the SCAG projections and, assuming consistent development trends through 2050, applied the rate in order to estimate development projections through 2050.

SCAG forecasts for the future, on an annualized basis, were compared with the MSHCP's original forecast along with historical information (when available) as described further below:

- **Residential Development Forecast.** **Figure 7** shows, for Western Riverside County, the annual residential unit count for SCAG projections through 2050, MSHCP projections through 2029, and residential units produced in Western Riverside County between 2005 and 2019. As shown, the SCAG projections suggest about 8,750 units each. This is similar to the average annual historic pace of growth between 2005 and 2019 of about 9,260 units, but well below the original MSHCP projections of about 13,400 units each year. Based on the similarity between the historical average and the SCAG forecast, the SCAG forecast is considered a reasonable basis for determining the future pace of residential development and associated residential land development (based on assumed densities of development).
- **Commercial Development Forecast.** The SCAG jobs forecast of about 15,000 jobs each year was converted into an annual gross amount of commercial/industrial development using the employment density and FAR assumptions used in the most recent Transportation Uniform Mitigation Fee (TUMF) update documents. As shown in **Figure 8**, this results in a forecast of about 690 acres of commercial/industrial land development each year (representing an overall average of about 21 jobs per acre of development), considerably above the original MSHCP projections of about 370 acres each year. The higher SCAG number, however, appears reasonable given recent and ongoing trends in Western Riverside County where substantial amounts of new logistics/distribution development have occurred covering substantial land areas and, as such, is considered reasonable as the basis of the future forecast of commercial/industrial land development.

²¹ Federal law requires that an urbanized area with a population of at least 50,000 be guided by a regional entity known as an MPO. California's Senate Bill 375 expands the role of the State's 18 MPOs to include regional plans that help the State reach its greenhouse gas reduction targets by encouraging compact development and new development near public transit.

Figure 7 New Housing Units per Year, SCAG and MSHCP Projections and Historic Production (2005-2019)

SCAG (2012-2040) and MSHCP Projections (2004-2029) and Historic Production (2005-2019)

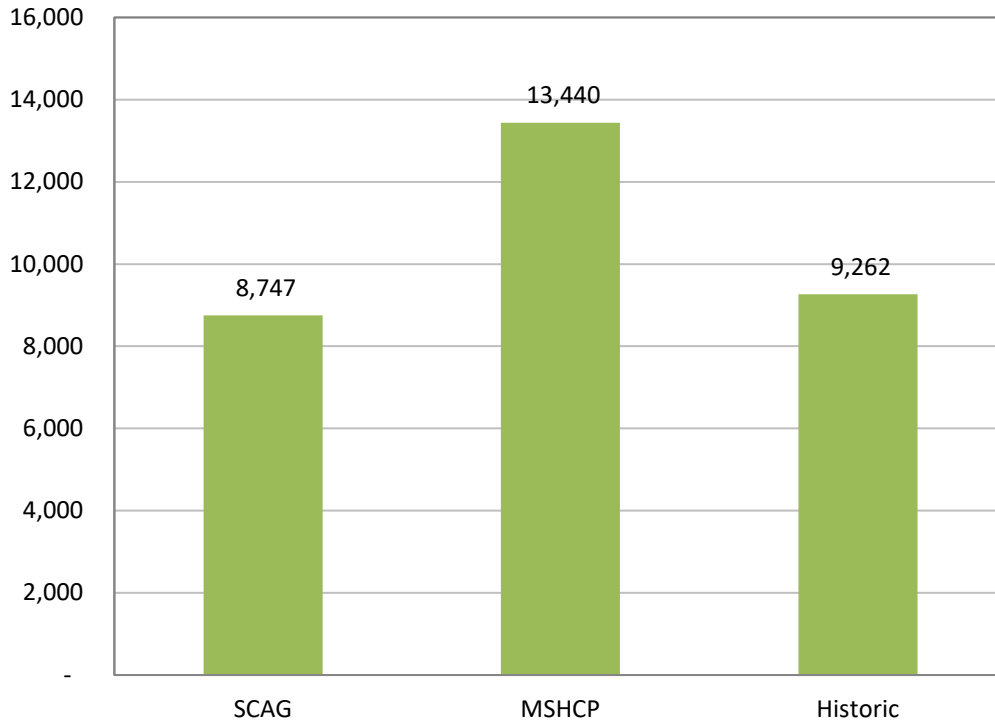
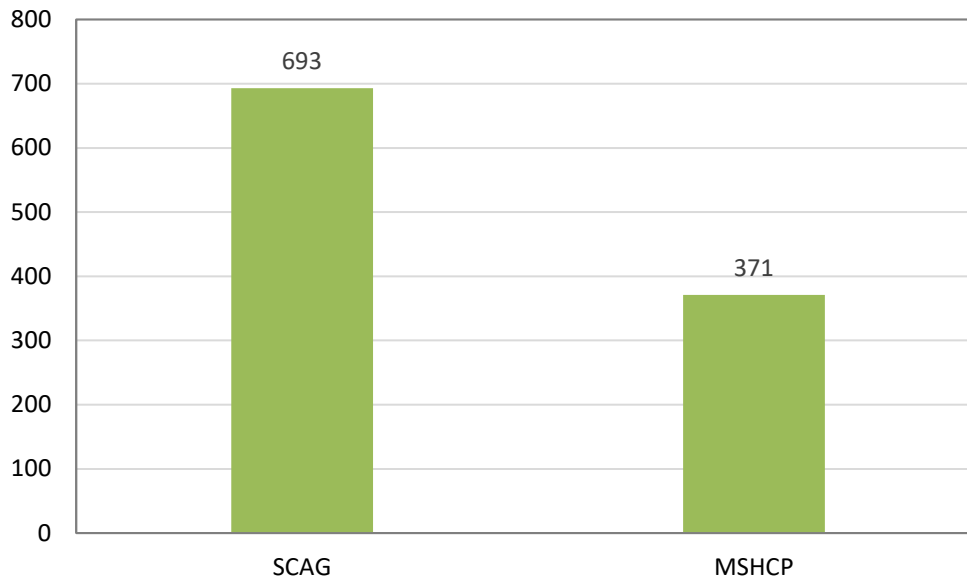


Figure 8 Newly Developed Commercial Acres per Year

SCAG (2012-2040) and MSHCP Projections



Note: SCAG job projections converted into acres by EPS

Forecasts for Fee Calculation

For this fee program update, the SCAG projections are considered a reasonable basis for forecasting future land development. Because all new development is expected to pay the mitigation fee, all of the forecasted household and job growth is converted into a land development forecast that is, in turn, used to calculate the mitigation fees. **Table 9** shows SCAG's overall projections for households and employment in Western Riverside County between 2012 and 2050, and **Table 10** shows the implied average annual land development rates, and, in turn, the overall level of residential and commercial/industrial land development that would be expected to occur through the end of the land acquisition period for each of the extension scenarios.²² As shown, all scenarios assume an overall average annual land development of 2,252 acres each year, including 693 acres in commercial/industrial land development and 1,558 acres in annual residential land development.²³

- **Baseline/No Extension Scenario.** Under the no extension scenario, a total of 20,265 acres of land development is expected to occur during the remaining Plan implementation period of nine (9) years and would pay the mitigation fees.
- **5-Year Extension.** Under the 5-year extension to the acquisition period, a total of 31,523 acres of land development is expected to occur during the remaining Plan implementation period of 14 years and would pay the mitigation fees.
- **10-Year Extension.** Under the 10-year extension to the acquisition period, a total of 42,782 acres of land development is expected to occur during the remaining Plan implementation period of 19 years and would pay the mitigation fees.
- **15-Year Extension.** Under the 15-year extension to the acquisition period, a total of 54,040 acres of land development is expected to occur during the remaining Plan implementation period of 24 years and would pay the mitigation fees.

²² Under the MSHCP, all new development is required to pay the mitigation fee and contribute to funding the implementation of the MSHCP except where specifically exempted in the Ordinance.

²³ The 1,558 acres of residential land development was derived based on the forecasted 8,747 residential units each year and assumptions concerning distribution by density category and an average density level. More specifically, consistent with the recent TUMF analysis assumptions, 70 percent of new residential units are assumed to be in the low density category (less than 8 units per acre) with an average of 4.5 units/acre, 20 percent are assumed to be the medium density category (8 to 16 units per acre) with an average of 10.8 units/acre, and 10 percent are assumed to be the high density category (over 16 units per acre) with an average of 24.4 units/acre. The unit per acre factors are consistent with those indicated in the Original Nexus Study. The overall implied average residential density is 5.6 units/gross acre.

Table 9 Projected Growth in Western Riverside County, through 2050

SCAG	Western Riverside MSHCP Plan Area	
	Households	Employment
2012	530,970	463,833
2040 Projection	775,882	869,792
2050 Projection (1)	863,350	1,014,777
New Households/Jobs Expected by 2050	332,380	550,944
Average Annual	8,747	14,499

(1) SCAG projections forecast growth through 2040. EPS assumes the annual growth rate from 2012 to 2040 remains constant through 2050 and applies the rate to an additional 10 years in order to project growth through 2050.

Sources: Southern California Association of Governments; Economic & Planning Systems, Inc.

Table 10 Projected Developed Acres in Western Riverside County, by Extension Scenario

SCAG	Western Riverside MSHCP Plan Area				
	Residential		Non Residential		Total
No Extension					
Proportionate Share 2020-2028 ¹	78,722	Households	130,487	Jobs	
New Development to Acres²					
Acres of New Development Through 2028	14,026	Acres	6,239	Acres	20,265 Acres
Acres per Year	1,558	Acres	693	Acres	2,252 Acres
5 Year Extension					
Proportionate Share 2020-2034 ¹	122,456	Households	202,979	Jobs	
New Development to Acres²					
Acres of New Development Through 2034	21,818	Acres	9,705	Acres	31,523 Acres
Acres per Year	1,558	Acres	693	Acres	2,252 Acres
10 Year Extension					
Proportionate Share 2020-2038 ¹	166,190	Households	275,472	Jobs	
New Development to Acres²					
Acres of New Development Through 2038	29,611	Acres	13,171	Acres	42,782 Acres
Acres per Year	1,558	Acres	693	Acres	2,252 Acres
15 Year Extension					
Proportionate Share 2020-2043 ¹	209,924	Households	347,965	Jobs	
New Development to Acres²					
Acres of New Development Through 2043	37,403	Acres	16,637	Acres	54,040 Acres
Acres per Year	1,558	Acres	693	Acres	2,252 Acres

(1) SCAG forecasts from the 2016 Report have been used for all cities in Western Riverside County. The projections for the entire unincorporated area in Riverside have been split into just the Western part of the County through a review of WRCOG's recent proportion of unincorporated growth, compared to the whole County.

(2) Conversion from household projections to residential acres of developed land is based on expected development mix and average residential density by land use type, with an average residential density of 5.6 DUAC. Similarly, conversion from job projections to nonresidential acres of developed land is based on distribution of jobs by workspace type and average employment density by land use type, with an average nonresidential density of 21 jobs per land acre. Residential density assumptions are based on data from the Census and California Department of Finance; Employment density assumptions are based on SCAG data.

Sources: California Department of Finance; US Census Bureau; Southern California Association of Governments; Economic & Planning Systems, Inc.

5. MSHCP IMPLEMENTATION COSTS

This chapter describes the analysis and assumptions that underpin the estimation of the total remaining MSHCP implementation costs in 2019 dollars. Key cost factors evaluated include land costs, management and monitoring costs, administration and professional services costs, and endowment costs. Together these cost components form the total MSHCP implementation costs. Because the duration allowed for land acquisition and endowment establishment affect several of these cost items, distinct total implementation cost estimates are provided for all scenarios (i.e., Baseline/ No Extension and the three extension scenarios).

Land Costs

Planning-level estimates of the per acre values associated with potential Additional Reserve Land (ARL) acquisitions are a critical input into the estimation of total land acquisition costs associated with Plan implementation. Land acquisition costs represented the majority of the original estimates of MSHCP implementation costs. This chapter provides planning-level estimates of per acre land conservation costs in 2019-dollar terms based on available information. In combination with assumptions concerning the characteristics of the Additional Reserve Lands to be acquired and potential levels of dedication, the per acre land value estimates drive the estimate of overall land acquisition costs.

Actual per acre habitat conservation costs may vary from the average planning-level estimates presented in this chapter for a number of reasons, including differences in the specific characteristics of the actual parcels acquired as well as fluctuations in economic, real estate, and land market conditions over time. Individual transactions will require appraisals to establish their value at the time of acquisition based on parcel characteristics and pertinent market conditions at the time of appraisal. Over time, per acre and overall cost estimates typically change for a number of reasons as discussed further in **Chapter 9**.

MSHCP/Original Nexus Study

The initial adoption of the mitigation fees was based on a nexus study completed in July 2003 that included a land valuation analysis that was completed in December 2002. The land valuation analysis assumed the acquisition of vacant and unentitled lands in the Criteria Cells. The land value analysis provided planning-level estimates of per acre land values by grouped land use designation and by Area Plan. Planning-level land value estimates were based on sales comparables. The land value estimates indicated per acre land values that were primarily driven by differentiation in land use category. The land use designation categories represent groupings of the broad number of land use designations present in the Study Area. **Table 11** summarizes the per-acre land value ranges and resulting averages. Based on this analysis, an overall weighted average of \$13,100 per acre was applied in the MSHCP financial sections in the Original Nexus Study.

Table 11 Per-Acre Land Value Estimates—2003 Dollars (2003 Nexus Study)

Land Use Designation	Value Range	Resulting Average *
Open Space	\$2,500 to \$10,000 per acre	\$ 8,000 per acre
Rural/Agricultural	\$5,000 to \$25,000 per acre	\$11,000 per acre
Community Development	\$20,000 to \$80,000 per acre	\$45,000 per acre
Overall (1)	\$2,500 to \$80,000 per acre	Varied (1)

* Per acre values rounded to the nearest 1,000.

(1) Reported overall average land value per acre depends on mix of land types. Number varies by documents, though \$13,100 per acre was overall value applied in the MSHCP financing sections.

Source: Original 2003 Nexus Study

RCA Experience to Date

Table 12 summarizes average RCA land acquisition costs to date. Including land purchased shortly before the MSHCP was adopted through the end of 2018, costs for Local Permittee land acquisitions summed to \$352.5 million in nominal dollar terms, an average of \$9,400 per acre. However, for the year 2018, about 2,100 acres were acquired at the higher average per acre cost of \$13,200 per acre.

Table 12 Local Conservation Costs Through 2018

Item	Pre-MSHCP through 2018	2018
Total Acres Acquired (1)	37,547	2,066
Total Cost (millions)	\$352.5	\$27.4
Cost per Acre (Nominal \$s)	\$9,400	\$13,200

(1) Includes all acres purchased; does not include acres conserved via easement.

Sources: Western Riverside County Regional Conservation Authority MSHCP Annual Report 2018; Economic & Planning Systems, Inc.

To date, the overall historical level of per acre land acquisition expenditures is well below the original 2004 per acre land value estimates. The cost of RCA acquisitions during this timeframe were kept relatively low by concentrating more on lower cost parcels (larger parcels in remote areas with limited development potential). In 2018, as in the future, the average cost per acre is expected to be higher than this historical average due to the characteristics of land still needing to be acquired.

New Land Value Analysis and Conclusions

New 2019 per acre land value estimates were developed based on recent historical transactions as reported in the sales comparables sections of appraisals conducted for RCA acquisitions. This data set provided a substantial inventory of over 150 land sales between 2012 and 2017 that supported conclusions concerning per acre land values by key land value characteristic.

Similar to the Original Nexus Study, land values were determined to be substantially affected by land use designation and by parcel size. Land values were developed for twelve different value categories based on combinations of three land use designations and four different size ranges.

Based on the land valuation data and detailed GIS analysis by RCA staff, parcels were divided into three groups of development potential based on their land use designation: ²⁴

- **Open Space.** Low development potential land use designations included open space, rural mountainous, and rural residential.
- **Rural.** Medium development potential land use designations include agriculture and rural communities land use designations.
- **Community Development.** High development potential land use designations include all community development designations, including residential, non-residential, and other community development designations.

In addition to these three land use designation groupings reflecting different levels of development potential, parcels were also divided by parcel size. The land value information indicated a per acre value distinction between the following parcels sizes:

- Parcels less than 5 acres.
- Parcels between 5 and 20 acres.
- Parcels between 20 and 80 acres.
- Parcels over 80 acres.

Based on the analysis of the sales comparables, **Table 13** shows the planning level per acre land value by land use designation grouping/size range in 2017 dollars.

Table 13 Planning Level Per Acre Land Value Estimates by Category

Land Use Designation	Per Acre Land Value (\$ / Acre) ¹			
	Less than 5 Acres	5 - 19.99 Acres	20 - 79.99 Acres	80 + Acres
Open Space	\$11,761	\$5,091	\$3,949	\$1,866
Rural	\$33,363	\$11,553	\$8,337	\$5,531
Community Development	\$177,414	\$76,050	\$72,369	\$24,335

1. Most land sale comparables used for pricing are from 2013 to 2017 and were converted to 2017 dollars using BLS CPI adjustments for the Los Angeles-Riverside-Orange County area.

Sources: Economic & Planning Systems, Inc.

²⁴ RCA staff developed a consistent set of land use designation categories across different jurisdictions in the Study Area for the purposes of this study. These formed the basis of the development potential categories.

The average land value per acre for future RCA acquisitions is dependent on the different land values per acre as well as the expected distribution of future acquisitions. The actual land to be acquired is uncertain and is dependent on the availability of land through willing sellers. However, based on the conservation needs by Area Plan, the suitable land available for protection, as well as the specific linkages that must be created between the core reserve areas, RCA staff provided sufficient information for EPS to develop a general expression of parcels by characteristic to support the land value analysis. An illustration of the expected distribution of acres by land use designation and size range is provided in **Table 14**.

Table 14 Illustrative Distribution of Land Acquisitions by Land Use and Size

Land Use Designation	Conservation Scenario (Acres) (1)				Total
	Less than 5 Acres	5 - 19.99 Acres	20 - 79.99 Acres	80 + Acres	
Open Space	535	1,531	3,626	4,654	10,346
Rural	1,901	17,241	26,802	29,428	75,371
Community Development	<u>638</u>	<u>1,707</u>	<u>3,613</u>	<u>4,384</u>	<u>10,342</u>
Total Purchases by Acreage	3,074	20,479	34,041	38,466	96,059

1. Conservation scenario analysis was conducted in 2017 so overall acres acquired more than those required as of end of 2019.

Sources: RCA; Economic & Planning Systems, Inc.

Applying the per acre land values in **Table 13** to the illustrative land conservation distribution in **Table 14** provides an estimate of the aggregate land value, supporting the estimate of the average planning level land value per acre in 2017-dollar terms (see **Table 15**).

Table 15 Aggregate Land Value of Remaining Areas (2017 dollars)

Land Use Designation	Land Comparables by Acres				Total
	Less than 5 Acres	5 - 19.99 Acres	20 - 79.99 Acres	80 + Acres	
Open Space	\$6,292,633	\$7,795,633	\$14,319,467	\$8,682,942	\$37,090,674
Rural	\$63,411,345	\$199,183,566	\$223,437,526	\$162,777,034	\$648,809,470
Community Development	<u>\$113,198,910</u>	<u>\$129,817,405</u>	<u>\$261,456,200</u>	<u>\$106,682,740</u>	<u>\$611,155,254</u>
Total Cost of Purchases	\$182,902,887	\$336,796,603	\$499,213,192	\$278,142,716	\$1,297,055,399
% of Total	14%	26%	38%	21%	100%

1. This table is the average land value per acre multiplied by the Conservation Scenario. See **Table E-1** and **E-2**.

Sources: RCA; Economic & Planning Systems, Inc.

As shown in **Table 15**, the aggregate land value of the approximately 96,000 acres remaining to be protected as part of the MSHCP as of 2017 is estimated at about \$1.3 billion in 2017 dollars. This represents an average land value of about \$13,500 per acre. To convert this land value into 2019 dollars terms (similar to the rest of the analysis), EPS indexed the value to about \$14,300 per acre in 2019-dollar terms.²⁵

Other Costs—Administration, Management, and Monitoring

Program administration, reserve management, and reserve monitoring are required functions that require annual funding. The forecasts for each of these cost categories are described below.

Administration and Professional Service Costs

The Western Riverside County Regional Conservation Authority is responsible for implementing the MSHCP. Since 2004, RCA staff members have directed the acquisition, management, and monitoring of the local portion of the Additional Reserve Land (ARL) required by the MSHCP, monitored State and federal Public/Quasi-Public lands and the State and federal portions of the ARL, and undertook all of the administrative tasks associated with maintaining the permit.

Costs categorized in this fee study under MSHCP administration include all RCA staff costs and other costs like building rents and average expenditures on non-acquisition related professional services that are not anticipated to vary as the size of the ARL increases. The forecast for the acquisition period assumes that these costs will remain at approximately \$4.2 million in constant 2019 dollars, increasing with inflation but not increasing as the size of the ARL grows (see **Table 16**). This includes salaries and benefits of about \$2.3 million annually and about \$1.5 million in professional services, supplies, and other costs.

²⁵ Two years of inflation (2017 – 2019) based on by BLS CPI adjustment for Riverside-San Bernardino-Ontario Metro Area.

Table 16 Administrative and Professional Services Costs

Expenditures	RCA FY16/17- 18/19 3-Year Average of Actuals	CPI Adjusted to 2019\$ ¹
Total Salaries and Employee Benefits	\$2,219,261	\$2,288,495
Professional Services and Supplies		
Environmental		
Legal	\$394,320	\$406,621
Auditing, Accounting & Financial Services	\$101,717	\$104,891
GIS Services	\$10,000	\$10,312
Personnel Services	\$13,920	\$14,354
Real Estate Services	\$653,774	\$674,169
<u>Other Services</u>	<u>\$247,979</u>	<u>\$255,715</u>
Subtotal	\$1,421,710	\$1,466,062
Other Charges	<u>\$388,145</u>	<u>\$400,254</u>
Total	\$4,029,116	\$4,154,811

(1) Three year average CPI-adjusted by one year, the average of the annual CPI adjustments for the three years.

Sources: Western Riverside County Regional Conservation Authority; Bureau of Labor Statistics;

Management and Monitoring

Reserve Management

The MSHCP describes reserve management activities focused on maintaining and improving habitat conditions and ecosystem functions including habitat and landscape-based activities and species-specific activities. For the purposes of this analysis, the average per acre cost estimate for Reserve Management as reported in the RCA actual spending for FY 2018-19 has been used to inform cost projections through the full acquisition period. Because RCA staff and relevant contractors have indicated that the current spending on staff capacity is not adequate to accomplish necessary management with existing land holdings, additional staffing and associated expenditures have been added to the current reserve management expenditures. Specifically, three new full time equivalent (FTE) positions are added to the current 2019 spending for reserve management. Overall, the 2019 per acre reserve management cost of \$25.39 per acre was adjusted to \$32.70 per acre (2019 dollars) to account for three new mid-level park ranger FTEs. While as of the end of 2019 about 40,200 acres were under management, ultimately, reserve management activities will cover the entire 97,000 acres to be acquired by the RCA.

Biological Monitoring

The purpose of biological monitoring is to provide Reserve Managers with information and data upon which reserve management decisions will be made. According to the MSHCP, the monitoring program must provide “sufficient, scientifically reliable data for Reserve Managers to assess the MSHCP’s effectiveness at meeting resource objectives and achieving or maintaining a

healthy MSHCP Conservation Area in perpetuity.” Unlike the RCA’s reserve management activities which are limited to local ARL acres, the RCA will ultimately be responsible for monitoring all 500,000 acres of the reserve lands mandated under the MSHCP. The acreage currently being monitored totals roughly 408,000 acres. For the purposes of this analysis, the \$1.1 million annual cost estimate based on FY 2018-19 actual spending was used to inform cost projections through the full acquisition period. Because current staff capacity is not adequate to accomplish necessary biological monitoring with existing land holdings, to address the additional land acquisitions, two new full time equivalent (FTE) positions are added to the current 2019 spending for reserve monitoring. The 2019 per acre reserve monitoring cost of \$2.67 was adjusted to \$3.01 (2019 dollars) to account for two new entry-level biologist FTEs. (see **Table 17**). This constant dollar per acre cost was assumed to apply throughout the period of implementation.

Reserve Management and Biological Monitoring Costs

Table 17 summarizes estimated per acre costs for reserve management and monitoring in 2019 dollars. Applying these per acre costs (in 2019 dollars) to current acreage under management and monitoring projects results in annual costs of \$1.32 million and \$1.23 million, respectively. The annual reserve management and biological monitoring costs increase as new acquisitions occur.

Table 17 Management and Monitoring Anticipated Costs in 2004 and 2019 Dollars

Item	Actual FY 2019 Spending
Reserve Management¹	
Acres under Management	40,212
Existing Reserve Management Expenses	\$1,021,000
<u>Additional Staff Capacity Required³</u>	<u>\$294,000</u>
Total Reserve Management Expenses	\$1,315,000
\$/Acre	\$32.70
\$/Acre without additional staff capacity	\$25.39
Biological Monitoring²	
Acres being Monitored	408,820
Existing Biological Monitoring Expenses	\$1,092,000
<u>Additional Staff Capacity Required³</u>	<u>\$140,000</u>
Total Biological Monitoring Expenses	\$1,232,000
\$/Acre	\$3.01
\$/Acre without additional staff capacity	\$2.67

1. Reserve Management costs include Parks & Open Space contract fees, maintenance of motor vehicles, and HOA dues.

2. Biological Monitoring costs include SAWA contract fees, office and computer supplies, training, private mileage reimbursement, building rent, and rental vehicles/fuel.

3. Current staff capacity is not sufficient to accomplish necessary management and monitoring. An Expanded staff capacity scenario envisions adding 3 FTE mid-level park rangers to Reserve Management and 2 FTE entry-level biologists to Reserve Monitoring, with salaries and benefits of \$98,000 and \$70,000

Sources: Western Riverside County Regional Conservation Authority; and Economic & Planning Systems, Inc.

Endowment Funding

The overall permit period was set at 75 years, ending in 2079. To cover ongoing management and monitoring costs beyond the duration when mitigation fees will be collected, the establishment of a non-depleting endowment is required. In other words, the endowment must be sufficient such that expected average interest revenues (after inflation and transaction costs) can cover the ongoing costs associated with administration, management and monitoring in perpetuity. This section summarizes the estimated cost of establishing this endowment under the different scenarios. A key assumption is that the endowment must be fully established by

the end of the land acquisition period as it is assumed that no more mitigation fees will be collected at that time.²⁶

For the purposes of this analysis, we have assumed that habitat management and habitat monitoring costs continue in full, while administration costs are reduced by half following the end of the land acquisition period. All of these costs then continue in perpetuity. As a result and as shown in **Table 18**, the endowment is sized to cover the expected annual management and monitoring costs and 50 percent of the administration costs, totaling \$6.8 million (2019 dollars) once all lands have been acquired.

Table 18 Annual Implementation Cost Estimate (2019\$)

Cost Categories	Annual Cost by Last Year of Land Acquisition Period	Adjustment	Annual Post-Land Acquisition Cost
Ongoing Habitat Management	\$3,172,063	100%	\$3,172,063
Ongoing Habitat Monitoring	\$1,506,776	100%	\$1,506,776
Administration ¹	\$4,154,811	50%	\$2,077,406
Total	\$8,833,650		\$6,756,244

1. Administration includes salaries and benefits, accounting, auditing and reporting, contracts, etc.. Assumes less administration is needed following the land acquisition period; ongoing administrative needs include oversight, auditing and reporting, and board staffing.

Sources: Western Riverside County Regional Conservation Authority; and Economic & Planning Systems, Inc.

Consistent with many regional habitat conservation plans, the average annual net, real (allowing for inflation and institutional fees) interest rate is assumed to be three (3) percent.²⁷ Under all extension scenarios, the total required endowment funding is \$225.2 million. Because the longer extension periods provide more time for the accrual of interest revenues, the net endowment cost (that must be funded by mitigation fees) is different for each scenario. **Table 19** shows the consistent total endowment funding required by scenario as well as the different levels of aggregate endowment interest and associated net endowment funding requirement. For a detailed time-series accounting of endowment funding by extension scenario, see **Appendix II**.

²⁶ It is important to note that the RCA has collected a distinct set of endowment funds for situations where specific conservation activities are required over-and-above the core activities covered by this endowment calculation.

²⁷ This assumes that the implementing entity can use investment vehicles that may be not be typical for Riverside County.

Table 19 Endowment Funding (2019\$), by Extension Scenario

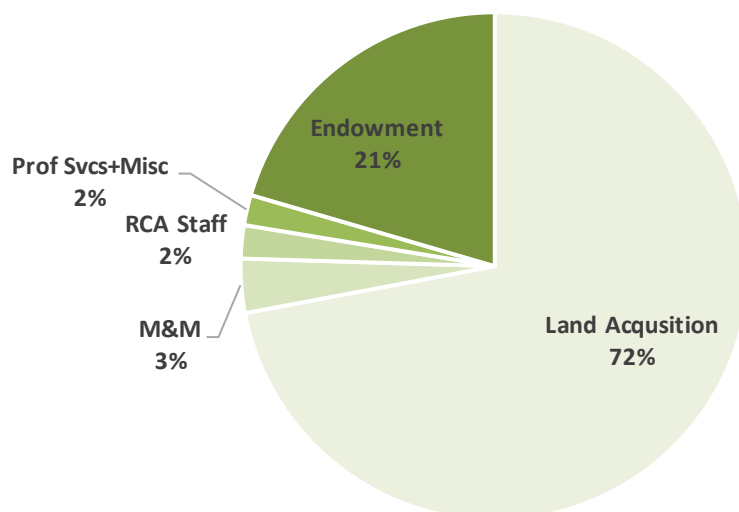
Item	No Extension	5-Year Extension	10-Year Extension	15-Year Extension
Total Endowment Funding Required	\$225,208,133	\$225,208,133	\$225,208,133	\$225,208,133
(Less) Endowment Interest	<u>(\$25,695,187)</u>	<u>(\$40,679,628)</u>	<u>(\$54,846,349)</u>	<u>(\$68,206,990)</u>
Net Endowment Funding Required	\$199,512,947	\$184,528,506	\$170,361,785	\$157,001,144

Sources: Western Riverside County Regional Conservation Authority; and Economic & Planning Systems, Inc.

Total Implementation Costs

Implementation costs include land costs, administrative and professional services expenses, management and monitoring costs, and the required net endowment funding. The remaining MSHCP implementation costs, as described in detail in the preceding sections, are all estimated in 2019 constant dollar terms. Under the Baseline/ No Extension scenario, as shown in **Figure 9**, the \$702 million in estimated land acquisition costs make up 72 percent of the total implementation cost of \$974 million. Administrative costs total about 4 percent of total costs, management and monitoring sum to 3 percent of total implementation costs, and the endowment constitutes 21 percent of total costs.

Figure 9 Comparison of Costs by Category



Total implementation costs vary by extension scenario. Land acquisition costs are the same for all scenarios. Administrative, management and monitoring costs increase the longer the acquisition period is extended, but the endowment funding required decreases the longer the

acquisition period is extended. As shown in **Table 20**, total implementation costs range from \$890 million to \$967 million depending on the extension period. Although total costs over time increase with longer extension periods the per-year implementation costs decrease with longer extension periods, as shown in **Table 21**. For a detailed time-series of all implementation costs excepting the endowment, see **Appendix I**.

Table 20 Total Implementation Costs (2019\$*), by Extension Scenario

Local Permittee MSHCP Implementation Costs	Total for 2020 - 2028 No Extension	Total for 2020 - 2033 5-Yr Extension	Total for 2020 - 2038 10-Yr Extension	Total for 2020 - 2043 15-Yr Extension
Land ¹	\$701,931,902	\$701,931,902	\$701,931,902	\$701,931,902
Management & Monitoring	\$33,582,193	\$51,646,790	\$69,711,387	\$87,775,983
RCA Staff ²	\$20,596,453	\$32,038,927	\$43,481,401	\$54,923,875
Professional Services and Supplies ²	\$13,194,561	\$20,524,873	\$27,855,185	\$35,185,497
Loan Repayment ³	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Other Costs ^{2,4}	\$3,602,285	\$5,603,554	\$7,604,824	\$9,606,093
Net Endowment Funding Required	<u>\$199,512,947</u>	<u>\$184,528,506</u>	<u>\$170,361,785</u>	<u>\$157,001,144</u>
Total Costs	\$974,420,341	\$998,274,552	\$1,022,946,483	\$1,048,424,494

1. Land value estimates at \$14,288 per acre in 2019 dollar terms.

2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.

3. RCA has "Other Long Term Obligations" totaling \$5 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of \$1 million starting in FY 2018.

4. Includes rents and all other miscellaneous expenses.

NOTE: In some cases numbers may not perfectly sum due to rounding.

Sources: Western Riverside County RCA; Economic & Planning Systems, Inc.

* All costs are provided in constant 2019 dollar terms. Costs will change over time due to inflation and other factors. These changes will be addressed through the fee indexing/ updating process that will include automatic inflation-indexed fee changes annually based on the regional Consumer Price Index and periodic comprehensive updates to the Nexus Study.

Table 21 Average Annual Implementation Costs (2019\$), by Extension Scenario

Local Permittee MSHCP Implementation Costs	Average Annual			
	2020 - 2028 No Extension	2020 - 2033 5-Yr Extension	2020 - 2038 10-Yr Extension	2020 - 2043 15-Yr Extension
Land ¹	\$77,992,434	\$50,137,993	\$36,943,784	\$29,247,163
Management & Monitoring	\$3,731,355	\$3,689,056	\$3,669,020	\$3,657,333
RCA Staff ²	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495
Professional Services and Supplies ²	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062
Loan Repayment ³	\$222,222	\$142,857	\$105,263	\$83,333
Other Costs ^{2,4}	\$400,254	\$400,254	\$400,254	\$400,254
Net Endowment Funding Required	<u>\$22,168,105</u>	<u>\$13,180,608</u>	<u>\$8,966,410</u>	<u>\$6,541,714</u>
Total Costs	\$108,268,927	\$71,305,325	\$53,839,289	\$43,684,354

1. Land value estimates at \$14,288 per acre in 2019 dollar terms.

2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.

3. RCA has "Other Long Term Obligations" totaling \$5 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of \$1 million starting in FY 2018.

4. Includes rents and all other miscellaneous expenses.

NOTE: In some cases numbers may not perfectly sum due to rounding.

Sources: Western Riverside County RCA; Economic & Planning Systems, Inc.

6. RCA NON-FEE REVENUES

MSHCP Forecast of Non-Fee Revenues

The MSHCP forecast an array of revenue sources, in addition to fee revenue, supporting the conservation program. These sources were anticipated to total about 44 percent of the revenue for the program, including:

- **Transportation funding** – includes the Measure A sales tax which is authorized through 2039 and other transportation funding sources such as the Transportation Uniform Mitigation Fees (TUMF) charged on new development. Note that the MSHCP envisioned up to \$121 million of Measure A money to the HCP.
- **Other infrastructure projects** – funding from this source was not quantified in the MSHCP but reflected the expectation that local public construction projects such as schools, administrative facilities, libraries, jails, and other projects like flood control and utility projects would mitigate the construction through the payment of a per-acre fee.²⁸ Since MSHCP adoption, the standard contribution has been three to five percent of total project costs.
- **Landfill contributions** – Landfill tipping fees have been used in the County since the 1990 for conservation programs. Under county permitting of landfills, the County has committed to divert portions of tipping fees to MSHCP implementation.

Table 22 and **Figure 10** summarizes the revenue forecasts under the MSHCP. Including the fee revenues, these sources totaled \$1.07 billion or an estimated average almost \$43 million per year for 25-years (in 2004 dollars). Excluding fee revenues, a total of \$18.84 million in annual revenues were forecast, including Measure A funding, \$10 million each year from other transportation projects, and \$4.0 million from land fill contributions.

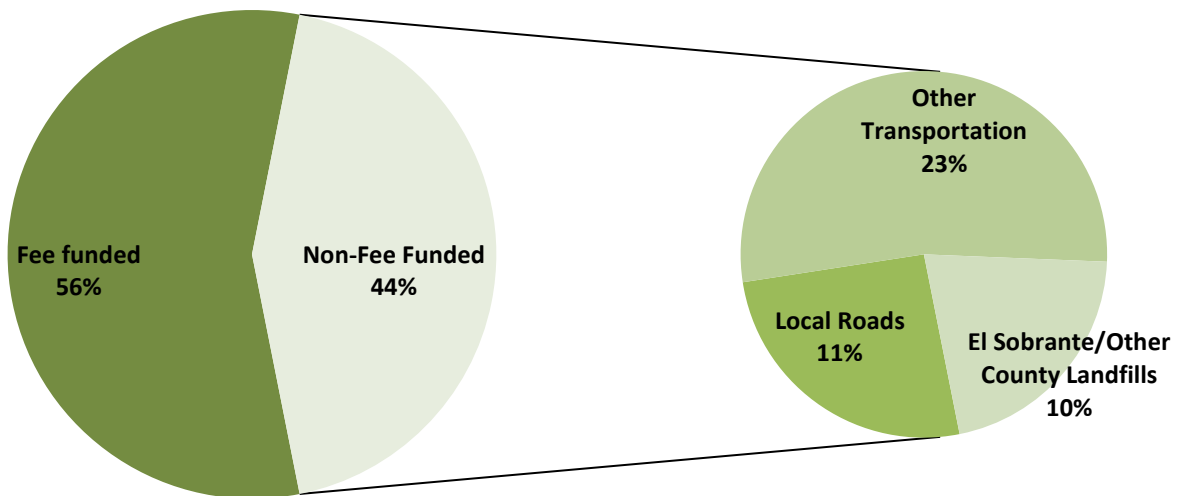
As described further below, at this point, the average annual funding from non-fee revenues sources are well below the MSCHP forecast. Measure A, a voter-approved ½ cent sales tax measure did provide substantial funding as envisioned (though is now fully used/ allocated) and, collectively, the other non-fee funding sources are well beyond what was originally envisioned.

²⁸ See Chapter 8.5.1 Funding Sources in the MSHCP.

Table 22 2004 MSHCP Anticipated Funding Sources

MSHCP Anticipated Funding Source	Estimate (millions)	% of Avg/Yr Total	(millions over 25 years)
Fee Funded Sources:			
Cities and County Development Mitigation Fees	\$539.6	50%	\$21,584,000
Density Bonus Fees	<u>\$66.0</u>	6%	<u>\$2,640,000</u>
Non-Fee Funded Sources	\$605.6		\$24,224,000.0
Public Funding Sources			
Local Roads (Measure A)	\$121.0	11%	\$4,840,000
Other Transportation	\$250.0	23%	\$10,000,000
Other infrastructure Projects	unknown	0%	\$0
El Sobrante Landfill	\$90.0	8%	\$3,600,000
County Landfills	\$10.0	1%	\$400,000
Eagle Mountain Landfill	unknown	0%	\$0
New Regional funding	<u>unknown</u>	0%	<u>\$0</u>
Non-Fee Funded Sources	\$471.0		\$18,840,000
Total, Local Funds	\$1,076.6	100%	\$43,064,000

Figure 10 2004 MSHCP Anticipated Funding Sources



New Forecast of Non-Fee Revenues

Non-fee revenues to the RCA are projected to be \$6.85 million annually in 2019 dollars. This estimate was derived from a line by line review of the major revenue items for a 3-year period from FY 2016-17 to FY 2018-19, projections by collection entities (e.g., TUMF revenue), and recent dynamics likely to affect the revenue source (e.g., greater diversion of trash to recycling

will likely reduce tipping fees). The estimates have been inflated from a three-year average to 2019 dollars, as detailed in **Table 23**.

Table 23 Annual Non-Fee Revenue Projection (2019\$s)

Non-Fee Revenue Item	RCA FY16/17- 18/19 3-Year Average of Actuals	CPI Adjusted to 2019\$
<u>Transportation Mitigation¹</u>		
TUMF Revenue-Developer Fees	<u>\$950,000</u>	<u>\$979,637</u>
Subtotal	<u>\$950,000</u>	<u>\$979,637</u>
<u>Tipping Fee</u>	<u>\$3,865,728</u>	<u>\$3,986,326</u>
<u>Public Project Mitigation</u>		
PSE Mitigation Fee ²	NA	\$500,000
Other Gov MSHCP Infrastructure	\$284,570	\$293,448
Other Gov MSHCP Civic Projects	\$93,629	\$96,550
Flood Control District	<u>\$293,084</u>	<u>\$302,227</u>
Subtotal	<u>\$671,283</u>	<u>\$1,192,225</u>
<u>Other Revenue</u>		
Interest and Other Sources	\$467,073	\$481,644
Rents	\$80,531	\$83,043
Joint Project Review Fees	<u>\$124,762</u>	<u>\$128,654</u>
Subtotal	<u>\$672,365</u>	<u>\$693,341</u>
Total Revenue	NA	<u>\$6,851,529</u>

1. All Measure A funding was provided prior to 2020 and the associated obligations have been met.

2. Participating Special Entities fees. This does not include Developer Mitigation Fees. These fees vary widely year over year, \$500,000 is used as an annual average per the recommendation of RCA staff.

Sources: Western Riverside County Regional Conservation Authority; Economic & Planning Systems, Inc.

7. MITIGATION FEE CALCULATION

The revised Local Development Mitigation Fee is based on a generally similar methodology to the Original Nexus Study that ensures the fee level is proportional to the development impact. This methodology looks at the remaining conservation requirements associated with Local Permittee obligations under the MSHCP and associated Incidental Take Permit and Implementing Agreement, determines the remaining Local Permittee implementation cost, subtracts out reasonable estimates of non-fee revenues and other contributions, to determine the overall fee-funding obligation. This obligation is then divided among the new development forecast to determine the required mitigation fee. In others words, the original 2003 and updated 2020 Local Development Mitigation Fee estimates are the outcome of the following formula (the 2003 and 2020 Nexus Studies differ in their process of allocating funding required between land uses):

1. Implementation Costs

minus

2. Non-Fee Funding

equals

3. Outstanding Funding Required

divided by

4. Development Forecast

equals

5. Local Development Mitigation Fee Schedule

Table 24 summarizes the estimated Net Implementation Costs, Expected Acres of Development, and the associated per gross acre mitigation fee. As shown, the average mitigation fee per gross acre decreases with each extension as similar levels of net implementation costs are spread across more development. **Tables 25** through **28** provide the detailed calculations that determine the total net MSHCP implementation costs shown in **Table 24**. As noted in **Chapter 1**, for residential development, the per-gross-acre fee is translated into a per-unit fee schedule for administrative continuity.

Table 24 MSHCP Implementation Costs and Per Acre Mitigation Fees

Fee Per Acre	No Extension	5-Year Extension	10-Year Extension	15-Year Extension
Net Cost	\$912,756,583	\$902,353,150	\$892,767,438	\$883,987,805
Acres of Development				
Residential	14,026	21,818	29,611	37,403
Nonresidential	<u>6,239</u>	<u>9,705</u>	<u>13,171</u>	<u>16,637</u>
Total	20,265	31,523	42,782	54,040
Mitigation Fee per Acre	\$45,041	\$28,625	\$20,868	\$16,358

Sources: Southern California Association of Governments; Western Riverside County RCA; Economic & Planning Systems, Inc.

Table 25 Recommended Fee Level—No Extension

Item	Total for 2020 - 2029 (Years 17 - 25)	9 yrs	Average Annual	% of Total Cost/ Funding Need
Local Permittee Land Requirements				
Preservation Requirement	56,788 acres		6,310 acres	na
(less) HANS Dedication	<u>10,000</u> acres		<u>1,111</u> acres	na
Local Permittee Acquisition	46,788 acres		5,199 acres	na
Local Permittee MSHCP Implementation Costs				
Land (1)	\$701,931,902		\$77,992,434	72.0%
Management & Monitoring	\$33,582,193		\$3,731,355	3.4%
RCA Staff (2)	\$20,596,453		\$2,288,495	2.1%
Professional Services and Supplies (2)	\$13,194,561		\$1,466,062	1.4%
Loan Repayment (3)	\$2,000,000		\$222,222	0.2%
Other Costs (2) (4)	\$3,602,285		\$400,254	0.4%
Net Endowment Funding Required	\$199,512,947		\$22,168,105	20.5%
Total Costs	\$974,420,341		\$108,268,927	100.0%
Offsetting Revenues (5) (exc. Private Development Mitigation)				
Public Project Mitigation (6)	\$10,730,025		\$1,192,225	1.4%
Transportation Mitigation (7)	\$8,816,731		\$979,637	1.1%
Tipping Fees	\$35,876,934		\$3,986,326	4.6%
Other Revenues (8)	<u>\$6,240,068</u>		<u>\$693,341</u>	<u>0.8%</u>
Total Selected Revenues	\$61,663,758		\$6,851,529	8.0%
Funding Required from Private Development Mitigation				
Net Cost	\$912,756,583		\$101,417,398	93.7%
Mitigation Fee Estimates (per gross acre of development)				
<u>Growth Projection:</u>				
Development	2020 - 2028		Annual	
Residential Units	79,000		8,778	
Residential Acres	14,026		1,558	
Non-Residential Acres	6,239		693	
Total Acres	20,265		2,252	
Mitigation Fee	\$45,041 per acre			

- (1) Land value estimates at \$14,288 per acre in 2019 dollar terms plus a 5% transaction cost.
(2) RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(3) RCA has "Other Long Term Obligations" totaling \$2 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of \$1 million over the course of two years.
(4) Includes rents and all other miscellaneous expenses.
(5) RCA Revenues are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(6) Includes Flood Control District, PSE mitigation payments, and other government MSHCP infrastructure & civic project revenues.
(7) Includes TUMF fees.
(8) Includes interest and other sources, rents, and joint project review fees.

Sources: MSHCP; RCA; Economic & Planning Systems, Inc.

Table 26 Recommended Fee Level—5-Year Extension

Item	Total for 2020 - 2034 (Years 17 - 30)	14 yrs	Average Annual	% of Total Cost/ Funding Need
Local Permittee Land Requirements				
Preservation Requirement	56,788 acres		4,056 acres	na
(less) HANS Dedication	<u>10,000</u> acres		<u>714</u> acres	na
Local Permittee Acquisition	46,788 acres		3,342 acres	na
Local Permittee MSHCP Implementation Costs				
Land (1)	\$701,931,902		\$50,137,993	70.3%
Management & Monitoring	\$51,646,790		\$3,689,056	5.2%
RCA Staff (2)	\$32,038,927		\$2,288,495	3.2%
Professional Services and Supplies (2)	\$20,524,873		\$1,466,062	2.1%
Loan Repayment (3)	\$2,000,000		\$142,857	0.2%
Other Costs (2) (4)	\$5,603,554		\$400,254	0.6%
Net Endowment Funding Required	\$184,528,506		\$13,180,608	18.5%
Total Costs	\$998,274,552		\$71,305,325	100.0%
Offsetting Revenues (5) (exc. Private Development Mitigation)				
Public Project Mitigation (6)	\$16,691,150		\$1,192,225	2.1%
Transportation Mitigation (7)	\$13,714,915		\$979,637	1.7%
Tipping Fees	\$55,808,564		\$3,986,326	6.9%
Other Revenues (8)	<u>\$9,706,772</u>		<u>\$693,341</u>	<u>1.2%</u>
Total Selected Revenues	\$95,921,402		\$6,851,529	11.8%
Funding Required from Private Development Mitigation				
Net Cost	\$902,353,150		\$64,453,796	90.4%
Mitigation Fee Estimates (per gross acre of development)				
<u>Growth Projection:</u>				
Development	2020 - 2033		Annual	
Residential Units (4.2 DU/Acres)	122,456		8,747	
Residential Acres	21,818		1,558	
Non-Residential Acres	9,705		693	
Total Acres	31,523		2,252	
Mitigation Fee	\$28,625 per acre			

- (1) Land value estimates at \$14,288 per acre in 2019 dollar terms plus a 5% transaction cost.
(2) RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(3) RCA has "Other Long Term Obligations" totaling \$2 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of \$1 million over the course of two years.
(4) Includes rents and all other miscellaneous expenses.
(5) RCA Revenues are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(6) Includes Flood Control District, PSE mitigation payments, and other government MSHCP infrastructure & civic project revenues.
(7) Includes TUMF fees.
(8) Includes interest and other sources, rents, and joint project review fees.

Sources: MSHCP; RCA; Economic & Planning Systems, Inc.

Table 27 Recommended Fee Level—10-Year Extension

Item	Total for 2020 - 2039 (Years 17 - 35)	19 yrs	Average Annual	% of Total Cost/ Funding Need
Local Permittee Land Requirements				
Preservation Requirement	56,788 acres		2,989 acres	na
(less) HANS Dedication	<u>10,000</u> acres		<u>526</u> acres	na
Local Permittee Acquisition	46,788 acres		2,463 acres	na
Local Permittee MSHCP Implementation Costs				
Land (1)	\$701,931,902		\$36,943,784	68.6%
Management & Monitoring	\$69,711,387		\$3,669,020	6.8%
RCA Staff (2)	\$43,481,401		\$2,288,495	4.3%
Professional Services and Supplies (2)	\$27,855,185		\$1,466,062	2.7%
Loan Repayment (3)	\$2,000,000		\$105,263	0.2%
Other Costs (2) (4)	\$7,604,824		\$400,254	0.7%
Net Endowment Funding Required	\$170,361,785		\$8,966,410	16.7%
Total Costs	\$1,022,946,483		\$53,839,289	100.0%
Offsetting Revenues (5) (exc. Private Development Mitigation)				
Public Project Mitigation (6)	\$22,652,275		\$1,192,225	2.7%
Transportation Mitigation (7)	\$18,613,099		\$979,637	2.2%
Tipping Fees	\$75,740,195		\$3,986,326	8.9%
Other Revenues (8)	<u>\$13,173,476</u>		<u>\$693,341</u>	<u>1.5%</u>
Total Selected Revenues	\$130,179,045		\$6,851,529	15.3%
Funding Required from Private Development Mitigation				
Net Cost	\$892,767,438		\$46,987,760	87.3%
Mitigation Fee Estimates (per gross acre of development)				
<u>Growth Projection:</u>				
Development	2020 - 2038		Annual	
Residential Units (4.2 DU/Acres)	166,000		8,737	
Residential Acres	29,611		1,558	
Non-Residential Acres	13,171		693	
Total Acres	42,782		2,252	
Mitigation Fee	\$20,868 per acre			

- (1) Land value estimates at \$14,288 per acre in 2019 dollar terms plus a 5% transaction cost.
(2) RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(3) RCA has "Other Long Term Obligations" totaling \$2 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of \$1 million over the course of two years.
(4) Includes rents and all other miscellaneous expenses.
(5) RCA Revenues are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(6) Includes Flood Control District, PSE mitigation payments, and other government MSHCP infrastructure & civic project revenues.
(7) Includes TUMF fees.
(8) Includes interest and other sources, rents, and joint project review fees.

Sources: MSHCP; RCA; Economic & Planning Systems, Inc.

Table 28 Recommended Fee Level—15-Year Extension

Item	Total for 2020 - 2044 (Years 17 - 40)	24 yrs	Average Annual	% of Total Cost/ Funding Need
Local Permittee Land Requirements				
Preservation Requirement	56,788 acres		2,366 acres	na
(less) HANS Dedication	<u>10,000</u> acres		<u>417</u> acres	na
Local Permittee Acquisition	46,788 acres		1,950 acres	na
Local Permittee MSHCP Implementation Costs				
Land (1)	\$701,931,902		\$29,247,163	67.0%
Management & Monitoring	\$87,775,983		\$3,657,333	8.4%
RCA Staff (2)	\$54,923,875		\$2,288,495	5.2%
Professional Services and Supplies (2)	\$35,185,497		\$1,466,062	3.4%
Loan Repayment (3)	\$2,000,000		\$83,333	0.2%
Other Costs (2) (4)	\$9,606,093		\$400,254	0.9%
Net Endowment Funding Required	\$157,001,144		\$6,541,714	15.0%
Total Costs	\$1,048,424,494		\$43,684,354	100.0%
Offsetting Revenues (5) (exc. Private Development Mitigation)				
Public Project Mitigation (6)	\$28,613,400		\$1,192,225	3.2%
Transportation Mitigation (7)	\$23,511,283		\$979,637	2.6%
Tipping Fees	\$95,671,825		\$3,986,326	10.7%
Other Revenues (8)	<u>\$16,640,181</u>		<u>\$693,341</u>	<u>1.9%</u>
Total Selected Revenues	\$164,436,689		\$6,851,529	18.4%
Funding Required from Private Development Mitigation				
Net Cost	\$883,987,805		\$36,832,825	84.3%
Mitigation Fee Estimates (per gross acre of development)				
<u>Growth Projection:</u>				
Development	2020 - 2043		Annual	
Residential Units	210,000		8,750	
Residential Acres	37,403		1,558	
Non-Residential Acres	16,637		693	
Total Acres	54,040		2,252	
Mitigation Fee	\$16,358 per acre			

- (1) Land value estimates at \$14,288 per acre in 2019 dollar terms plus a 5% transaction cost.
(2) RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(3) RCA has "Other Long Term Obligations" totaling \$2 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of \$1 million over the course of two years.
(4) Includes rents and all other miscellaneous expenses.
(5) RCA Revenues are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(6) Includes Flood Control District, PSE mitigation payments, and other government MSHCP infrastructure & civic project revenues.
(7) Includes TUMF fees.
(8) Includes interest and other sources, rents, and joint project review fees.

Sources: MSHCP; RCA; Economic & Planning Systems, Inc.

8. MITIGATION FEE ACT (NEXUS) FINDINGS

Mitigation fees are utilized in California to finance public facilities necessary to mitigate impacts stemming from new development. In 1987, the California Legislature adopted the Mitigation Fee Act to provide a framework for the application and administration of such fees. Current prevailing practice among the majority of approved and permitted regional multiple-species Habitat Conservation Plans is that any habitat mitigation fees are to be adopted by the relevant jurisdictions (cities and Counties) consistent with the Mitigation Fee Act.²⁹ As discussed further in **Chapter 9**, the adoption of fees under the Mitigation Fee Act includes a number of auditing and reporting requirements.

The Mitigation Fee Act, defined in California Government Code Sections 66000 to 66025, requires all public agencies to document five findings when establishing or increasing a fee as a condition for new development. These findings were made when the Western Riverside County MSHCP Local Development Mitigation Fees were first justified and established.³⁰

This Chapter of the Western Riverside Habitat Conservation Plan Nexus Fee Study was prepared to describe how the proposed increase in the Local Development Mitigation Fee satisfies the five statutory findings required by the Mitigation Fee Act and is based on the appropriate nexus between new development and the imposition of a mitigation fee. The five statutory findings required for the establishment of a mitigation fee are summarized in the sections below and supported by the technical analysis in the prior chapters of this Study.

Purpose of Fee

Identify the purpose of the fee. (66001(a)(1))

The purpose of the Local Development Mitigation Fee is to contribute to the funding required to implement the MSCHP and, as a result, help maintain the incidental take permits for new private and public development in Western Riverside County under the federal and State Endangered Species Acts. Maintaining the incidental take permit is necessary to allow for future development, and without the development community paying for the cost of the MSHCP, individual applicants will need to apply independently for development approval under federal and State law if the project impacts a threaten or endangered species. The federal Endangered Species Act specifically requires that the applicant for incidental take permit “ensure that adequate funding for the plan will be provided.”³¹ In addition, the Local Development Mitigation Fee helps provide the regional benefit of streamlined economic development in Western Riverside County as well as

²⁹ In addition to the current Western Riverside County habitat mitigation fee, see also the Coachella Valley habitat mitigation fee, the San Joaquin County Multi-Species Habitat Conservation and Open Space Fee, and the East Contra Costa County HCP/NCCP mitigation fee.

³⁰ See the Final Mitigation Nexus Report for the Western Riverside County Multiple Species Habitat Conservation Plan, published July 1, 2003.

³¹ See Section 1539(a)(2)Biii of the federal Endangered Species Act.

the provision of contiguous open spaces that will serve as a community amenity to residents, workers, and visitors.

Use of Fee Revenues

Identify the use to which the fee is to be put. If the use is financing public facilities, the facilities shall be identified. That identification may, but need not, be made by reference to a capital improvement plan as specific in Section 65403 or 66002, may be made in applicable general or specific plan requirements, or may be made in other public documents that identify the public facilities for which the fee is charged. (66001(a)(2)).

The MSHCP is the public document that outlines the actions required as a whole and the particular set of actions required by the Local Permittees (and the Regional Conservation Agency as their agent) to obtain incidental take permits—associated with State and federal Endangered Species Act requirements—for new public and private development in Western Riverside County. Failure to meet the requirements of the MSHCP will result in an inability to obtain or maintain incidental take permits through the MSHCP, which would require future development to secure individual take authorization if the project impacts a threaten or endangered species.

Revenues from the Local Development Mitigation Fee will be used, in conjunction with other local and regional funding sources, to fund the conservation actions identified as the responsibility of Local Permittees in the MSHCP. The revenue from the Local Development Mitigation Fee will be used to help fund the appropriate habitat acquisition (land acquisition and associated transaction costs), maintenance and monitoring of habitat land (preserve management, monitoring, and adaptive management), and program management, administration, and oversight activities and costs.³² **Chapter 3** of this report describes the Local Permittee conservation requirements, progress to date, and the remaining actions required under the MSHCP.

Relationship

Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed. (66001(a)(3)).

The implementation of the MSHCP, and the mitigation fee as a fundamental part of it, will benefit all new development by mitigating their collective impacts on covered species and associated habitat. All new public and private development in the Plan area will affect habitat and species either directly, indirectly, or as a cumulative effect. New infrastructure development, for example, in addition to its direct effects, will support new development on other parcels and other locations in the Plan Area. Similarly, new private development will require new infrastructure and also result in additional demand for new developments through linkages—for

³² Consistent with the interpretation applied to the majority of permitted and approved regional, multiple-species Habitat Conservation Plans in California and guidance from RCA Counsel, the Local Development Mitigation Fee is assumed to fund its proportionate share (as determined by the technical analysis and constrained by the statutory requirements) of applicable MSHCP implementation costs including, but also limited to, habitat acquisition costs (and associated transaction costs), the costs of managing and monitoring the habitat preserves in perpetuity, and the administrative and other costs of managing the overall program.

example, the need for new housing to accommodate new workers at commercial developments or the need for new retail developments to serve new residents at residential developments. In other words, all new development in Western Riverside County will benefit from the incidental take permits obtained through the MSHCP and via the use of the mitigation fee revenues.

In addition, the incidental take permits are necessary to permit any future development within the Plan Area, and in order to obtain or maintain such incidental take permits, the MSHCP must be fully funded. Because funding the MSHCP is required in order to allow for future development under the MSHCP, there is a direct relationship between the proposed use of the mitigation fee and development within the Plan Area.

Need

Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed. (66001(a)(4)).

Without new development, no MSHCP would be necessary and no further habitat conservation would be required under the federal and State Endangered Species Acts. To allow for any future development under the Plan, the MSHCP must be fully funded. New development in the Plan Area, as noted above, will directly, indirectly, or cumulatively affect species and habitat in Western Riverside County. Because of this, development of the MSHCP was undertaken to provide a regional, streamlined approach to benefit future development of all types in Western Riverside County, including the development and improvements envisioned under the numerous General Plans and the Regional Transportation Improvement Program. The requirements of the MSHCP (habitat acquisition, management and monitoring, program administration) are a direct result of the regional approach to mitigation that is engendered by all new development in the Plan Area under the pertinent environmental regulations. Meeting the requirements of the MSHCP is necessary to obtain the necessary federal authorization to develop within the Plan Area.

Proportionality

Determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed. (66001(b)).

The MSHCP includes detailed conservation requirements based on the scientific evaluations that form the basis of the MSHCP. Based on these evaluations, conservation responsibilities were allocated between the Local Permittees and other agencies, such as the State and federal governments. The Local Development Mitigation Fee appropriately provides funding towards the fulfillment of the Local Permittee conservation requirements. Furthermore, the Local Permittee obligations are not fully funded through the Local Development Mitigation Fee revenues. Other local and regional funding sources, such as the Measure A sales tax and tipping fees, provide additional mitigation and/or offsetting revenues that reduce the overall cost allocation to the Local Development Mitigation Fee Program. In addition, consistent with the relationship between new development in Western Riverside County and the need for the public facilities (conservation program) described above, proportional attribution between new development is ensured

through the determination of a consistent per gross acre Local Development Mitigation Fee.³³ As a result, the Local Development Mitigation Fee level calculations are carefully determined to fund only the proportionate (or less than) conservation costs attributable to the new development on which the fee is imposed and to allocate the fee levels proportionally across all new development. It is this process of careful calculation based on the requirements of the MSHCP that is the subject of a substantial portion of this Nexus Study (see **Chapters 2** through **7**).

³³ Determining habitat mitigation fees on a gross acre basis is the clearest way of ensuring proportionate cost allocations among new developments and is a common practice among adopted Habitat Conservation Plans. For purposes of implementation/administrative consistency, for residential uses, the per-gross-acre fee is translated into per unit fees for different density categories.

9. FEE IMPLEMENTATION

The revised Local Development Mitigation Fee must be implemented consistent with the MSHCP (and associated Incidental Take Permit and Implementing Agreement) as well as the California Mitigation Fee Act. A detailed set of guidance is included in the Fee Implementation Handbook to support clarity and specificity in the implementation of the updated fee program by Local Permittees. The sections below summarize some of the key implementation and administration actions to be consistent with the requirements.

Adoption of Revised LDMF

- Consistent with the MSHCP and associated documents, each Local Permittee (i.e., all participating jurisdictions) must adopt an updated LDMF ordinance and a fee resolution establishing the revised fee level as prescribed by the Mitigation Fee Act.
- Consistent with the Mitigation Fee Act, the revised ordinance and associated fee resolution will become effective after a public hearing and 60 days.
- RCA Legal Counsel will prepare a Fee Update Ordinance and Resolution to facilitate the consistent adoption of the updated LDMF by Local Permittees.

Securing Supplemental Funding

The revised Local Development Mitigation Fee is set at the level that would cover the Local Permittee cost obligations once expected non-fee revenues are subtracted out. To the extent any discounts/exemptions are provided to new Western Riverside County development below the updated fee level, additional funding will be required to backfill the fee revenue losses. To the extent, these revenues do not make up for any fee discounts provided, other sources of funding will need to be sought by the RCA and the Local Permittees to fulfill their Plan obligations. At the same time, if new substantial funding sources become available to the RCA for Local Permittee obligations, the funding required through fees may decrease, in turn reducing the required fee levels through a new update.

Annual Review

The Mitigation Fee Act (at Gov. C. §§ 66001(c), 66006(b)(1)) stipulates that each local agency that requires payment of a fee make specific information available to the public annually within 180 days of the last day of the fiscal year. In this case, the RCA can play this role on behalf of the Local Permittees. This information includes the following:

- A description of the type of fee in the account.
- The amount of the fee (the mitigation fee schedule).
- The beginning and ending balance of the fund.
- The amount of fees collected and interest earned.
- Identification of the improvements constructed.
- The total cost of the improvements constructed.
- The fees expended to construct the improvement.
- The percentage of total costs funded by the fee.

If sufficient fees have been collected to fund specific improvement cost, the agency must specify the approximate date for the cost of that improvement. Because of the dynamic nature of growth and MSHCP implementation costs and consistent with current practice, the RCA should continue to monitor progress towards MSHCP goals. The overall adequacy of the fee revenues and other available funding in meeting these goals should be reviewed annually.

Surplus Funds

The Mitigation Fee Act also requires that if any portion of a fee remains unexpended or uncommitted in an account for 5 years or more after deposit of the fee, the RCA, acting for the Local Permittees, shall make findings once each year (1) to identify the purpose to which the fee is to be put, (2) to demonstrate a reasonable relationship between the fee and the purpose for which it was charged, (3) to identify all sources and amounts of funding anticipated to complete financing of incomplete improvements, and (4) to designate the approximate dates on which the funding identified in (3) is expected to be deposited into the appropriate fund (§66001(d)).

If adequate funding has been collected for specific investments, an approximate date must be specified as to when the cost of the investment will be incurred. If the findings show no need for the unspent funds, or if the conditions discussed above are not met, and the administrative costs of the refund do not exceed the refund itself, the local agency that has collected the funds must refund them (Gov. C §66001(e)(f)).

Annual and Periodic Updates

Consistent with the current practice, the Fee Ordinance should allow an automatic annual adjustment to the fees based on the Riverside-San Bernardino-Ontario, CA Consumer Price Index (CPI) or a similar inflation factor. In addition, a more comprehensive update should be conducted required periodically. The Nexus Study and the technical information it contains should be reviewed periodically by the RCA (every five years is recommended) to identify any necessary refinements to the Local Development Mitigation Fees to ensure adequate funding to implement the MSHCP. Under certain circumstances, the RCA may wish to conduct a Nexus Study update sooner than after five years. For example, to the extent there are significant and unexpected changes in implementation costs, in the level of non-fee funding, and/ or the level of fee-paying private development over time, a more immediate fee update may be appropriate.

APPENDIX I:

Detailed Time Series of Implementation Costs



All Implementation Costs Over Time – No Extension

Habitat Lands/ Cost Items	Factors	End of:								
		17 2020	18 2021	19 2022	20 2023	21 2024	22 2025	23 2026	24 2027	25 2028
ACRES										
Land Acquisition Costs										
Land Acquisition (Annual)										
Local		6,310	6,310	6,310	6,310	6,310	6,310	6,310	6,310	6,310
(less) HANS/JPR Dedications		<u>-1,250</u>	<u>-1,250</u>	<u>-1,250</u>	<u>-1,250</u>	<u>-1,250</u>	<u>-1,250</u>	<u>-1,250</u>	<u>-1,250</u>	0
Total Local		5,060	5,060	5,060	5,060	5,060	5,060	5,060	5,060	6,310
State/Fed		<u>3,821</u>	<u>3,821</u>	<u>3,821</u>	<u>3,821</u>	<u>3,821</u>	<u>3,821</u>	<u>3,821</u>	<u>3,821</u>	<u>3,821</u>
Total		8,881	8,881	8,881	8,881	8,881	8,881	8,881	8,881	10,131
Land Acquisition (Cumulative)										
Local ¹		45,272	50,332	55,391	60,451	65,511	70,571	75,630	80,690	87,000
State/Fed		25,429	29,251	33,072	36,893	40,715	44,536	48,357	52,179	56,000
Local - HANS/JPR Dedications		<u>1,250</u>	<u>2,500</u>	<u>3,750</u>	<u>5,000</u>	<u>6,250</u>	<u>7,500</u>	<u>8,750</u>	<u>10,000</u>	<u>10,000</u>
Total		71,951	82,082	92,213	102,344	112,476	122,607	132,738	142,869	153,000
Management and Monitoring Costs										
Reserve Summary										
	Financial Responsibility									
	Monitoring	Management								
State/ Federal										
PQP	RCA	State/ Fed	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000
ARL	RCA	State	<u>25,429</u>	<u>29,251</u>	<u>33,072</u>	<u>36,893</u>	<u>40,715</u>	<u>44,536</u>	<u>48,357</u>	<u>52,179</u>
Total			307,429	311,251	315,072	318,893	322,715	326,536	330,357	334,179
Local										
PQP	RCA	Non-RCA Local	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000
ARL	RCA	RCA	<u>46,522</u>	<u>52,832</u>	<u>59,141</u>	<u>65,451</u>	<u>71,761</u>	<u>78,071</u>	<u>84,380</u>	<u>90,690</u>
Total			111,522	117,832	124,141	130,451	136,761	143,071	149,380	155,690
Total Acres under RCA Management			46,522	52,832	59,141	65,451	71,761	78,071	84,380	90,690
Total Acres under RCA Monitoring			418,951	429,082	439,213	449,344	459,476	469,607	479,738	489,869
COSTS (all constant 2019 dollars)										
Land Acquisition Costs										
Local, ARL, Annual	\$14,288 \$/Acre		\$72,294,065	\$72,294,065	\$72,294,065	\$72,294,065	\$72,294,065	\$72,294,065	\$72,294,065	\$72,294,065
Land Transaction Costs	5% of acquisition costs		\$3,614,703	\$3,614,703	\$3,614,703	\$3,614,703	\$3,614,703	\$3,614,703	\$3,614,703	\$3,614,703
Total, Land Acquisition Costs			\$75,908,768	\$75,908,768	\$75,908,768	\$75,908,768	\$75,908,768	\$75,908,768	\$75,908,768	\$75,908,768
Local, ARL, Cumulative			\$75,908,768	\$151,817,536	\$227,726,304	\$303,635,072	\$379,543,840	\$455,452,608	\$531,361,376	\$607,270,144
Management and Monitoring Costs										
Management, Annual	\$32.70 \$/Acre		\$1,521,340	\$1,727,681	\$1,934,021	\$2,140,361	\$2,346,702	\$2,553,042	\$2,759,382	\$2,965,723
Management Cumulative			\$1,521,340	\$3,249,021	\$5,183,042	\$7,323,403	\$9,670,105	\$12,223,147	\$14,982,530	\$17,948,252
Monitoring, Annual	\$3.01 \$/Acre		\$1,262,531	\$1,293,061	\$1,323,592	\$1,354,122	\$1,384,653	\$1,415,184	\$1,445,714	\$1,476,245
Monitoring Cumulative			\$1,262,531	\$2,555,592	\$3,879,184	\$5,233,306	\$6,617,959	\$8,033,143	\$9,478,857	\$10,955,102
Endowment Costs										
Net Endowment Funding, Annual			\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105
Net Endowment Funding, Cumulative			\$22,168,105	\$44,336,210	\$66,504,316	\$88,672,421	\$110,840,526	\$133,008,631	\$155,176,736	\$177,344,842
Administrative Costs ²										
RCA Staff Costs			\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495
Professional Services			\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062
Loan Repayment ³			\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0
Other			\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254
Total Annual			\$5,154,811	\$5,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811
Cumulative Costs			\$5,154,811	\$10,309,622	\$14,464,433	\$18,619,244	\$22,774,055	\$26,928,866	\$31,083,677	\$35,238,488
TOTAL ALL COSTS										
TOTAL Annual			\$106,015,555	\$106,252,426	\$105,489,297	\$105,726,168	\$105,963,039	\$106,199,910	\$106,436,781	\$106,673,652
TOTAL Cumulative			\$106,015,555	\$212,267,981	\$317,757,279	\$423,483,447	\$529,446,486	\$635,646,396	\$742,083,177	\$848,756,829

1. All local land conserved to date, including all HANS dedications to date, are captured in the year 17 number.

2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.

3. Annual administrative costs decrease in year 19 due to assumption that loan repayment is completed.

All Implementation Costs Over Time – 5 Year Extension

Habitat Lands/ Cost Items	Factors	End of:													
		17 2020	18 2021	19 2022	20 2023	21 2024	22 2025	23 2026	24 2027	25 2028	26 2029	27 2030	28 2031	29 2032	30 2033
ACRES															
Land Acquisition Costs															
Land Acquisition (Annual)															
Local		4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056
(less) HANS/JPR Dedications		-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	0	0	0	0	0	0
Total Local		2,806	2,806	2,806	2,806	2,806	2,806	2,806	2,806	4,056	4,056	4,056	4,056	4,056	4,056
State/Fed		2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457
Total		5,263	5,263	5,263	5,263	5,263	5,263	5,263	5,263	6,513	6,513	6,513	6,513	6,513	6,513
Land Acquisition (Cumulative)															
Local ¹		43,018	45,825	48,631	51,437	54,243	57,050	59,856	62,662	66,719	70,775	74,831	78,887	82,944	87,000
State/Fed		24,065	26,521	28,978	31,434	33,891	36,347	38,804	41,261	43,717	46,174	48,630	51,087	53,543	56,000
Local - HANS/JPR Dedications		1,250	2,500	3,750	5,000	6,250	7,500	8,750	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Total		68,333	74,846	81,359	87,871	94,384	100,897	107,410	113,923	120,436	126,949	133,461	139,974	146,487	153,000
Management and Monitoring Costs															
Reserve Summary															
		Financial Responsibility													
		Monitoring	Management												
<u>State/ Federal</u>															
PQP	RCA	State/ Fed		282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000
ARL	RCA	State		24,065	26,521	28,978	31,434	33,891	36,347	38,804	41,261	43,717	46,174	48,630	51,087
Total				306,065	308,521	310,978	313,434	315,891	318,347	320,804	323,261	325,717	328,174	330,630	333,087
<u>Local</u>															
PQP	RCA	Non-RCA Local		65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000
ARL	RCA	RCA		44,268	48,325	52,381	56,437	60,493	64,550	68,606	72,662	76,719	80,775	84,831	88,887
Total				109,268	113,325	117,381	121,437	125,493	129,550	133,606	137,662	141,719	145,775	149,831	153,887
Total Acres under RCA Management				44,268	48,325	52,381	56,437	60,493	64,550	68,606	72,662	76,719	80,775	84,831	88,887
Total Acres under RCA Monitoring				415,333	421,846	428,359	434,871	441,384	447,897	454,410	460,923	467,436	473,949	480,461	486,974
COSTS (all constant 2019 dollars)															
Land Acquisition Costs															
Local, ARL, Annual	\$14,288 \$/Acre			\$40,096,188	\$40,096,188	\$40,096,188	\$40,096,188	\$40,096,188	\$40,096,188	\$40,096,188	\$40,096,188	\$57,956,178	\$57,956,178	\$57,956,178	\$57,956,178
Land Transaction Costs	5% of acquisition costs			\$2,004,809	\$2,004,809	\$2,004,809	\$2,004,809	\$2,004,809	\$2,004,809	\$2,004,809	\$2,004,809	\$2,897,809	\$2,897,809	\$2,897,809	\$2,897,809
Total, Land Acquisition Costs				\$42,100,997	\$42,100,997	\$42,100,997	\$42,100,997	\$42,100,997	\$42,100,997	\$42,100,997	\$42,100,997	\$60,853,987	\$60,853,987	\$60,853,987	\$60,853,987
Local, ARL, Cumulative				\$42,100,997	\$84,201,995	\$126,302,992	\$168,403,990	\$210,504,987	\$252,605,985	\$294,706,982	\$336,807,979	\$397,661,967	\$458,515,954	\$519,369,941	\$580,223,928
Management and Monitoring Costs															
Management, Annual	\$32.70 \$/Acre			\$1,447,647	\$1,580,295	\$1,712,942	\$1,845,589	\$1,978,237	\$2,110,884	\$2,243,532	\$2,376,179	\$2,508,826	\$2,641,474	\$2,774,121	\$2,906,768
Management Cumulative				\$1,447,647	\$3,027,942	\$4,740,884	\$6,586,474	\$8,564,710	\$10,675,595	\$12,919,126	\$15,295,305	\$17,804,131	\$20,445,605	\$23,219,726	\$26,126,494
Monitoring, Annual	\$3.01 \$/Acre			\$1,251,627	\$1,271,254	\$1,290,880	\$1,310,507	\$1,330,134	\$1,349,761	\$1,369,388	\$1,389,015	\$1,408,641	\$1,428,268	\$1,447,895	\$1,467,522
Monitoring Cumulative				\$1,251,627	\$2,522,880	\$3,813,761	\$5,124,268	\$6,454,402	\$7,804,163	\$9,173,551	\$10,562,566	\$11,971,207	\$13,399,476	\$14,847,371	\$16,314,893
Endowment Costs															
Net Endowment Funding, Annual				\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608
Net Endowment Funding, Cumulative				\$13,180,608	\$26,361,215	\$39,541,823	\$52,722,430	\$65,903,038	\$79,083,645	\$92,264,253	\$105,444,860	\$118,625,468	\$131,806,076	\$144,986,683	\$158,167,291
Administrative Costs ²															
RCA Staff Costs				\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495
Professional Services				\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062
Loan Repayment ³				\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other				\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254
Total Annual Costs				\$5,154,811	\$5,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811
Cumulative Costs				\$5,154,811	\$10,309,622	\$14,464,433	\$18,619,244	\$22,774,055	\$26,928,866	\$31,083,677	\$35,238,488	\$39,393,299	\$43,548,111	\$47,702,922	\$51,857,733
TOTAL ALL COSTS															
TOTAL Annual				\$63,135,690	\$63,287,964	\$62,440,239	\$62,592,513	\$62,744,787	\$62,897,061	\$63,049,335	\$63,201,610	\$82,106,873	\$82,259,148	\$82,411,422	\$82,563,696
TOTAL Cumulative				\$63,135,690	\$126,423,655	\$188,863,893	\$251,456,406	\$314,201,193	\$377,098,254	\$440,147,590	\$503,349,199	\$585,456,073	\$667,715,220	\$750,126,642	\$832,690,338

1. All local land conserved to date, including all HANS dedications to date, are captured in the year 17 number.

2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.

3. Annual administrative costs decrease in year 19 due to assumption that loan repayment is completed.

All Implementation Costs Over Time – 10 Year Extension

Habitat Lands/ Cost Items	Factors	End of:																			
		17 2020	18 2021	19 2022	20 2023	21 2024	22 2025	23 2026	24 2027	25 2028	26 2029	27 2030	28 2031	29 2032	30 2033	31 2034	32 2035	33 2036	34 2037	35 2038	
ACRES																					
Land Acquisition Costs																					
Land Acquisition (Annual)																					
Local		2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	
(less) Anheuser Busch purchase		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(less) HANS/JPR Dedications		-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	0	0	0	0	0	0	0	0	0	0	0	
Total Local		1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	
State/Fed		1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	
Total		3,549	3,549	3,549	3,549	3,549	3,549	3,549	3,549	4,799	4,799	4,799	4,799	4,799	4,799	4,799	4,799	4,799	4,799	4,799	
Land Acquisition (Cumulative)																					
Local ¹		41,951	43,690	45,429	47,167	48,906	50,645	52,384	54,123	57,112	60,100	63,089	66,078	69,067	72,056	75,045	78,033	81,022	84,011	87,000	
State/Fed		23,418	25,228	27,038	28,848	30,659	32,469	34,279	36,089	37,899	39,709	41,519	43,329	45,139	46,949	48,760	50,570	52,380	54,190	56,000	
Local - HANS/JPR Dedications		1,250	2,500	3,750	5,000	6,250	7,500	8,750	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	
Total		66,619	71,418	76,217	81,016	85,815	90,614	95,413	100,212	105,011	109,809	114,608	119,407	124,206	129,005	133,804	138,603	143,402	148,201	153,000	
Management and Monitoring Costs																					
Reserve Summary																					
		Financial Responsibility																			
		Monitoring									Management										
State/ Federal																					
PQP	RCA	State/ Fed	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	
ARL	RCA	State	23,418	25,228	27,038	28,848	30,659	32,469	34,279	36,089	37,899	39,709	41,519	43,329	45,139	46,949	48,760	50,570	52,380	54,190	
Total			305,418	307,228	309,038	310,848	312,659	314,469	316,279	318,089	319,899	321,709	323,519	325,329	327,139	328,949	330,760	332,570	334,380	336,190	
Local																					
PQP	RCA	Non-RCA Local	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	
ARL	RCA	RCA	43,201	46,190	49,179	52,167	55,156	58,145	61,134	64,123	67,112	70,100	73,089	76,078	79,067	82,056	85,045	88,033	91,022	94,011	
Total			108,201	111,190	114,179	117,167	120,156	123,145	126,134	129,123	132,112	135,100	138,089	141,078	144,067	147,056	150,045	153,033	156,022	159,011	
Total Acres under RCA Management			43,201	46,190	49,179	52,167	55,156	58,145	61,134	64,123	67,112	70,100	73,089	76,078	79,067	82,056	85,045	88,033	91,022	94,011	
Total Acres under RCA Monitoring			413,619	418,418	423,217	428,016	432,815	437,614	442,413	447,212	452,011	456,809	461,608	466,407	471,206	476,005	480,804	485,603	490,402	495,201	
COSTS (all constant 2019 dollars)																					
Land Acquisition Costs																					
Local, ARL, Annual	\$14,288	\$/Acre	\$24,844,562	\$24,844,562	\$24,844,562	\$24,844,562	\$24,844,562	\$24,844,562	\$24,844,562	\$24,844,562	\$42,704,552	\$42,704,552	\$42,704,552	\$42,704,552	\$42,704,552	\$42,704,552	\$42,704,552	\$42,704,552	\$42,704,552	\$42,704,552	
Land Transaction Costs	5%	of acquisition costs	\$1,242,228	\$1,242,228	\$1,242,228	\$1,242,228	\$1,242,228	\$1,242,228	\$1,242,228	\$1,242,228	\$2,135,228	\$2,135,228	\$2,135,228	\$2,135,228	\$2,135,228	\$2,135,228	\$2,135,228	\$2,135,228	\$2,135,228	\$2,135,228	
Total, Land Acquisition Costs			\$26,086,790	\$26,086,790	\$26,086,790	\$26,086,790	\$26,086,790	\$26,086,790	\$26,086,790	\$26,086,790	\$44,839,780	\$44,839,780	\$44,839,780	\$44,839,780	\$44,839,780	\$44,839,780	\$44,839,780	\$44,839,780	\$44,839,780	\$44,839,780	
Local, ARL, Cumulative			\$26,086,790	\$52,173,581	\$78,260,371	\$104,347,161	\$130,433,952	\$156,520,742	\$182,607,532	\$208,694,323	\$253,534,102	\$298,373,882	\$343,213,662	\$388,053,442	\$432,893,222	\$477,733,002	\$522,572,782	\$567,412,562	\$612,252,342	\$657,092,122	\$701,931,902
Management and Monitoring Costs																					
Management, Annual	\$32.70	\$/Acre	\$1,412,740	\$1,510,480	\$1,608,220	\$1,705,961	\$1,803,701	\$1,901,441	\$1,999,181	\$2,096,921	\$2,194,661	\$2,292,402	\$2,390,142	\$2,487,882	\$2,585,622	\$2,683,362	\$2,781,102	\$2,878,843	\$2,976,583	\$3,074,323	\$3,172,063
Management Cumulative			\$1,412,740	\$2,923,220	\$4,531,441	\$6,237,402	\$8,041,102	\$9,942,543	\$11,941,725	\$14,038,646	\$16,233,307	\$18,525,709	\$20,915,851	\$23,403,733	\$25,989,355	\$28,672,717	\$31,453,819	\$34,332,662	\$37,309,245	\$40,383,568	\$43,555,631
Monitoring, Annual	\$3.01	\$/Acre	\$1,246,462	\$1,260,924	\$1,275,386	\$1,289,847	\$1,304,309	\$1,318,771	\$1,333,233	\$1,347,695	\$1,362,157	\$1,376,619	\$1,391,081	\$1,405,542	\$1,420,004	\$1,434,466	\$1,448,928	\$1,463,390	\$1,477,852	\$1,492,314	\$1,506,776
Monitoring Cumulative			\$1,246,462	\$2,507,386	\$3,782,771	\$5,072,619	\$6,376,928	\$7,695,699	\$9,028,932	\$10,376,627	\$11,738,784	\$13,115,403	\$14,506,484	\$15,912,026	\$17,332,030	\$18,766,497	\$20,215,425	\$21,678,815	\$23,156,667	\$24,648,980	\$26,155,756
Endowment Costs																					
Net Endowment Funding, Annual			\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410
Net Endowment Funding, Cumulative			\$8,966,410	\$17,932,819	\$26,899,229	\$35,865,639	\$44,832,049	\$53,798,458	\$62,764,868	\$71,731,278	\$80,697,687	\$89,664,097	\$98,630,507	\$107,596,917	\$116,563,326	\$125,529,736	\$134,496,146	\$143,462,556	\$152,428,965	\$161,395,375	\$170,361,785
Administrative Costs ²																					
RCA Staff Costs			\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495
Professional Services			\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062
Loan Repayment ³			\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Other			\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254
Total Annual Costs			\$5,154,811	\$5,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811
Cumulative Costs			\$5,154,811	\$10,309,622	\$14,464,433	\$18,619,244	\$22,774,055	\$26,928,866	\$31,083,677	\$35,238,488	\$39,393,299	\$43,548,111	\$47,702,922	\$51,857,733	\$56,012,544	\$60,167,355	\$64,322,166	\$68,476,977	\$72,631,788	\$76,786,599	\$80,941,410
TOTAL ALL COSTS																					
TOTAL Annual			\$42,867,213	\$42,979,415	\$42,091,617	\$42,203,819	\$42,316,021	\$42,428,223	\$42,540,425	\$42,652,627	\$61,517,819	\$61,630,021	\$61,742,223	\$61,854,425	\$61,966,627	\$62,078,829	\$62,191,031	\$62,303,233	\$62,415,435	\$62,527,637	\$62,639,839
TOTAL Cumulative			\$42,867,213	\$85,846,628	\$127,938,245	\$170,142,065	\$212,458,086	\$254,886,309	\$297,426,735	\$340,079,362	\$401,597,181	\$463,227,202	\$524,969,425	\$586,823,850	\$648,790,477	\$710,869,307	\$773,060,338	\$835,363,571	\$897,779,006	\$960,306,644	\$1,022,946,483

1. All local land conserved to date, including all HANS dedications to date, are captured in the year 17 number.

2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.

3. Annual administrative costs decrease in year 19 due to assumption that loan repayment is completed.

All Implementation Costs Over Time – 15 Year Extension

Habitat Lands/ Cost Items	Factors	End of:																							
		17 2020	18 2021	19 2022	20 2023	21 2024	22 2025	23 2026	24 2027	25 2028	26 2029	27 2030	28 2031	29 2032	30 2033	31 2034	32 2035	33 2036	34 2037	35 2038	36 2039	37 2040	38 2041	39 2042	40 2043
ACRES																									
Land Acquisition Costs																									
Land Acquisition (Annual)																									
Local		2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366
(less) HANS/JPR Dedications		-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Local		1,116	1,116	1,116	1,116	1,116	1,116	1,116	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	
State/Fed		1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	
Total		2,549	2,549	2,549	2,549	2,549	2,549	2,549	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	
Land Acquisition (Cumulative)																									
Local ¹		41,328	42,444	43,561	44,677	45,793	46,909	48,025	49,141	51,508	53,874	56,240	58,606	60,972	63,338	65,705	68,071	70,437	72,803	75,169	77,535	79,902	82,268	84,634	87,000
State/Fed		23,041	24,474	25,907	27,340	28,773	30,206	31,639	33,072	34,505	35,938	37,371	38,804	40,237	41,670	43,103	44,536	45,969	47,402	48,835	50,268	51,701	53,134	54,567	56,000
Local - HANS/JPR Dedications		1,250	2,500	3,750	5,000	6,250	7,500	8,750	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Total		65,619	69,418	73,218	77,017	80,816	84,615	88,414	92,213	96,013	99,812	103,611	107,410	111,209	115,008	118,808	122,607	126,406	130,205	134,004	137,803	141,603	145,402	149,201	153,000
Management and Monitoring Costs																									
Reserve																									
Summary																									
		Financial Responsibility																							
		Monitoring												Management											
State/ Federal																									
PQP	RCA	State/ Fed	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000
ARL	RCA	State	23,041	24,474	25,907	27,340	28,773	30,206	31,639	33,072	34,505	35,938	37,371	38,804	40,237	41,670	43,103	44,536	45,969	47,402	48,835	50,268	51,701	53,134	54,567
Total			305,041	306,474	307,907	309,340	310,773	312,206	313,639	315,072	316,505	317,938	319,371	320,804	322,237	323,670	325,103	326,536	327,969	329,402	330,835	332,268	333,701	335,134	336,567
Local																									
PQP	RCA	Non-RCA	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000
ARL	RCA	RCA	42,578	44,944	47,311	49,677	52,043	54,409	56,775	59,141	61,508	63,874	66,240	68,606	70,972	73,338	75,705	78,071	80,437	82,803	85,169	87,535	89,902	92,268	94,634
Total			107,578	109,944	112,311	114,677	117,043	119,409	121,775	124,141	126,508	128,874	131,240	133,606	135,972	138,338	140,705	143,071	145,437	147,803	150,169	152,535	154,902	157,268	159,634
Total Acres under RCA Management			42,578	44,944	47,311	49,677	52,043	54,409	56,775	59,141	61,508	63,874	66,240	68,606	70,972	73,338	75,705	78,071	80,437	82,803	85,169	87,535	89,902	92,268	94,634
Total Acres under RCA Monitoring			412,619	416,418	420,218	424,017	427,816	431,615	435,414	439,213	443,013	446,812	450,611	454,410	458,209	462,008	465,808	469,607	473,406	477,205	481,004	484,803	488,603	492,402	496,201
COSTS (all constant 2019 dollars)																									
Land Acquisition Costs																									
Local, ARL, Annual	\$14,288 \$/Acre	\$15,947,780	\$15,947,780	\$15,947,780	\$15,947,780	\$15,947,780	\$15,947,780	\$15,947,780	\$15,947,780	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771	\$33,807,771
Land Transaction Costs	5% of acquisition costs	\$797,389	\$797,389	\$797,389	\$797,389	\$797,389	\$797,389	\$797,389	\$797,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389	\$1,690,389
Total, Land Acquisition Costs		\$16,745,170	\$16,745,170	\$16,745,170	\$16,745,170	\$16,745,170	\$16,745,170	\$16,745,170	\$16,745,170	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159	\$35,498,159
Local, ARL, Cumulative		\$16,745,170	\$33,490,339	\$50,235,509	\$66,980,678	\$83,725,848	\$100,471,017	\$117,216,187	\$133,961,356	\$169,459,515	\$204,957,674	\$240,455,833	\$275,953,992	\$311,452,152	\$346,950,311	\$382,448,470	\$417,946,629	\$453,444,788	\$488,942,947	\$524,441,106	\$559,939,265	\$595,437,424	\$630,935,583	\$666,433,743	\$701,931,902
Management and Monitoring Costs																									
Management, Annual	\$32.70 \$/Acre	\$1,392,378	\$1,469,755	\$1,547,133	\$1,624,511	\$1,701,888	\$1,779,266	\$1,856,643	\$1,934,021	\$2,011,399	\$2,088,776	\$2,166,154	\$2,243,532	\$2,320,909	\$2,398,287	\$2,475,664	\$2,553,042	\$2,630,420	\$2,707,797	\$2,785,175	\$2,862,553	\$2,939,930	\$3,017,308	\$3,094,685	\$3,172,063
Management Cumulative		\$1,392,378	\$2,862,133	\$4,409,266	\$6,033,776	\$7,735,664	\$9,514,930	\$11,371,574	\$13,305,595	\$15,316,993	\$17,405,770	\$19,571,923	\$21,815,455	\$24,136,364	\$26,534,651	\$29,010,315	\$31,563,357	\$34,193,777	\$36,901,574	\$39,686,749	\$42,549,302	\$45,489,232	\$48,506,540	\$51,601,225	\$54,773,288
Monitoring, Annual	\$3.01 \$/Acre	\$1,243,449	\$1,254,898	\$1,266,347	\$1,277,796	\$1,289,245	\$1,300,694	\$1,312,143	\$1,323,592	\$1,335,041	\$1,346,490	\$1,357,939	\$1,369,388	\$1,380,837	\$1,392,286	\$1,403,735	\$1,415,184	\$1,426,633	\$1,438,082	\$1,449,531	\$1,460,980	\$1,472,429	\$1,483,878	\$1,495,327	\$1,506,776
Monitoring Cumulative		\$1,243,449	\$2,498,347	\$3,764,694	\$5,042,490	\$6,331,735	\$7,632,429	\$8,944,572	\$10,268,163	\$11,603,204	\$12,949,694	\$14,307,633	\$15,677,021	\$17,057,857	\$18,450,143	\$19,853,878	\$21,269,062	\$22,695,694	\$24,133,776	\$25,583,307	\$27,044,286	\$28,516,715	\$30,000,593	\$31,495,919	\$33,002,695
Endowment Costs																									
Net Endowment Funding, Annual		\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714
Net Endowment Funding, Cumulative		\$6,541,714	\$13,083,429	\$19,625,143	\$26,166,857	\$32,708,572	\$39,250,286	\$45,792,000	\$52,333,715	\$58,875,429	\$65,417,143	\$71,958,858	\$78,500,572	\$85,042,286	\$91,584,001	\$98,125,715	\$104,667,429	\$111,209,144	\$117,750,858	\$124,292,572	\$130,834,286	\$137,376,001	\$143,917,715	\$150,459,429	\$157,001,144
Administrative Costs ²																									
RCA Staff Costs		\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495	\$2,288,495
Professional Services		\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062	\$1,466,062
Loan Repayment ³		\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other		\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254	\$400,254
Total Annual Costs		\$5,154,811	\$5,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811	\$4,154,811
Cumulative Costs		\$5,154,811	\$10,309,622	\$14,464,433	\$18,619,244	\$22,774,055	\$26,928,866	\$31,083,677	\$35,238,488	\$39,393,299	\$43,548,111	\$47,702,922	\$51,857,733	\$56,012,544	\$60,167,355	\$64,322,166	\$68,476,977	\$72,631,788	\$76,786,599	\$80,941,410	\$85,096,221	\$89,251,032	\$93,405,843	\$97,560,654	\$101,715,465
TOTAL ALL COSTS																									
TOTAL Annual		\$31,077,521	\$31,166,348	\$30,255,175	\$30,344,001	\$30,432,828	\$30,521,655	\$30,610,481	\$30,699,308	\$49,541,124	\$49,629,951	\$49,718,777	\$49,807,604	\$49,896,430	\$49,985,257	\$50,074,084									

APPENDIX II:

Detailed Time Series of Endowment Funding



Annual Cost Estimate for Management and Monitoring, Constant 2019\$

Cost Categories	Annual Cost by Last Year of Land Acquisition Period	Adjustment	Annual Post-Land Acquisition Cost
Ongoing Habitat Management	\$3,172,063	100%	\$3,172,063
Ongoing Habitat Monitoring	\$1,506,776	100%	\$1,506,776
Administration ¹	\$4,154,811	50%	\$2,077,406
Total	\$8,833,650		\$6,756,244

1. Administration includes salaries and benefits, accounting, auditing and reporting, contracts, etc.. Assumes less administration is needed following the land acquisition period; ongoing administrative needs include oversight, auditing and reporting, and board staffing.

Sources: Western Riverside County Regional Conservation Authority; and Economic & Planning Systems, Inc.

Endowment Funding – No Extension Scenario

Item	1	2	3	4	5	6	7	8	9	Post-Permit
New Impact Acres (avg. annual)	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	
Average Per Acre Endowment Fee	\$9,845	\$9,845	\$9,845	\$9,845	\$9,845	\$9,845	\$9,845	\$9,845	\$9,845	
Annual Endowment Funding	\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105	\$22,168,105	
Endowment Balance	\$22,168,105	\$44,336,210	\$67,169,359	\$90,687,502	\$114,911,189	\$139,861,586	\$165,560,496	\$192,030,373	\$219,294,346	
Annual Interest	\$0	\$665,043	\$1,350,038	\$2,055,582	\$2,782,293	\$3,530,804	\$4,301,772	\$5,095,868	\$5,913,787	
Cumulative Interest Earnings	\$0	\$665,043	\$2,015,081	\$4,070,663	\$6,852,955	\$10,383,760	\$14,685,531	\$19,781,399	\$25,695,187	
Total Endowment	\$22,168,105	\$45,001,254	\$68,519,396	\$92,743,083	\$117,693,481	\$143,392,391	\$169,862,268	\$197,126,241	\$225,208,133	
Average Annual Post Permit Interest										\$6,756,244

(1) Endowment fee set to ensure that, at the end of the permit term, the total endowment (including endowment fee revenues and interest) are sufficient to provide annual interest revenues equal to the post-permit annual cost. The real interest rate is assumed to be 3 percent annually.

Assumptions
20,265 impact acres developed
9 year plan
3% interest rate (real, net)
\$6,756,244 annual post-permit cost estimate
\$9,845 Endowment Funding Per Acre of Conservation

Endowment Funding – 5 Year Extension Scenario

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Post-Permit
New Impact Acres (avg. annual)	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	
Average Per Acre Endowment Fee	\$5,854	\$5,854	\$5,854	\$5,854	\$5,854	\$5,854	\$5,854	\$5,854	\$5,854	\$5,854	\$5,854	\$5,854	\$5,854	\$5,854	
Annual Endowment Funding	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	\$13,180,608	
Endowment Balance	\$13,180,608	\$26,361,215	\$39,937,241	\$53,920,547	\$68,323,353	\$83,158,243	\$98,438,180	\$114,176,514	\$130,386,999	\$147,083,799	\$164,281,502	\$181,995,136	\$200,240,180	\$219,032,574	
Annual Interest	\$0	\$395,418	\$802,699	\$1,222,198	\$1,654,282	\$2,099,329	\$2,557,727	\$3,029,877	\$3,516,192	\$4,017,096	\$4,533,027	\$5,064,436	\$5,611,787	\$6,175,559	
Cumulative Interest Earnings	\$0	\$395,418	\$1,198,117	\$2,420,315	\$4,074,598	\$6,173,927	\$8,731,654	\$11,761,531	\$15,277,723	\$19,294,819	\$23,827,846	\$28,892,281	\$34,504,069	\$40,679,628	
Total Endowment	\$13,180,608	\$26,756,633	\$40,739,940	\$55,142,746	\$69,977,636	\$85,257,572	\$100,995,907	\$117,206,392	\$133,903,191	\$151,100,894	\$168,814,529	\$187,059,572	\$205,851,967	\$225,208,133	
Average Annual Post Permit Interest															\$6,756,244

(1) Endowment fee set to ensure that, at the end of the permit term, the total endowment (including endowment fee revenues and interest) are sufficient to provide annual interest revenues equal to the post-permit annual cost. The real interest rate is assumed to be 3 percent annually.

Assumptions	
31,523	impact acres developed
14	year plan
3%	interest rate (real, net)
\$6,756,244	annual post-permit cost estimate
\$5,854	Endowment Funding Per Acre of Conservation

Endowment Funding – 10 Year Extension Scenario

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Post-Permit
New Impact Acres (avg. annual)	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252
Average Per Acre Endowment Fee	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982	\$3,982
Annual Endowment Funding	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410	\$8,966,410
Endowment Balance	\$8,966,410	\$17,932,819	\$27,168,221	\$36,680,686	\$46,478,524	\$56,570,297	\$66,964,823	\$77,671,185	\$88,698,738	\$100,057,118	\$111,756,249	\$123,806,354	\$136,217,962	\$149,001,918	\$162,169,393	\$175,731,892	\$189,701,266	\$204,089,722	\$218,909,831	
Annual Interest	\$0	\$268,992	\$546,054	\$831,428	\$1,125,363	\$1,428,117	\$1,739,952	\$2,061,143	\$2,391,970	\$2,732,721	\$3,083,695	\$3,445,198	\$3,817,547	\$4,201,065	\$4,596,089	\$5,002,964	\$5,422,046	\$5,853,699	\$6,298,303	
Cumulative Interest Earnings	\$0	\$268,992	\$815,047	\$1,646,475	\$2,771,838	\$4,199,955	\$5,939,907	\$8,001,051	\$10,393,020	\$13,125,742	\$16,209,437	\$19,654,635	\$23,472,182	\$27,673,247	\$32,269,336	\$37,272,301	\$42,694,347	\$48,548,046	\$54,846,349	
Total Endowment	\$8,966,410	\$18,201,812	\$27,714,276	\$37,512,114	\$47,603,887	\$57,998,413	\$68,704,775	\$79,732,328	\$91,090,708	\$102,789,839	\$114,839,944	\$127,251,552	\$140,035,508	\$153,202,983	\$166,765,482	\$180,734,856	\$195,123,312	\$209,943,421	\$225,208,133	
Average Annual Post Permit Interest																				\$6,756,244

(1) Endowment fee set to ensure that, at the end of the permit term, the total endowment (including endowment fee revenues and interest) are sufficient to provide annual interest revenues equal to the post-permit annual cost. The real interest rate is assumed to be 3 percent annually.

Assumptions
42,782 impact acres developed
19 year plan
3% interest rate (real, net)
\$6,756,244 annual post-permit cost estimate
\$3,982 Endowment Funding Per Acre of Conservation

Endowment Funding – 15 Year Extension Scenario

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
New Impact Acres (avg. annual)	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252
Average Per Acre Endowment Fee	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905
Annual Endowment Funding	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714
Endowment Balance	\$6,541,714	\$13,083,429	\$19,821,394	\$26,761,499	\$33,909,807	\$41,272,564	\$48,856,204	\$56,667,353	\$64,712,836	\$72,999,684	\$81,535,138	\$90,326,655	\$99,381,917	\$108,708,838	\$118,315,566
Annual Interest	\$0	\$196,251	\$398,390	\$606,594	\$821,043	\$1,041,925	\$1,269,435	\$1,503,769	\$1,745,134	\$1,993,739	\$2,249,803	\$2,513,548	\$2,785,206	\$3,065,014	\$3,353,216
Cumulative Interest Earnings	\$0	\$196,251	\$594,642	\$1,201,235	\$2,022,278	\$3,064,204	\$4,333,638	\$5,837,407	\$7,582,541	\$9,576,280	\$11,826,083	\$14,339,631	\$17,124,837	\$20,189,851	\$23,543,067
Total Endowment	\$6,541,714	\$13,279,680	\$20,219,785	\$27,368,093	\$34,730,850	\$42,314,490	\$50,125,639	\$58,171,122	\$66,457,970	\$74,993,424	\$83,784,941	\$92,840,203	\$102,167,123	\$111,773,852	\$121,668,781
Average Annual Post Permit Interest															

16	17	18	19	20	21	22	23	24	Post-Permit
2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	
\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	\$2,905	
\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	\$6,541,714	
\$128,210,496	\$138,402,273	\$148,899,805	\$159,712,262	\$170,849,092	\$182,320,028	\$194,135,092	\$206,304,607	\$218,839,209	
\$3,650,063	\$3,955,817	\$4,270,743	\$4,595,116	\$4,929,221	\$5,273,349	\$5,627,801	\$5,992,887	\$6,368,925	
\$27,193,130	\$31,148,947	\$35,419,689	\$40,014,806	\$44,944,027	\$50,217,377	\$55,845,178	\$61,838,065	\$68,206,990	
\$131,860,559	\$142,358,090	\$153,170,547	\$164,307,378	\$175,778,314	\$187,593,377	\$199,762,893	\$212,297,494	\$225,208,133	
									\$6,756,244

(1) Endowment fee set to ensure that, at the end of the permit term, the total endowment (including endowment fee revenues and interest) are sufficient to provide annual interest revenues equal to the post-permit annual cost. The real interest rate is assumed to be 3 percent annually.

Assumptions
54,040 impact acres developed
24 year plan
3% interest rate (real, net)
\$6,756,244 annual post-permit cost estimate
\$2,905 Endowment Funding Per Acre of Conservation