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Introduction

With increasing frequency across the country, population growth and development interests are colliding with environmental goals and regulations that protect threatened and endangered species' habitats. Perhaps nowhere is this clash more evident than in western Riverside County, California—one of the fastest-growing metropolitan areas in the United States and the home of a diverse array of increasingly rare species. In the 1990s, policymakers in Riverside County found the regulatory process for reconciling environmental and development interests both ineffective and inefficient. Regulatory and legal systems slowed development projects and increased their costs. The required project-by-project mitigation for endangered-species impacts resulted in a patchwork assembly of uncoordinated habitats. There was legitimate concern that these problems would only grow worse over time.

Responding to this challenge, in 1999, the Riverside County Board of Supervisors and the Riverside County Transportation Commission (RCTC) initiated a comprehensive regional-planning effort called the Riverside County Integrated Project (RCIP). A key element of the RCIP is the Multiple Species Habitat Conservation Plan (MSHCP), a plan to conserve half a million acres of species habitat in the western part of the county. In return for establishing the conservation reserve, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) issued the county and 14 cities in western Riverside County a 75-year “take” permit for endangered species. Finalized in June 2004, the take permit allows the cities and county to approve development projects outside the reserve that may negatively impact the plant and animal species covered by the plan, thus allowing for continued growth and development outside of the reserve area. Responsibility for acquiring and managing the reserve was vested with the Western Riverside County Regional Conservation Authority (RCA). RCA will not be able to use powers of eminent domain to assemble the reserve. Rather, the reserve will be assembled through willing property sales and transfers.

The MSHCP is an ambitious effort, mitigating development impact on 146 plant and animal species. While it is a potential model for other areas in the county, questions remain about the costs of assembling such a reserve, the adequacy of revenue sources, and how it will affect the length and cost of the approval processes for trans-

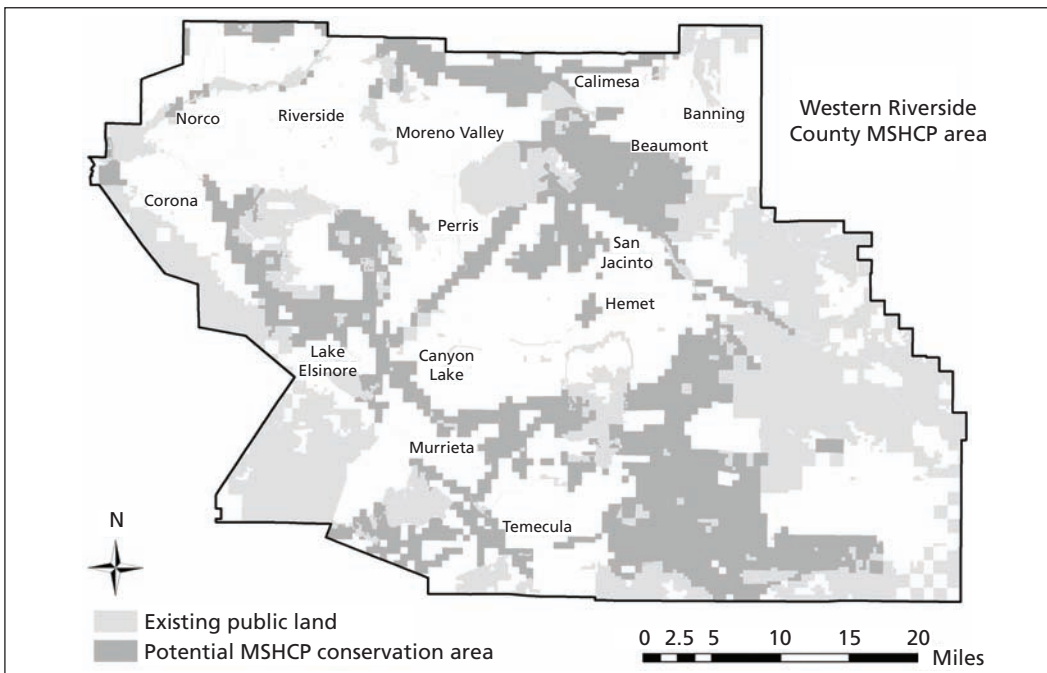
portation and development projects. This monograph examines a series of issues that address these questions.

The Multiple Species Habitat Conservation Plan

The plan area for the MSHCP encompasses the unincorporated lands in Riverside County west of the crest of the San Jacinto Mountains as well as the cities of Banning, Beaumont, Calimesa, Corona, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Norco, Perris, Riverside, San Jacinto, and Temecula. RCA, a joint-powers authority that includes each of these jurisdictions, is implementing the plan. Acting through RCA, the county and municipalities share responsibility for funding the assembly, management, and monitoring of the reserve area, and each in turn gains greater local control over land-use and development decisions consistent with the plan (TLMA, 2003).

Figure 1.1 provides an overview of the MSHCP plan area in western Riverside County, including existing public land and the additional area from which the

Figure 1.1
Location of the MSHCP and Targeted Areas for Conservation



SOURCE: Data provided by Western Riverside County Regional Conservation Authority in 2007.

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reserve will be drawn. The region of western Riverside County included in the MSHCP scope spans 1.26 million acres; of these, approximately 500,000 (40 percent) will be preserved, making this one of the largest habitat-conservation plans (HCPs) ever attempted. The 500,000 acres includes about 350,000 acres already held in public trust along with 153,000 additional acres that will be conserved under the MSHCP agreement. The 153,000 acres will be drawn from approximately 300,000 acres that constitute the potential MSCHP conservation area shown in Figure 1.1.

The MSHCP encompasses a wide variety of bioregions—including the Santa Ana, San Jacinto, and San Bernardino Mountains; the Riverside Lowlands; the San Jacinto Foothills; Agua Tibia Mountain; and the desert transition—preserving habitat for 146 distinct endangered species. While there is some flexibility in the exact set of land parcels that will ultimately be included in the habitat reserve, the land-assembly process will be guided by tenets described in California’s Natural Community Conservation Planning Act of 1991 (NCCP) (California Fish and Game Code §§2800–2835). Specifically, the reserve’s design should (1) focus on critical species and their habitats throughout the plan area, (2) conserve large habitat blocks, (3) conserve contiguous and connected blocks of land, and (4) protect against encroachment and invasion by nonnative species (TLMA, 2003).

A key issue in developing the MSHCP was distributing the costs associated with assembling and managing the conservation area. Without the MSHCP, responsibility for conserving endangered species would rest solely with public and private entities whose construction projects and other activities directly affected declining species and their habitats. Stakeholders on the MSHCP Advisory Committee determined, however, that the conservation plan’s benefits would accrue broadly—not only to existing and future communities in western Riverside County but also to the citizens of California and the United States as a whole. For this reason, responsibility for funding the MSHCP has been divided among federal, state, and local jurisdictions along with private development interests.

Of the 500,000 acres to be assembled, a large portion was already in public ownership when the take permit was issued. This includes approximately 248,000 acres of federal land, 34,000 acres of state land, and 65,000 acres of locally owned public or quasipublic (PQP) land (see Table 1.1). This left a total of 153,000 acres that still needed to be acquired to complete the MSHCP reserve. While RCA manages the assembly process, federal, state, and local governments as well as private developers are all expected to contribute either funding or land.

Of the 153,000 acres still required when the plan was adopted, federal and state agencies are obligated to fund the acquisition of about 56,000 acres. Anticipated methods of acquisition include direct purchase from willing sellers,¹ cooperative federal and state programs for conserving threatened or endangered species, land exchanges,

¹ Eminent domain will not be used.

Table 1.1
Responsibility for Assembling the Reserve (acres)

Resource	Target Acreage	Acreage Acquired as of October 2007
Existing PQP open space		
Federal	248,000	248,000
State	34,000	34,000
Local	65,000	65,000
Subtotal	347,000	347,000
Land for RCA to assemble		
Federal and state acquisition	56,000	14,677
Purchases by local government	56,000	20,192
Contributions by private developers through development-authorization process	41,000	657
Subtotal	153,000	35,526
Total	500,000	382,526

SOURCE: Data on target acreage from TLMA (2003, pp. 4-3-4-13. Data on acquired acreage provided by RCA in 2007.

NOTE: There are 1.26 million acres in western Riverside County.

tax credits, purchases to mitigate state or federally funded projects (such as state and federal highways), and other government programs, such as the U.S. Department of Defense's Base Realignment and Closure program and the Federal Deposit Insurance Corporation. Potential funding sources include Land and Water Conservation Fund appropriations, grant funds from such entities as the Wildlife Conservation Board and the National Fish and Wildlife Foundation, federal funds provided pursuant to Section 6 of the federal Endangered Species Act (ESA) (Pub. L. Nos. 93-205, 107-136), Transportation Equity Act for the 21st Century (TEA-21) (Pub. L. No. 105-178) funds, state bond acts, funds generated from the sale of public-agency lands, and federal aid programs (TLMA, 2003).

Local governments, in turn, are expected to purchase an additional 56,000 acres from willing sellers through the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process (for more details, see TLMA, 2003) or other suitable mechanisms. These holdings may be acquired in fee or through conservation easements, deed restrictions, land exchanges, flood-control easements, or other types of interest acceptable under the MSHCP. Eminent domain will not be used. Funding sources to finance these purchases include local development fees, density bonus fees (DBFs), regional infrastructure contributions (as mitigation for transportation projects, regional utility projects, local public capital construction, or regional flood control),

landfill tipping fees, and other potential new revenue sources, such as special assessments (TLMA, 2003).

It is anticipated that an additional 41,000 acres will be conserved through the entitlement and authorization processes for private development, relying on incentive structures as well as existing local, state, and federal development regulations. Relevant incentives include land exchanges, waiver or reduction of fees, fast-track entitlement processing, density bonuses, clustering, density transfers, and property reassessment. Private landholders may also donate land to federal or state wildlife agencies, local governments, or qualified nonprofit conservation organizations in order to assist with the habitat-conservation effort. Alternative forms of donation include gift of fee title, donation with retention of a term or life estate, sale at fair market value with donation of a portion of the proceeds, use of tax credits, or use of state and federal programs to conserve agricultural lands (TLMA, 2003). If local governments cannot acquire 41,000 acres through the development process, they will need to purchase the balance themselves.

According to RCA staff, 35,526 acres were acquired as of October 2007 (see rightmost column of Table 1.1). While considerable shares of the targets for federal and state acquisition and local purchases have been acquired (26 percent and 35 percent, respectively), only 2 percent (657 acres) of the target for developer contributions has been conserved. The low level of contributions indicates that developers have been able to avoid situations in which they are required or expected to make contributions to the reserve. Parties familiar with the development process provided the following explanation for how developers have been able to avoid land contributions. If the land proposed for development is all needed for the reserve, then RCA will make an offer to purchase the entire property. If the land proposed for development is not needed for the reserve, then there will be no requirement to contribute land. It is only when part of the land proposed for development is needed for the reserve that property owners will potentially contribute to the reserve. The low level of contributions to date suggests that landowners have been able to avoid developing properties that are partially needed for the reserve. Over time, as the amount of land available for development declines, it may become more common for properties that are partially needed for the reserve to be developed. However, the low rate of contribution to date raises concern that local government will need to find funding to purchase a substantial fraction of the acreage included in this category.

Contribution of This Monograph

This monograph begins by examining the value of the land needed for the reserve. Chapters Two and Three estimate the value of land already acquired by RCA, the value of land in a completed reserve, and the value of land yet to be acquired. This analysis

allows us to compare the average value per acre of land already acquired and the average value of land yet to be acquired and thus to assess how good a guide past acquisitions are to the ultimate cost of the reserve. This detailed examination of the land that remains to be acquired allows a better understanding of what drives the overall acquisition cost and what types of adjustments in the acreage targeted for conservation might yield substantial cost savings. The details of the statistical models used to estimate land values and the regression results are reported in Appendix A.

The plan sets targets for the number of acres for different vegetation communities in different subregions of western Riverside County. Chapter Three also examines whether these targets can be met given the current planned configuration of the reserve.

The analyses in Chapters Two and Three develop estimates of the cost of completing the reserve given land values in mid-2007. The remaining land will not be purchased all at once, however, and both the time frame in which the land is purchased and the future trajectory of land prices will determine the ultimate cost of assembling the reserve. In Chapter Four, we examine the advantages and disadvantages of buying land for the reserve in different time frames and evaluate temporal acquisition strategies that will tend to reduce reserve-assembly costs. Appendix B contains examples of the range of future land-price trajectories that are considered.

The cost of the land needed for the reserve is the largest component of the overall cost of the plan, but costs of administering the plan and operating the reserve are also considerable. In Chapter Five, we forecast RCA's future expenditures on habitat management, biological monitoring, and MSHCP implementation and oversight. These implementation and administrative costs are combined with projected land-acquisition costs to give an estimate of the overall cost of plan.

Chapters Two through Five address the plan's costs. The subsequent two chapters examine its revenues. Chapter Six describes existing revenue sources and forecasts revenue through the end of the plan in 2079. The present value of the revenue projections are then compared with cost estimates from the preceding chapters to determine whether additional revenues will be necessary to fund the plan. Potential sources of additional revenue are explored in Chapter Seven. The chapter begins with a review of the revenue for other HCPs that have been established and then investigates a wide range of local (as opposed to state and federal) measures for raising additional revenue. Estimates of the amount that each tax or fee would need to be increased to raise \$1 billion in present value are provided. Appendix C details the revenue sources for 20 HCPs that are at least 1,000 acres in size, and Appendix D examines the extent to which existing funding mechanisms allow integration of transportation and habitat-conservation projects and what types of changes are required to increase funding flexibility in the future.

An important expectation of the MSHCP is that it streamline the permitting processes for transportation and commercial, industrial, and residential development

projects in western Riverside County. Chapter Eight explores this aspect of MSHCP benefits. Based on interviews and a detailed questionnaire filled out by knowledgeable stakeholders, Chapter Eight provides an initial assessment of the extent to which the MSHCP has accelerated the permitting processes for transportation and development projects. It reports perceptions of the effects to date and those expected in the next 10 years. It also reports stakeholder perceptions of the MSHCP's impact on the frequency and scope of lawsuits that attempt to stop or modify projects.

Faster placement of major roads and freeways in western Riverside County will presumably improve mobility in the county. Appendix E quantifies some of the MSHCP's mobility benefits. It uses a detailed computer model to examine the effects of the faster completion of four major transportation corridors in western Riverside County on average travel speeds and travel times and then translates these impacts into dollar values.

The permitting process under the MSHCP will change at least to some extent once the reserve has been established and the objectives concerning the species covered by the plan have been met. In Appendix F, we examine how the roles of the wildlife agencies and the permitting process may change. This analysis provides insight into how MSHCP benefits may change over time.

The final chapter of the monograph, Chapter Nine, provides overall observations on the findings and identifies issues raised by our analysis that the RCA Board of Directors, RCA staff, and stakeholders should address moving forward.

