

This chapter provides planning-level estimates of the costs to implement the ECCC HCP/NCCP and identifies all necessary funds to pay for implementation.

9.1 Cost to Implement the HCP/NCCP

The cost analysis was based on a number of assumptions regarding the eventual development of the HCP/NCCP and the unit cost of many items. Unit cost estimates were based on the best available information and represent average unit costs. The costs of individual items will fluctuate above and below these averages. The total cost presented herein should therefore be regarded as a planning-level estimate to aid in the determination of the eventual amount of funding likely to be necessary to implement the Plan.

Tables 9-1 and 9-2 summarize the costs likely to be necessary to implement the HCP/NCCP. Cost categories are listed below.

- Program administration.
- Land acquisition.
- Planning and design of management, restoration, and recreational facilities.
- Habitat restoration/creation.
- Environmental compliance.
- HCP/NCCP preserve management and maintenance.
- Monitoring, research, and adaptive management.
- Remedial measures.

Some cost elements are split between categories or assigned a single category for simplicity; for example, Implementing Entity staff salaries appear in several categories because staff will perform a variety of functions. All cost categories, however, are mutually exclusive. Each cost category is divided into capital and operational costs. Capital costs are typically one-time costs for land, equipment, or structures. Operational costs are ongoing costs such as staff salaries and contractor fees. Table 9-1 summarizes total costs, capital costs, and operational costs under the initial urban development area. Table 9-2 summarizes total costs,

capital costs, and operational costs under the maximum urban development area. Costs are summarized by 5-year periods except for year 0, which contains initial start-up expenses. All costs are in 2004 dollars.

9.2 Cost Estimate Methodology

This section provides an explanation of each cost category and the methods that were used to develop the HCP/NCCP cost estimate.

The spreadsheets used to develop the HCP/NCCP cost estimate are provided in Appendix G, *HCP/NCCP Cost Data*. The cost estimates for operations, maintenance and administration were developed in coordination with land management agencies in the inventory area—specifically, EBRPD and CCWD. These agencies helped to determine the specific elements in each broad cost category and the unit cost assumptions. The land valuation analysis used to develop the HCP/NCCP land acquisition cost estimates (Appendix G) was based on land and real estate data from appraisers, brokers, land management agencies, and land trusts.

9.2.1 Program Administration

Program administration costs involve the support of employees, facilities, equipment, and vehicles to operate the office of the Implementing Entity. Program administration costs also include associated costs such as travel, insurance, legal and financial assistance, meeting stipends, contingency budgets, and in-lieu payments for law enforcement and firefighting paid to the County and other land management agencies. It is assumed that program administration costs will be necessary in perpetuity. Program administration costs are estimated to be, on average, approximately \$600,000 annually during the permit term (Tables 9-1 and 9-2).

Cost savings in program administration can be realized by partnering with existing land management agencies that already have staff with the required qualifications and have the infrastructure to hire and manage such staff. However, because the ultimate structure of the Implementing Entity is not yet known, for costing purposes it is assumed that the Implementing Entity will be a stand-alone agency that will hire and manage its own staff in its own facilities. This assumption ensures that potential costs of staffing and program administration are not understated.

Salaries, Office Space, and Equipment

Employee costs comprise the annual salaries for program administration personnel. For the purposes of the cost estimate, it is assumed that the following

positions would be staffed within the Implementing Entity according to the roles described in Chapter 8, *Plan Implementation*: an Executive Director, a GIS/Database Technician, a Budget Analyst, a Real-Estate Specialist, a Grant Administrator, and Administrative Staff that are housed in the office of the HCP/NCCP Executive Director. The salaries of non-program administration employees are included in their respective cost categories. A salary multiplier is used for each employee (program administration and non-program administration staff) to include the cost of benefits such as health insurance, payroll taxes, training, and a retirement plan.

It is assumed that the office of the HCP/NCCP Executive Director would house all the employees of the Implementing Entity except for onsite preserve staff (e.g., Preserve Manager and Preserve Maintenance Staff). Facilities costs are based on the area of office space that would be required to house the office of the HCP/NCCP Executive Director and the cost per square foot per year to lease the office. General office equipment includes copy and fax machines, an office telephone system, printers, scanners, publications, and digital cameras. GIS and database equipment includes GIS/database servers, a digitizing table, a plotter, GIS software, and database software.

The cost for employee-specific office equipment is included in this cost category only for the program administration employees listed above. Office equipment purchased on a per-employee basis includes office furniture, office supplies, computers, cell phones, and portable radios.

Travel and Insurance

Mileage allowance for program administration employees is based on a mileage allowance per employee per year and cost per mile. Travel costs are based on days of travel per year and per diem allowance per employee. The Executive Director's travel costs include a per diem multiplier to cover additional travel expenses such as airfare.

Insurance costs are an important part of program administration. Insurance costs are addressed in two categories: per employee per year, and per year for the entire HCP/NCCP program. Per employee per year costs include worker's compensation, disability, life, and automobile insurance for all Implementing Entity employees. Costs for the entire program include directors' and officers' insurance and liability insurance to cover public recreational use within HCP/NCCP preserves.

Outside Legal and Financial Assistance

The Implementing Entity will periodically require outside legal and financial assistance. Attorneys will be needed to draft and review conservation easements, finalize land purchases, assist with negotiations, and assist with easement

violations if they occur. Outside financial analysis assistance will also be periodically required to review the program's cost/revenue balance and ensure that development fees are adjusted in line with changing land costs and inflation. Legal costs are based on the billing rate for legal contractors and the estimated time contracted per 5-year period; financial analyst costs are based on the estimated cost for financial analysis services per 5-year period.

Public Safety Costs

The HCP/NCCP Preserve System will increase the need for law enforcement services in Contra Costa County because of the visitor use of the new preserves. The need for firefighting services will also increase because of the increased use of prescribed burning as a management tool. The risk of wildfire may increase because grazing pressure will likely be reduced in some areas, increasing fuels, and because increased recreational use will increase the chance of human-caused ignitions. To address these impacts, the Implementing Entity will pay the County to cover preserve-related public safety costs on an annual basis. The number of police officers and firefighters funded per 5-year period is based on the total area projected to constitute designated preserves during the specified period and the predetermined areal extent of preserve that would require the funding of one officer or firefighter, respectively.

Public Outreach and Involvement

The Plan includes a small annual budget for outreach to the community to produce brochures; hold special events (e.g., groundbreakings and dedications, volunteer appreciation functions); manage volunteer groups; and otherwise involve the public in implementation of the HCP/NCCP.

9.2.2 Land Acquisition

Land acquisition costs are divided into two broad categories. The first entails the cost of the land transaction (operational cost). The second cost is the price of the land or conservation easement itself (capital cost).

Land Transaction Costs

Land transaction costs include due diligence, reconnaissance-level biological surveys (pre-acquisition surveys), and initial site improvements.

The process of investigating a parcel of land before acquiring it is considered due diligence. It is assumed that 25% more parcels will be investigated than will be acquired. Due diligence costs include the costs for appraisal, preliminary title

report, Phase 1 Site Assessment¹, and legal description. Due diligence costs also include the cost of a boundary survey and monumentation, if necessary. To determine the cost of boundary surveys and other costs that are dependent on parcel size, an average parcel size and perimeter length within the Zones was developed using GIS analysis.

As described in Chapters 5 and 6, pre-acquisition surveys will be required to determine the biological value of any land considered for inclusion in the HCP/NCCP Preserve System. Pre-acquisition surveys include surveys for the following characterizations.

- Land-cover type.
- Covered species habitat.
- Covered plant populations.
- Wetlands (i.e., jurisdictional delineations).
- Rare vegetation communities and associations and rare landscape features.
- Covered wildlife populations.

The cost of these surveys is based on the estimated number of hours per acre required for each type of survey and the cost per hour for contracting biologists to conduct the surveys (the cost per hour includes travel costs for the contractors).

Some newly acquired land may need to be stabilized before habitat management, restoration activities, or public access can begin. Site improvements may include (but are not limited to) demolition or repair of unsafe facilities; remediation of minor contaminants; repair of boundary fences; repair and replacement of gates; installation of signs (e.g., boundary and landmark signs); road repair; repair and replacement of creek crossings; and removal of nonnative species. These costs are based on an estimated cost per acquired parcel, with the exception of boundary fence repair, which is based on the average boundary length per parcel mentioned above and the estimated cost per linear foot for fence repair.

Land transaction costs are expected only during the 30-year permit term of the HCP/NCCP. Land transaction costs will end once the Preserve System has been fully assembled by the end of the permit term.

¹ A *Phase 1 Site Assessment* is a preliminary investigation to determine if a site might contain hazardous materials. Typical methods include a literature and database search, interviews to determine land use history, and site reconnaissance. If results are positive (i.e., the site is determined to contain or possibly contain hazardous materials), a Phase 2 Assessment is conducted. Sites with hazardous materials will be evaluated for potential cleanup; these costs will be weighed against the effect on the Preserve System design should the site not be protected, and a determination will be made whether the site should still be acquired. For costing purposes, it is assumed that sites with positive Phase 2 Assessment results (i.e., sites that may contain hazardous materials) will not be added to the HCP/NCCP Preserve System.

Land Acquisition Costs

Land acquisition costs, including due diligence, are estimated to range from approximately \$177,850,000 to \$215,740,000 for fee title acquisitions or conservation easements over approximately 23,650–29,900 acres of land with the initial and maximum urban development areas, respectively.

To ensure that cost estimates do not understate actual costs, and to reflect the limited number of easement sales in this area, it was assumed that all of the land will be acquired in fee title. There have been few comparable conservation easement sales in the county to date, though typical costs suggest values of 50–90% of the fee title value. For the purposes of this analysis, no dedications to the Preserve System by means of gift or transfer of a conservation easement associated with a development project were assumed. Actual costs will be lower if such dedications occur.

Fee title land values were based on a review of comparable sales and interviews with appraisers, real estate brokers, and land management agencies active in the region (see Appendix G). Values were based on size, land use designation, proximity to urban infrastructure, and topography. All land value estimates represent average planning-level estimates. They are based on private market values derived from either arm's-length sales transactions or simplified pro forma residual land value analysis. Actual sales prices of individual properties will vary considerably around these averages.

Per-acre values were developed for the various land-value categories and were then applied to the acquisition requirements outlined in the conservation strategy (Chapter 5) using spatially explicit GIS analysis (see Appendix G).

Fee title and conservation easement land acquisitions are assumed to occur evenly through time over the course of the permit term. Land costs will likely increase over time; mechanisms for addressing these increases are described in Section 9.3, *Funding Sources and Assurances*. Land acquisitions and associated costs are expected to be incurred throughout the permit term but not beyond it.

9.2.3 Management, Restoration/Creation, and Recreation Planning and Design

Management, restoration, and recreation planning and design costs are estimated to be, on average², approximately \$200,000 annually during the permit term (Tables 9-1 and 9-2). Management, restoration, and recreation planning and

² Average costs cited in each section are the average annual cost over the 30-year permit term (= total cost/30); actual annual costs will vary depending on the category. For example, annual costs for program administration and preserve management will grow over time as the Preserve System grows, while annual costs for restoration will peak midway through the permit term when most restoration projects will have been implemented.

design costs include the costs associated with planning and designing HCP/NCCP conservation actions.

Management planning activities are listed below.

- Preparing preserve management plans for natural habitat lands (Conservation Measure 1.2).
- Preparing agricultural management plans for conservation easements in agricultural areas (Conservation Measure 1.3).
- Developing or renewing grazing leases.
- Creating a Preserve System-wide exotic plant control program (Conservation Measure 1.4).
- Creating a Preserve System-wide fire management/control plan (Conservation Measure 1.2).

Recreation planning activities include creating a Preserve System-wide recreation plan and creating construction designs for limited new recreational facilities such as trails, gravel parking lots, gates, information kiosks, and restroom facilities (Conservation Measure 1.5).

Restoration planning and design activities entail development of the plans and documents listed below.

- Wetland and pond enhancement and management plans for specific sites, if necessary (Conservation Measure 2.2).
- Wetland and pond restoration or creation plans and construction designs (Conservation Measure 2.3).
- Native grassland enhancement plans for specific sites, if necessary (Conservation Measure 2.4).
- Oak savanna restoration plans and construction designs (Conservation Measure 2.7).
- Stream restoration plans and construction designs (Conservation Measure 2.10).
- Riparian woodland/scrub restoration plans and construction designs (Conservation Measure 2.10).

It is assumed that the same Implementing Entity employees will conduct management, restoration, and recreation planning and design work; habitat restoration/creation work; and monitoring, research, and adaptive management work. One-third of the employees' time is assumed to be spent on planning and design work, one-third is estimated to be spent on habitat restoration/creation work, and one-third is estimated to be spent on monitoring work. Accordingly, one-third of employee, office equipment, vehicle and fuel, and travel costs are assigned to planning and design; one-third are assigned to habitat restoration/creation; and one-third are assigned to monitoring, research, and

adaptive management. Contractor costs are specific to the planning and design cost category.

Employee costs include one-third of the yearly salary for a Senior Scientist and biological staff (a senior planner, a project manager, and technical support personnel). In addition, a salary multiplier is used for each employee to account for the cost of benefits such as health insurance, training, and retirement.

The cost for office equipment includes one-third of the cost of office furniture, office supplies, computers, cell phones, and portable radios. The costs for office space, shared office equipment, GIS and database equipment, and insurance for planning and design employees are included in the program administration cost category.

Vehicle and fuel costs are based on the number of vehicles purchased and retired during each 5-year period, the purchase price of a vehicle, and fuel and maintenance costs per vehicle per year. Travel costs for planning and design employees are based on days of travel per year and per diem allowance per employee. One-third of the cost from the vehicle and fuel and travel cost elements is assigned to the planning and design cost category.

Contractors are expected to be needed for a majority of the preserve management and restoration/creation planning tasks for the first 5 years of HCP/NCCP implementation due to the time required to hire and train Implementing Entity staff and the need for many management plans early in implementation. Implementing Entity staff will be expected to assume most of the planning work by years 6–10, including management plan development and restoration/creation planning. Contractor costs include the cost of hiring outside contractors for management, recreation, and restoration planning work. Contractor costs are based on the estimated contract value for each type of contract work for each 5-year period.

It is expected that contractors will conduct the majority of restoration/creation project design work throughout the term of the permit. Design work includes developing specific restoration/creation designs (plans and specifications are covered under the habitat restoration/creation cost category). Contractor costs are based on the estimated contract value for each type of contract work for each 5-year period.

It is assumed that all planning and design costs would be necessary in perpetuity but would be reduced substantially after the permit term. By the end of the permit term most if not all restoration and creation projects are expected to be completed (although they may not have yet reached performance standards). In addition, all Preserve System management plans and most, if not all, preserve-specific management plans will have been written. However, preserve management plans will need to be updated and modified in perpetuity.

9.2.4 Habitat Restoration/Creation

Habitat restoration/creation costs are estimated to be, on average, \$666,000 or \$748,000 annually during the permit term with the initial and maximum urban development areas, respectively (Tables 9-1 and 9-2). Habitat restoration and creation costs comprise those listed below.

- The cost of restoring or creating each required land-cover type.
- Costs associated with the habitat restoration/creation employees (e.g., salaries, benefits, office equipment, vehicles and fuel, and travel).
- Costs for using contractors to conduct habitat restoration/creation work.

Employee costs are shared with the management, restoration, and recreation planning and the design and monitoring, research, and adaptive management cost categories; one-third of employee salary, benefit, office equipment, vehicle and fuel, and travel costs are assigned to the habitat restoration/creation cost category.

The land-cover types that would be restored under the ECCC HCP/NCCP are oak savanna, riparian woodland/scrub, perennial wetland, seasonal wetland, alkali wetland, slough/channel, and streams. Impacts on open water would be offset by pond creation. Similarly, stream impacts that could not be offset by stream restoration would be offset by additional off-stream pond creation. The cost per acre for restoring or creating each land-cover type includes but is not limited to: site preparation; direct seeding; growing container stock; harvesting cuttings in the field; field planting; planting materials (e.g., mulch); earthmoving; constructing water control structures, if needed; and irrigation system construction and maintenance, if needed. The cost is developed for each 5-year period based on the area of each land-cover type that is estimated to be restored during that period (to take efficiencies of scale into account).

It is expected that contractors will be hired to construct all but the smallest habitat restoration or creation projects due to the specialized equipment and plant propagation needed. For large-scale projects, a great deal of labor is typically required (e.g., planting seedlings, cuttings, or container stock for riparian or oak savanna restoration projects), which only a contractor can provide. In addition, it is expected that contractors will be hired to create restoration/creation plans and specifications, assist with construction bids, oversee the construction of habitat restoration/creation projects, and conduct postconstruction maintenance. Contractor costs are based on the estimated contract value for each type of contract work for each 5-year period.

It is assumed that all habitat restoration/creation costs would be incurred during the 30-year permit term. All habitat restoration/creation projects will be implemented during this period. The cost of management of all restoration/creation projects after they reach their success criteria is included in Section 9.2.6, *HCP/NCCP Preserve Management and Maintenance*.

9.2.5 Environmental Compliance

Environmental compliance costs are estimated to be, on average, \$77,000 annually during the permit term with either urban development scenario (Tables 9-1 and 9-2). As described in Chapter 8, *Plan Implementation*, environmental compliance will be needed during implementation for certain land management and restoration activities within HCP/NCCP preserves. All costs are based on average costs for contracting the preparation and submittal of compliance documents and applications. Environmental compliance costs are assumed to include compliance with NEPA and CEQA, Sections 401 and 404 of the Clean Water Act, Section 106 of the National Historic Preservation Act (NHPA), Sections 1600–1607 of the California Fish and Game Code, and other miscellaneous requirements (e.g., county grading permits, road encroachment permits).

For purposes of cost estimation, HCP/NCCP projects are divided into three size/complexity categories.

- Small/simple (up to 10 acres or up to 0.1 stream mile).
- Medium /moderately complex (10.1–50 acres or 0.1–0.5 stream mile).
- Large/most complex (more than 50 acres or 0.5 stream mile).

Environmental compliance costs are assumed to vary with the type of compliance and the size and complexity of the project. It is assumed that Section 404 and Section 1602 permits will be procured on a per-project basis. A Section 404 Regional General Permit and Master Streambed Alteration Agreement may be available for use by the Implementing Entity. However, this cost estimate is based upon the conservative assumption that these general permits will not be available. NHPA compliance is assumed to cover cultural resource inventory only when needed for projects with a federal nexus (e.g., Clean Water Act Section 404 permits). If significant cultural resources are found at a location subject to disturbance by management, restoration, or other Plan activities, the activities would be relocated.

All environmental compliance costs are expected to be incurred during the permit term because they are associated with initial preserve management actions and habitat restoration/creation projects.

9.2.6 HCP/NCCP Preserve Management and Maintenance

HCP/NCCP preserve management and maintenance costs are estimated to be, on average, \$1,080,000 or \$1,191,000 annually during the permit term under the initial and maximum urban development areas, respectively (Tables 9-1 and 9-2). Preserve management costs are correlated with the size of the Preserve System;

accordingly, these costs will grow as the Preserve System grows. However, costs will not grow directly with the size of the Preserve System because per-acre management costs are expected to decrease as the Preserve System gets larger.

Preserve management and maintenance costs are assumed to be required in perpetuity. Management and maintenance costs beyond the permit term are assumed to be the same as the costs in Year 30 (with annual inflation adjustments described below in section *Automatic Fee Adjustments*), approximately \$2.9 million or \$3.2 million annually under the initial urban development area and maximum urban development area scenarios, respectively (Tables 9-1 and 9-2).

HCP/NCCP preserve management and maintenance costs cover the ongoing management and maintenance of the HCP/NCCP Preserve System, exclusive of management planning and design and construction of habitat restoration or creation projects. Costs related to management and maintenance activities could include those listed below.

- Costs related to Preserve System staff.
- Construction and maintenance of field facilities.
- Purchase of field office equipment and field vehicles.
- Purchase and maintenance of field equipment.
- Purchase of construction materials.
- Maintenance of ponds (e.g., water pumping, dam repair, dredging).

Management and maintenance employees include the Preserve Manager and Preserve Maintenance Staff (comprising preserve maintenance staff members and an administrative assistant). The number of each employee type in each 5-year period is based on the area of preserve in each period and the area each employee type is assumed to cover. Employee costs include the salary and a salary multiplier (to include the cost of benefits, training, and retirement) for each employee.

The cost for office equipment includes the cost of office furniture, office supplies, computers, cell phones, and portable radios. In addition, it includes the cost to lease a copy and fax machine and to purchase a printer and office phone system for the HCP/NCCP Preserve System field facility. The costs for GIS and database equipment and insurance for management and maintenance are included in the program administration cost category.

Management and maintenance vehicles include small trucks, four-wheel-drive trucks, all-terrain vehicles, dump trucks, large tractors, small tractors, and small four-wheel-drive vehicles. Vehicle and fuel costs are based on the number of each type of vehicle purchased and retired during each 5-year period, the purchase price of each type of vehicle, and fuel and maintenance costs per each type of vehicle per year.

Travel costs are assumed to be incurred by the Preserve Manager only. Costs are based on days of travel per year and the HCP/NCCP per diem allowance.

Preserve management and maintenance employees will have access to the office space of the HCP/NCCP Preserve System (covered under the program administration cost category), but their primary office space is assumed to be a field facility. Field facilities are small buildings that would house workshop space, equipment, a manager's office, a shared office for field staff, a locker room, and restrooms. Field facilities also include secure covered parking for maintenance vehicles. The cost for constructing and maintaining the facilities and parking areas is included in the maintenance and management category. The cost is based on the preserve area that is assumed to be managed by the staff in each facility and the cost to construct the facilities and parking areas. The estimated cost per year for field facility maintenance and utilities is included for each facility.

The cost for maintenance equipment and materials is based on the estimated cost of equipment and materials per 1,000 acres of preserve per year and the area of preserve in each 5-year period. Maintenance equipment and supplies include firefighting equipment, small tools, safety glasses, gloves, hardhats, raingear, small pumps, generators, saws, demolition hammers, cargo containers, water pipes, irrigation supplies, landscape plants, and lumber.

Water would be pumped into existing stockponds as needed to maintain water levels for their habitat value for covered species and native biological diversity³. It is assumed that wells would need to be drilled and pumps would need to be purchased. Water costs are based on the estimated annual cost for well drilling and water pumping per 1,000 preserve acres and the total amount of preserve area in each 5-year period.

Some management and maintenance work is expected to be conducted by outside contractors; examples are listed below.

- Dirt and paved road maintenance and repair.
- Pond maintenance.
- Major pest management.
- Preconstruction surveys for biological resources clearing.
- Large-scale mowing for fire breaks.
- Boundary surveying.
- Fence maintenance and repair.
- Alarm installation and maintenance at field offices.
- Janitorial services.

³ Constructed ponds would be sited to minimize their need for supplemental water. Existing ponds that provide breeding habitat for covered species, if not sited properly, may need supplemental water to be maintained.

Contractor costs are based on the annual amount estimated to be expended for each type of contractor per 1,000 preserved acres and the total amount of preserve area in each 5-year period.

Preserve management and maintenance also includes capital and operations costs to build and maintain limited recreational facilities such as trails, trailheads and public access facilities, signage, informational kiosks, gravel parking lots and access roads, and restrooms. All recreational facilities will be built or improved in accordance with the terms of the Plan.

9.2.7 Monitoring, Research, and Adaptive Management

Monitoring, directed research, and adaptive management costs are estimated to be, on average, \$614,000 or \$689,000 annually during the permit term under the initial urban development area and maximum urban development area scenarios, respectively (Tables 9-1 and 9-2). Monitoring, research, and adaptive management costs are assumed to be required in perpetuity. These costs beyond the permit term are assumed to be the same as the costs in Year 30: approximately \$738,000 or \$860,000 annually under the initial urban development area and maximum urban development area scenarios, respectively (Tables 9-1 and 9-2). Like management costs, total monitoring costs will increase as the Preserve System grows, but per-acre monitoring costs will decrease as the Preserve System gets larger.

Monitoring, directed research, and adaptive management are described fully in Chapter 7. Monitoring, directed research, and adaptive management costs cover the following items.

- Planning, conducting, analyzing, and reporting on monitoring of ecosystems, natural communities, and covered species.
- Planning, conducting, analyzing, and reporting on monitoring the effectiveness of conservation measures and habitat restoration/creation projects.
- Planning surveys to assess properties prior to land acquisition.
- Preconstruction surveys and construction monitoring, if needed, within the Preserve System prior to implementing projects such as habitat restoration or facility construction.
- Research directed at management and conservation needs of the Preserve System.
- Stipends for Science Advisors and the Independent Conservation Assessment Team in adaptive management review and meetings.

It is assumed that Implementing Entity employees conducting monitoring, directed research, and adaptive management will plan, coordinate, and report on HCP/NCCP monitoring. It is assumed that contractors will collect monitoring data. Monitoring, research, and adaptive management employee costs are shared with the management, restoration, and recreation planning and design and habitat restoration/creation cost categories; one-third of employee salary, benefit, office equipment, vehicle and fuel, and travel costs are assigned to the monitoring, research, and adaptive management cost category.

The cost for office space, shared office equipment, GIS and database equipment, and insurance for monitoring, research, and adaptive management employees is included under the program administration cost category.

Contractor costs for collecting monitoring data are based on the estimated number of hours per acre required for each type of monitoring, the area that will be covered by each type of monitoring in each 5-year period, and the cost per hour for contracting biologists to conduct the monitoring (the cost per hour includes travel costs for the contractors).

Adaptive management costs cover scientists on the Independent Conservation Assessment Team and in the pool of Science Advisors in the adaptive management decision-making process. These costs are based on the annual amount assumed necessary as a stipend for each of 10 Science Advisors. Costs also include a stipend for the year in which each of five Independent Conservation Assessment Team members will serve (assumed to be every 5 years). Stipends for Team members include travel costs. The cost of adaptive management experiments is covered under the cost for directed research and monitoring.

9.2.8 Remedial Measures

Remedial measure costs are estimated to be, on average, approximately \$55,000 annually during the permit term (Tables 9-1 and 9-2). Remedial measures for created/restored habitat are assumed not to be needed once the performance standards are met. The cost of remedial measures for other preserve areas is assumed to be required in perpetuity. This cost, on average, is estimated at \$11,000 per year⁴.

Remedial measure costs cover the cost to implement remedial measures in response to changed circumstances or the failure to meet performance standards (see Chapter 10, *Assurances*) for a description of all changed circumstances and remedial measures). Remedial measure costs for created/restored land-cover types are calculated on the basis of the percentage of each restored/created land-cover type that is assumed to require remedial measures in each 5-year period and the cost per acre for restoration/creation of the land-cover types. Remedial measure costs for changed circumstances unrelated to restoration/creation sites

⁴ Remedial costs would be incurred at irregular intervals, but much less frequently than annually.

are based on a percentage of annual preserve management and maintenance costs that is assumed to be needed to conduct remedial actions.

9.2.9 Contingency

Due to cost uncertainties, a contingency of 5% of overall Plan costs is included in the cost model. The contingency fund will be used on a short-term basis to offset any program costs that are higher than predicted by this Plan. Contingency funds are modest because the overall cost estimate is somewhat conservative and mitigation fees are designed to keep pace with overall Plan costs. Costs for program administration, preserve management and maintenance, and monitoring and adaptive management assume that a new organization would be created to administer and manage the Preserve System. If existing local agencies or organizations can be used instead, there would be substantial cost savings for non-land acquisition costs. Important contingency costs are already “built-in” to habitat restoration. All wetland restoration fees include a 20% contingency to account for the risk of failure of restoration projects (see *Wetland Mitigation Fees* below). In addition, development fees will be raised automatically annually according to several indices (see *Development Mitigation Fees* below).

9.3 Funding Sources and Assurances

Methods for assembling and equitably distributing the costs associated with the HCP/NCCP have been the subject of extensive discussion and consideration by stakeholders; officials from local, state, and federal agencies; and elected officials. The ECCC HCPA Coordination Group—composed of representatives of private development and business interests, agricultural organizations, conservation organizations, landowner groups, and public agencies—helped to develop and recommend strategies for assembling and funding the HCP/NCCP Preserve System through a Funding Subcommittee. The HCP/NCCP, which incorporates the input from this diverse group, offers a balanced approach to conserving species and habitats while equitably distributing the costs.

The HCP/NCCP establishes a framework for compliance with state and federal endangered species laws and regulations that accommodates future growth in the permit area. Without the HCP/NCCP, the responsibility for mitigating impacts on endangered species and their habitats would rest only with those public and private entities whose activities directly affect declining species and their habitats, and the responsibility for conservation actions designed to aid recovery of endangered species would rest primarily with government agencies representing the public at large. The HCP/NCCP will address both the goals of mitigation and recovery. Consequently, the HCP/NCCP distributes the responsibility for conservation more widely under the assumption that the benefits of a successful HCP/NCCP will be shared by a broader group that includes not only the existing and future communities within the permit area but also the residents of California and the United States. A variety of groups will

directly benefit from the HCP/NCCP and will share in the responsibility for implementing the HCP/NCCP; this shared responsibility includes the costs associated with land acquisition and the long-term management and monitoring of those lands.

Plan funding will come from a number of different sources, which fall into one of three categories.

- **Development-Based Funding Sources.** These include developer mitigation fees and developer land dedications.
- **Other Local Funding.** Non-fee-based local funding will complement development-based funding and state and federal grants. Local funding will take many forms, including continued investments in conservation by EBRPD (funded by a variety of property tax and assessment sources) and local land trusts. Although not assumed in revenue projections, funding may be supplemented by future, local funding measures for parks and open space.
- **State and Federal Funding.** These include federal and state grant programs (e.g., USFWS grants under Section 6 of the ESA, Wildlife Conservation Board grants, and state bonds). Some of these funding sources are generally available throughout the state and nation, while others can only be used to implement an approved HCP/NCCP. State and federal funding can only be used for portions of the Plan that contribute to species recovery (not for mitigation).

Table 9-3 lists the expected revenues and their sources over the Permit Term. In general, developer fees will contribute to the mitigation obligations of the Plan, while non-fee funding from local, state, and federal sources will contribute to the conservation needs of the Plan (i.e., the contribution to species recovery). Each funding source is described below.

9.3.1 Development Mitigation Fees

Development fees were determined using a “fair share” cost apportionment analysis that is described in detail in Appendix G. This analysis considers the amount of open space acquisition relative to the amount of development before and after adoption of the HCP/NCCP and assigns the costs of the HCP/NCCP according to the premise that future development should pay a share of the costs of habitat conservation in the inventory area proportionate to its share of the overall habitat impacts on the inventory area. The analysis takes into account the fact that cultivated agriculture removes some but not all biological and open space values from a site. Because the pace of habitat protection relative to development before plan adoption was significantly lower than will be required under the HCP/NCCP, new development will pay a share (52%) of the costs of implementing the HCP/NCCP, and existing development (i.e., the public) will also pay a share (48%).

The HCP/NCCP development fee was established to meet the following criteria.

- Be consistent with the fair share apportionment analysis.
- Generate sufficient funding to offset a substantial portion of HCP/NCCP costs.
- Be consistent with the general level of biological impact associated with projects in different areas.
- Compare favorably with the actual cost of ESA and wetland permitting on a project-by-project basis, including the costs of uncertainty and project delays.

As described in Chapter 4, impacts on covered species and natural habitats vary according to whether projects occur within urban development, in cultivated agricultural areas (Zone 6), or in natural land-cover types (Zones 1–5). To account for this difference in impact, the development fee will vary based on project location. Three Fee Zones are defined by a map that determine the fee paid by development (Figure 9-1), regardless of the land-cover type within them. These three zones generally correspond to the dominant land-cover type and habitat and open space value.

- **Zone I: Cultivated and Disturbed Lands**⁵. Land within this zone is generally dominated by cultivated agriculture. Habitat value is lower in this zone than in natural land-cover types in the foothills of Mount Diablo.
- **Zone II: Natural Areas**. Land within this zone is dominated by natural land-cover types.
- **Zone III: Small Vacant Lots**. Specific, undeveloped parcels less than 10 acres in size were mapped within the initial UDA; these are the only parcels eligible for the fee in Zone III. Development of these parcels will result in loss of open space but minimal loss of habitat values. Participating jurisdictions have the option of setting the minimum parcel size for this fee at 0 or 1 acre.

Lands inside the initial UDA and mapped as urban, turf, or aqueduct land cover by the HCP/NCCP will not be assessed the development fee. These areas are considered developed and do not support habitat for covered species. This exemption is designed to exclude lands within urban areas that are being redeveloped. Developed areas within the initial UDA not mapped by the HCP/NCCP as urban, turf, or aqueduct land cover will be assessed the HCP/NCCP fee. Fees for covered activities outside the initial UDA are discussed below.

Development fees will be assessed on the acreage of land permanently removed by covered activities. *Permanently removed* is broadly defined to include undeveloped land in the same parcel that is isolated from natural areas by development. The entire parcel is subject to the development fee unless a landowner dedicates a portion of the property to be included in the HCP/NCCP Preserve System. The portion of the property included the Preserve System

⁵ Fee Zone names are provided only as a general guide to the dominant land cover. Fees will be determined solely by a parcel's location within the Fee Zones mapped on Figure 9-1.

would not be assessed the development fee. The required buffer adjacent to a preserve or required stream setback (see Conservation Measures 1.7 and 1.8 in Chapter 6) are subject to the development fee. Land subject to any wetland fee will also be included in the development fee calculation (i.e., the wetland fee is additive).

Table 9-4 lists the development fees by Fee Zone. Development fees will be adjusted over time to account for inflation (or deflation) according to the indexes and methods described below.

As described in Chapter 8, all or a portion of the development fee can be waived in exchange for land dedication or exchange beyond the minimums required. The amount waived will be determined by the Implementing Entity on a case-by-case basis according to the rules and principles described in Chapter 8. Fee waivers in exchange for land will only be allowed when the Implementing Entity has funds available or funding commitments to manage and monitor the dedicated land during the permit term (see the end of this chapter for a discussion of funding for post-permit management and monitoring).

Timing of Development Fee and Option for Ongoing Assessment

Development fees will be paid to local jurisdictions (or in the case of agencies not subject to local jurisdictions, to the Implementing Entity) at the time the first construction permits are issued (grading permits are the typically first construction permits issued). For other covered activities with permanent impacts, fees will be paid at or before the time of ground-disturbing activities.

Developers have the option of paying up to 33% of their total development fee through ongoing assessments on developed parcels or other mechanisms tied to their specific project. The cap on the portion of the development fee that can be paid with annual assessments was set to match the proportion of Plan costs required for ongoing administration, management, and maintenance. This option is designed to provide an ongoing source of income to the Implementing Entity while still ensuring that the portion of the fee needed for land acquisition is collected up front.

Assessments must be set high enough to repay the deferred portion of the fee during the permit term with interest. In addition, assessments are required to be guaranteed either through bonds sold against the assessment for the portion of the development fee not paid for at the time of development, or through binding restrictions on changes to the assessment. Repayment terms of the bonds will not extend beyond the life of the permit. Automatic increases of the annual assessment will be established when the assessment district is created. These increases must be at least as high as the Consumer Price Index (CPI) for the San Francisco Bay Region (see below and Table 9-7).

Assessments are required to be in perpetuity to provide a lasting revenue source to the Implementing Entity. For assessments initiated after year 10 of the HCP/NCCP, annual assessment rates after the permit term may be reduced to 1.65% (33% divided by 20) per year of the initially calculated development fee amount, after adjusting the fee amount by the CPI for the San Francisco Bay Region from the year the fee was calculated until the end of the permit term. Assessment rates beyond the permit term must also increase automatically at a rate equal to or higher than the CPI for the San Francisco Bay Area.

Wetland Mitigation Fee

Applicants that fill, dredge, or remove wetlands, streams, ponds, or riparian woodland/scrub land-cover types will be required to pay an additional *wetland fee* on top of the basic development fee. This wetland fee is intended to pay the full cost of restoration or creation of these land-cover types, including design, implementation, postconstruction monitoring, and remediation. Management and monitoring after success criteria are met (i.e., after wetland is fully functioning) will be covered by the basic development fee. Restoration of oak savanna is also required by the Plan, but the cost of this restoration is included in the basic development fee because it is not associated with wetlands and other jurisdictional waters.

As described in Chapter 5, mitigation requirements for wetland, stream, pond, and riparian woodland/scrub impacts include both preservation and restoration/creation. The wetland fee will cover wetland restoration or creation, but not wetland preservation. Preservation of these land-cover types is included in the basic development fee because land prices will not be significantly affected by the presence of these land-cover types, and most restoration/creation will occur on land already owned by the Implementing Entity. Therefore, for every acre of impact on wetlands, streams, ponds, and riparian woodland/scrub, applicants will pay the appropriate basic development fee (according to zone) towards land acquisition and the conservation program as a whole, as well as a wetland fee to cover the costs of successful restoration or creation. Wetland fees will vary by wetland type to account for the different costs of restoration and the different mitigation ratios required (Table 9-5). Table 9-5 also lists the accepted methods for determining the area to which the wetland fee applies. See Appendix G for the calculation of wetland fees by wetland type.

Applicants have the option of constructing and monitoring their own wetland, stream, ponds, or riparian mitigation in lieu of paying the wetland fee as long as wetland success criteria are met prior to project construction. Alternatively, applicants may purchase credits in a private mitigation bank in the inventory area that has been approved separately by USFWS and CDFG and preapproved to service the HCP/NCCP (currently there are no such banks in the inventory area, but they may be established). Guidelines for the use of mitigation banks are found in the section *Private Mitigation Banks* in Chapter 8.

Applicants receiving coverage for projects that impact vernal pools known or assumed to support covered shrimp will be responsible for direct compensation of this unique habitat type (see Conservation Measure 3.8). Applicants who mitigate for loss of occupied covered shrimp habitat will not pay the wetland fee for these impacts.

The cost of the wetland mitigation program will depend on the amount and type of wetland removed by covered activities. Because the program will be self-funding by the wetland mitigation fee, the total estimated program costs (see Table 9-8) have been subtracted from overall Plan costs when calculating the basic development mitigation fee.

Rural Road Fee

Rural road fees are described in Table 9-6. Rural roads pay a fee amount different than other types of development because these projects fragment habitat, create substantial barriers and hazards to wildlife movement, and have a greater per-acre impact, particularly related to habitat fragmentation, than most other types of development projects. Special conservation measures were created to address the unique and substantial effects of rural roads planned for the inventory area (see Chapter 2 for a description of these projects, and Chapter 6 for a description of the conditions that apply to them). Because residential and commercial urban development generate much of the need for rural road projects, a portion of the impacts caused by these rural projects has been assigned to future urban development for the purpose of calculating the basic fee on new development. Agencies constructing the rural road projects will be responsible for paying the portion of the road fee not covered by the basic fee on new development. Although rural bicycle trails are considered rural infrastructure projects, they will only pay the basic development fee (not the higher rural road fee) because they do not have the habitat fragmentation effects that rural roads have.

As described in Table 6-6, certain covered rural road projects are required to implement additional avoidance and minimization measures beyond those required by other covered activities. Other measures are optional and, if implemented, would reduce the rural road fee. The discount received would be determined by the Implementing Entity on a case-by-case basis because the scale and nature of the additional measures must be taken into account (e.g., the number, length, and position of viaducts proposed).

Byron Airport Expansion

As described in Chapter 5 (see Conservation Measure 1.1), the County may mitigate future impacts at the airport either through payment of fees or a program of avoidance and land preservation in and around the the airport. If the avoidance and land preservation program is adopted as described in Chapter 5,

no fees will be charged the Byron Airport for their allowable impacts within the permit area. If the Byron Airport chooses not to adopt the avoidance and land preservation program described in Chapter 5, they will be charged the full development fee on lands impacted by any impacts above the 88 acres already permitted, consistent with the fee assessment protocols described in this chapter. In addition, if the land acquisition program described in Chapter 5 is not chosen, impacts to the final 22 of 88 acres previously permitted will be assessed 50% of the full development fee. This reduced and discounted fee accounts for the additional regulatory compliance provided by the HCP/NCCP over their 1992 and 1993 permits (i.e., 27 covered species). Furthermore, if the land acquisition program described in Chapter 5 is not chosen, impacts must occur first on the impact areas shown in Figure 5-4 unless an exception is granted by the Implementing Entity and approved by CDFG and USFWS.

The Byron Airport may also propose a mitigation package that combines fees and land acquisition or dedication. A mitigation package different from those in this Plan will be negotiated with the Implementing Entity and approved by CDFG and USFWS.

Temporary Impact Fee

As described in Chapter 2, there are many covered activities that are ongoing and that result in small, localized, temporary impacts on natural land-cover types. As described in Chapter 4, the majority of these activities, particularly those within the UDA, will have little or no effect on covered species or their habitats. Some ongoing activities, however, are expected to have substantial temporary impacts on covered species due to their large footprint, linear nature, location in the inventory area, effect on local soils or hydrology, or a combination of these factors. Temporary impacts are defined as any impact on vegetation or habitat that does not result in permanent habitat removal. (Covered activities with permanent impacts must pay the development fee as described above.) Temporary impacts that occur within wetland land-cover types will be assessed the full wetland fee unless applicants develop and implement restoration to return the wetland to preproject conditions (see Chapter 6).

Temporary impacts subject to the fee (see list below of specific activities subject to this fee) will pay the fee once during the permit term in one of two ways.

- If the frequency of the impact can be predicted during the permit term, the applicant may pay a discounted fee for infrequent treatments. The total fee will be calculated using the following formula:

$$\text{Temporary Impact Fee} = \text{Full development fee} \times \text{activity footprint} \times F/30$$

where F = the number of calendar years during the permit term in which the activity occurs. For activities that disturb soil, F must be doubled to account for the longer delay in habitat recovery.

OR

- If impact frequency and location are not known, the applicant will pay the full development fee based on the known footprint of the activity (see Figure 9-1 and Table 9-4).

Regardless of the method used, the fee will be paid once during the permit term for any given piece of ground.

Activities Subject to the Fee

To reduce administrative costs, temporary impact fees will not be assessed on any covered project with impacts on non-wetland land cover types of less than 0.05 acre (i.e., impacts of any size would be charged temporary impacts on wetlands). The following covered activities greater than 0.05 acre will be assessed a temporary impact fee *inside and outside the UDA* because of their potential effects on covered species and aquatic communities.

- Construction and maintenance of detention basins.
- Repair of channel banks damaged by erosion or slope failure.
- Silt removal within nontidal areas of natural channels or reservoirs to maintain design flood capacity; activity may include temporary dewatering to allow silt removal (silt removal in the existing Marsh Creek Reservoir is not a covered activity because of the potential to mobilize high concentrations of mercury in the sediment; silt removal in the expanded detention basin of Marsh Creek Reservoir is covered; see Chapter 2).

The following covered activities greater than 0.05 acre will be assessed a temporary impact fee in the same way as the development fee (see Figure 9-1 and Table 9-4) for the portion of the project *outside the UDA*.

- Pipeline repair or replacement (trenching).
- Underground telecommunication line installation, repair, or replacement.
- Transmission tower replacement.
- Underground electrical transmission line installation, repair, or replacement.
- Vegetation clearing needed for utility line or gas line maintenance (e.g., mowing, disking, herbicide spraying, tree trimming).

Utilities will pay the full development fee outside the UDA because of the wide scale of their impacts in the inventory area and their likely need to cross the Preserve System and other public lands that support the Preserve System.

Other covered activities, such as mowing, herbicide use, tree trimming, and all activities that occur in already disturbed areas, are subject to BMPs described in Chapter 6 but will not be charged a fee. All low-impact operations and

maintenance activities of County roads and flood control facilities (excluding activities in areas described in this section above) outside the UDA have been addressed in this Plan and therefore will not pay a fee, but will apply the BMPs set forth in Chapter 6.

Impact Fee for County Flood Detention Basins

Expansion of County flood control detention basins described in Chapter 2 will be assessed the temporary impact fee as described above. These basins store water temporarily only in very high-flow conditions and are maintained as grassland when not in use; consequently, their temporary effects are much lower than activities subject to the full development fee.

The fee for the Marsh Creek Reservoir Expansion project cannot be determined at this time due to the uncertain nature of the project footprint. In addition, project amenities such as riparian or grassland restoration should offset all or part of the HCP/NCCP impact fee. The fee for this unique project will be determined by the Implementing Entity, CDFG, and USFWS during Plan implementation on the basis of the factors listed below. However, this is not an exhaustive list.

- Project footprint.
- Frequency and amount of dredging needed to maintain design capacity during the permit term.
- Expected recovery time of habitat.
- Habitat restoration and enhancement conducted on site to offset impacts and meet other HCP/NCCP goals.

Fee Collection

All fees paid by applicants to participating jurisdictions will be collected by the applicable jurisdiction and deposited into a single account administered by the Implementing Entity. Records of all deposits will be sent to the Implementing Entity by each jurisdiction upon execution.

Fee Adjustments

The dynamic nature of the costs associated with HCP implementation, including land acquisition costs and operating, maintenance, and management costs, requires a flexible approach to funding through time. Many existing HCPs have not incorporated sufficient flexibility into their funding mechanisms and, as a result, have found that funding lags behind increasing costs, compromising plan implementation. This is due in part to the impossibility of perfectly predicting future cost changes. This Plan includes two mechanisms for adjusting fee levels:

automatic adjustments and periodic audits. For details on these mechanisms, see Appendix G.

Automatic Fee Adjustments

The two primary costs of the Plan, land acquisition and operations/maintenance, will likely change at different rates over time. Land costs in many areas of California, including the San Francisco Bay Area, generally increase above the rate of inflation. The significant demand for housing in the Bay Area and the more limited housing supply have increased housing prices significantly, which in turn increases the value of developable land if housing construction costs increase by less than housing prices. Other Plan costs, including the cost of the personnel, supplies, and equipment involved in managing, operating, restoring, and maintaining the Preserve System, will more closely follow the general rate of inflation. To account for these differing rates of inflation, participating jurisdictions will change the development, road, and wetland fees automatically at the beginning of each fiscal year according to the indices in Table 9-7.

The variation in the cost of land due to site-specific factors means that it is difficult to develop land cost indices; consequently, no such indices are available. However, given the link between the housing market, housing prices, and land costs, housing prices generally provide a more accurate index for land cost inflation than measures of general inflation, especially for land whose value is primarily generated by its development value. The index used for inflation of land acquisition cost is the median home price for cities in Contra Costa County. The index used to develop the non-land cost inflation is the CPI for the San Francisco Bay Region.

Periodic Fee Audit and Adjustment

To ensure that the fees generated by development and other covered activities are adequately covering their share of Plan costs, a thorough fee audit will be completed by the end of Plan years 3, 6, 10, 15, 20, and 25. This schedule was developed to balance the need for frequent assessments with the need to accumulate enough data on which to base a meaningful audit and contain administrative costs.

The cost review process will include a review of the costs and their underlying assumptions that were developed as part of the original funding plan. Actual land sales in the inventory area transacted after the start of the HCP/NCCP will be evaluated and compared to the original land cost assumptions to determine the actual level of land cost inflation. The actual costs of operating, maintaining, and managing the Preserve System will also be compared to the original estimates of these costs to determine the actual level of non-land inflation. The Implementing Entity will hire an outside, independent financial auditor to conduct this analysis.

If either portion of the development or road fee (land acquisition or preserve management) is found to be lower than needed to offset the fee share of actual costs, that portion of the fees will be increased. If either portion of the fees is found to be significantly higher than needed to offset the fee share of actual costs, then the fees will be reduced. Automatic annual fee increases will resume when the fees are predicted to be in line with (or slightly greater than) actual costs.

Following completion of the independent fee audits, fees may be adjusted to reflect refined cost estimates. However, the fee on new development must always be based on the fair share apportionment ratio discussed above. For example, if state and federal contributions are not high as a predicted, the fee on development cannot be raised to make up the difference. Likewise, if grant funds exceed expectations, additional recovery lands will be acquired and development fees will not be reduced.

Interim Project Contributions

During Plan development, if projects contribute funding or land towards Plan implementation consistent with NCCPA requirements and the NCCP Planning Agreement, these funds and land will be available to satisfy the jump start guidelines and provide start-up funds for the Implementing Entity.

9.3.2 Local Funding

Approximately 65-75% of the funds for Plan implementation will come from local sources, including the County, cities, EBRPD, and local land trusts. As described in Chapter 8, acquisitions by other organizations can be counted towards HCP/NCCP land acquisition requirements if land is managed in accordance with the terms of the Plan either by the Implementing Entity or by another organization bound by an agreement with the Implementing Entity to manage land in accordance with the terms of the Plan. If only a portion of the land is managed according to the Plan, only that portion can be counted towards Plan requirements.

East Bay Regional Park District

EBRPD has long been active in land acquisition in Alameda and Contra Costa Counties, including the inventory area. Between 1967 and 2000, EBRPD acquired an annual average of 2,300 acres District-wide, with an annual average of about 440 acres acquired in the inventory area. If this trend continues, approximately 13,300 acres could be acquired over the next 30 years in the inventory area (see Appendix G for details and sources). Assuming the trend continues at 75% of the historic rate, EBRPD would acquire 10,000 acres, with an estimated value of \$65 million, in the inventory area. Because approximately

35% of EBRPD acquisition funds come from grants (mostly from state sources), the local contribution of EBRPD from local property taxes and assessments is estimated at \$42.25 million (see Appendix G for more information). (These calculations do not include the contribution of long-term management provided by EBRPD.)

Local Land Trusts

Organizations such as the Trust for Public Land, Save Mount Diablo, the Brentwood Agricultural Land Trust, and the Agricultural Trust of Contra Costa County are actively involved in land preservation and acquisition in the Plan area, though they often facilitate transfers rather than acquiring land themselves. For example, the Trust for Public land brokered the Cowell Ranch purchase in association with the CDPR. Likewise, Save Mount Diablo has been involved in numerous land acquisitions, many within the inventory area, over its more than 30-year history. For example, Save Mount Diablo has contributed substantially to the growth of Mount Diablo State Park. This summary is meant to provide context for the HCP/NCCP. No assumptions were made in the Plan that local land trusts would contribute to HCP/NCCP conservation goals or funding needs.

Other Local Funding

Other local funding could contribute to Plan costs during or after the permit term. For example, a \$175 million Open Space Funding Measure was the subject of a special mailout election in Contra Costa County in August 2004 by the Contra Costa County Open Space Funding Authority, a joint powers authority created by Contra Costa County and EBRPD. This measure would have funded approximately \$40 million in land acquisitions and land stewardship projects within the inventory area that would have been consistent with the conservation goals of the HCP/NCCP. The proposed funding source was a parcel tax.

Raw votes in favor of the Open Space Measure were 50.1%. However, when votes were weighted according to the amount of tax each voter would pay, as required by law, votes in favor dropped to 46.2%, below the needed simple majority. Despite the failure of this Open Space Measure, the Funding Authority continues to meet on a regular basis and has publicly expressed interest in proposing a similar Open Space Measure in the future. Passage of a similar Open Space Measure could provide substantial additional local funds for the HCP/NCCP.

9.3.3 State and Federal Funding

The U.S. Congress and the California legislature have determined that conserving species and their natural habitats is an issue of both national and state importance. The federal and state governments will fulfill their responsibilities

for conservation by assisting local governments and property owners to assemble, manage, and monitor the HCP/NCCP Preserve System. This assistance will contribute to the land acquisition requirements of the Plan, contribute to recovery of listed species in the Plan area, and reduce or avoid the need to list additional species as threatened or endangered. The state government has land under its jurisdiction in and near the inventory area (e.g., Mount Diablo State Park, Cowell Ranch State Park). The management and enhancement of the conservation values on state lands is consistent with the goals of the HCP/NCCP and will further the conservation of covered species in East Contra Costa County.

Through the HCP/NCCP Implementing Entity and the Implementing Agreement with the participating jurisdictions and special districts, the CDFG and USFWS have agreed to contribute 8,700 acres of land to the Preserve System (see below for a discussion of how to measure state and federal contributions). Funding for this land acquisition could come from a variety of sources administered by the CDFG and USFWS (Table 9-3). An assessment of progress towards this goal will be made annually and included in the annual report of the Implementing Entity submitted to CDFG and USFWS.

State and federal funding sources other than those administered by the CDFG and USFWS are also expected to play an important role in implementing the HCP/NCCP. For example, many of the funding sources described in Table 9-3, especially sources administered by the California Coastal Conservancy and the California Department of Parks and Recreation, have provided substantial revenues in the past for habitat conservation in the HCP/NCCP inventory area. Based on an analysis of past investments from these sources in this area (that assumes some reduction in investment levels from these sources in the future) as well as analysis of other state and federal funding sources that have not been utilized in the past but are expected to be utilized in the future, it is projected that these other state and federal funding sources will contribute an additional 4,650 acres of land to the preserve system (Table 9-3). The HCP/NCCP Implementing Entity, CDFG, and USFWS will work cooperatively with these other agencies to attempt to secure necessary contributions from these other organizations and the help achieve the comprehensive conservation goals of the HCP/NCCP.

If, after the exercise of all available authority and utilization of all available resources, the CDFG and USFWS contribution of 8,700 acres or the other state and federal agencies contribution of 4,650 acres cannot be provided to the HCP/NCCP Implementing Entity, the Plan will be reevaluated by the Implementing Entity, CDFG, and USFWS. All parties will work together to develop a mutually acceptable solution. Adjustments may be made to take authorization, permit term, conservation obligations, or other aspects of the Plan under the permits given the extent of the state and federal contribution to date. However, as discussed above, the development fee cannot be increased to offset a funding shortfall from state or federal sources.

Implementation of the HCP/NCCP is subject to the federal Anti-Deficiency Act and the availability of appropriated funds. Nothing in this Plan will require the obligation, appropriation, or expenditure of any money from the United States

Treasury. USFWS will not be required to expend any federal agency's appropriated funds until an authorized official of that agency commits these funds in writing. Similarly, CDFG will not be required to expend any state agency's appropriated funds until an authorized official of that agency commits these funds in writing. The state and federal agencies will use their best effort to contribute the acreage identified in Table 9-3.

Measuring State and Federal Contributions

State and federal contributions to the Plan are earmarked only for the portion of the Plan that contributes to the recovery of covered species. State and federal contributions cannot be used for the mitigation component of the Plan.

Contributions by the state or federal government to meet Plan requirements must be measured in terms of acreage rather than dollars. To address this, Plan funding needs were converted to acreage based on the cost of the land on an adjusted per-acre basis. This adjusted ratio takes into account the administration and management costs associated with the land and assumes that the state and federal agencies will not be acquiring and managing the land themselves (e.g., in a new State Ecological Reserve or National Wildlife Refuge).

If the state or federal agency acquires and manages the land itself, the land acquisition acreage credit it receives will be increased by 33%⁶ to offset the ongoing financial contribution of land administration, management, monitoring, and all other functions. If the state or federal agency assumes some but not all responsibility for management and monitoring then the land acquisition acreage credit will be reduced accordingly. As with other partners, all land acquired by state or federal agencies must be managed in accordance with the terms of the HCP/NCCP to receive credit under the Plan.

If the state and/or federal governments contribute a portion of the costs of a land acquisition, the state and/or federal contribution will be measured as a share of the overall acquired acreage that is in proportion to the state and federal share of the overall costs of the acquisition.

State and Federal Funding Sources

Federal ESA Section 6 Program

USFWS's Section 6 grant program is likely to provide a significant source of grant funding for the HCP/NCCP. USFWS annually provides significant funds

⁶ This acreage credit is the proportion of costs associated with all aspects of land management that would be saved by the Implementing Entity if federal or state agencies fully manage the land they acquire according to the terms of the Plan. The acreage credit applied for wildlife agency management of their own land is calculated as the proportion of non-land acquisition costs during the permit term for the maximum urban development area scenario. See Table 9-2 and Appendix G for details.

to local jurisdictions developing HCPs. The Section 6 grant program is generally divided into three funding categories: HCP Assistance (for planning), HCP Land Acquisition, and Recovery Land Acquisition Grants. Grants are applied for and administered by CDFG.

Over each of the past 3 fiscal years, USFWS has made available, on average, more than \$58 million in land acquisition funds nationally. Of this, an average of approximately 41%—nearly \$24 million—was dedicated annually for land acquisition for HCPs in California. It is estimated that the East Contra Costa County HCP/NCCP will receive approximately \$45 million over the permit term for implementation. This estimate is based on the historic funding rate and on the reasonable expectation that northern California HCPs will receive more of the California share of funding as more plans are approved and as the large southern California plans complete land acquisition.

Federal Aviation Administration

The Federal Aviation Administration (FAA) may fund the acquisition of land around the Byron Airport that could contribute substantially to the conservation goals in that area. Long-term plans for the Byron Airport include acquiring neighboring parcels in order to secure an adequate *clear zone* in the vicinity of the airport runways. County staff have provided background information on acreage and purchase price estimates related to the clear zone acquisition goals for the airport. All areas of acquisition interest lie within areas of high priority for conservation by the HCP/NCCP. It is assumed that acquisition and conservation of these parcels for airport needs would also satisfy Plan requirements. Current plans include approximately 800 acres for clear zone acquisition at an expected cost of \$6.5 million. The FAA matches such airport-related acquisitions at a very high rate (9:1), but the possibility exists that, should the Plan provide any matching funds, clear zone acquisition goals would remain fixed but airport financial contributions would decrease slightly.

State Funding Sources

As described in Table 9-3, there are a variety of sources available for state funding, including existing California propositions (e.g., 12, 40, 50). Proposition funding for the HCP/NCCP can come from a variety of sources including the Wildlife Conservation Board, CalFed Bay-Delta Program, and California Department of Parks and Recreation. More large bond measures (more than \$1 billion) for open space preservation and management are expected to be issued as California propositions in the next few years. If they pass, they could provide significant additional sources of state funding for the HCP/NCCP.

9.3.4 Funding Adequacy

As shown in Table 9-8, funding sources will meet all expected costs of the HCP/NCCP. This section further discusses the adequacy of Plan funding.

Additional Funds Needed for Management or Monitoring

The contingency fund is primarily intended to offset land management or monitoring costs that are higher than predicted by this Plan on a short-term basis. If this fund is inadequate to offset these costs, or if costs are predicted to exceed revenue on a long-term basis, then the Implementing Entity will consider whether to adjust management and monitoring requirements (without jeopardizing meeting HCP/NCCP requirements) or to raise revenue to offset the funding shortfall. When feasible, the Implementing Entity will make reasonable adjustments to revenue to meet the obligations of the HCP/NCCP. Adjusting management or monitoring requirements outside the adaptive management framework (see Chapter 7) can only be accomplished with the written approval of the HCP/NCCP Governing Board and permitting agencies. Some changes may require a minor or major amendment to the HCP/NCCP. See Chapter 10 for rules regarding changes to the HCP/NCCP.

Actions Required Should Revenue Collections or Land Acquisitions not Keep Pace with Land Development

The NCCPA requires that conservation keep pace with development in “rough proportionality.” The Jump-Start guideline and Stay-Ahead requirement of the conservation strategy (see Chapter 5) are intended to ensure that land acquisition and habitat restoration always stay ahead of impacts. Meeting this requirement, however, depends on the steady acquisition of land from willing sellers and a steady stream of funding from non-development sources.

The nature of land acquisition is such that assembly of the Preserve System is not likely to be accomplished in an incremental or predictable fashion. It is expected that large (640 acres or more) land acquisitions will comprise the bulk of the total acreage of the Preserve System. Acquisition of large parcels (or combinations of parcels) is typically more complex and may take longer to realize than acquisition of small parcels. Over the long term, larger land acquisitions will save money because of their typically lower price per acre and lower land expense costs per acre (e.g., due diligence, legal fees).

The Implementing Entity will make every attempt to meet Stay-Ahead requirements. At the end of each year, if these requirements are not being met, the HCP/NCCP Governing Board will meet with the regulatory agencies to

determine the cause of the shortfall. If the cause is the slow pace of large land acquisition deals, then the Stay-Ahead requirement may be waived by the regulatory agencies until the following year. If the cause is a lack of willing sellers, then the Governing Board and the regulatory agencies will consider slowing or stopping local permit issuance under the HCP/NCCP until enough willing sellers are available, or waiving Stay-Ahead requirements (or portions of the requirement) until enough willing sellers are available. Other options include requiring that land be provided in lieu of fees for projects covered by the HCP/NCCP (see Chapter 8, Section 8.6.7).

At annual financial reviews at the end of each fiscal year, if revenue collections from non-development sources are not keeping pace with the funding needs for land acquisition, the Governing Board and the regulatory agencies will meet to determine a course of action. Options considered will include

- waiving Stay-Ahead requirements until non-development funds become available,
- temporarily altering take authorizations under the NCCP permit until additional funds are available,
- slowing or stopping local permit issuance under the HCP/NCCP until adequate outside funds are available to continue land acquisition, or
- temporarily waiving some management, restoration, or monitoring requirements (e.g., Stay-Ahead requirements for restoration) to temporarily mobilize funds for acquisition of key parcels that may be available only for a short time.

These options are temporary actions designed to allow the Plant to proceed until the funding situation improves. If funding shortages are more severe, then permanent changes to the Plan may be needed. See Section 9.3.3 regarding state and federal contributions, Section 8.6.7 regarding land in lieu of development fees, and Section 10.3.3 regarding major amendments.

Funding for Post-Permit Management and Monitoring

Annual costs to maintain the Preserve System in perpetuity are estimated to be slightly less than the annual cost for program administration, preserve management, and monitoring estimated during the Years 26–30 funding period, or approximately \$2.9 million or \$3.2 million⁷ annually under the initial or maximum urban development area, respectively. Actual long-term costs may be lower if the Implementing Entity can develop streamlined procedures for management and monitoring during the permit term or reduce administrative

⁷ This is equivalent to approximately \$120/acre/year or \$100/acre/year in operational and capital costs for preserve system operation under the initial or maximum urban development areas, respectively.

costs. Responsibility for funding long-term management and monitoring rests solely with the Permittees.

The Implementing Entity will develop a detailed plan for long-term funding of operation and maintenance and will have secured all necessary commitments to implement this plan before using 50% of all authorized take under the maximum urban development area (= 50% of 14,518 acres [Table 4-3], or 7,259 acres) or at the end of Year 15 of implementation, whichever occurs first.

Potential approaches, funding sources, and opportunities for redirecting cost-savings toward post-permit management and monitoring include the following. Estimates of available funding are presented in Table 9-9.

- Partnerships with and commitments from existing organizations to assist with purchase and full operation and maintenance of HCP/NCCP preserves during and after the permit term.
- Endowment from cost savings over estimated Plan costs (e.g., lower than estimated operations and maintenance costs from using existing organizations in the inventory area).
- Local tax or other funding measure for operations and maintenance of open space similar to four recent measures proposed in Contra Costa County: Measures K (2001) and W (2003) proposed by EBRPD (both failed), Measure CC in 2004 (passed), and Contra Costa County Open Space Funding Authority's Parks and Open Space Protection and Preservation District in 2004 (failed).
- Assessments on new development covered by the HCP/NCCP that can contribute to long-term operations and maintenance as a substitute for up to 1/3 of the development fee (see description above).
- Real estate transfer fees on new development (permanent covenants recorded on the title of new parcels requiring fees to be paid to the HCP/NCCP with every ownership change) as an alternative or supplement to assessments.
- Greater than expected leveraging of acquisition and management costs from partnerships with other organizations.
- Grant funding for long-term management.
- Reduce the required frequency or intensity of monitoring or adaptive management actions after the permit term based on monitoring results during the permit term and develop more streamlined monitoring and management procedures, thereby reducing post permit costs.
- Grazing fees. If used, all or a large portion of grazing fee revenue should be earmarked to support livestock operations (e.g., fencing, watering tanks, access roads, etc.).
- Recreational use fees. If used, all or a large portion of recreational use fees should be earmarked to support recreational facilities (e.g., parking lots, informational kiosks, restrooms, trails, etc.).

The Implementing Entity will attempt to secure post-permit funding for HCP/NCCP implementation during the early phases of the permit term. The Implementing Entity will provide status reports and consult with CDFG and USFWS annually on progress towards this goal. If for reasons beyond the control of the Implementing Entity sufficient long-term funding sources are not secured before 50% of the authorized take under the maximum urban development area is used or at the end of Year 15 of implementation, whichever occurs first, the Implementing Entity will consult with CDFG and USFWS to

- Consider revoking or suspending take permits.
- Consider reduction of take authorization limits, covered activities, or permit duration.
- Consider raising HCP/NCCP fees to cover some or all of post-permit management and monitoring.
- Develop alternative strategies for long-term funding.

Chapter 9
Tables

Table 9-1. Summary of East Contra Costa County HCP/NCCP Implementation Costs (Rounded to the Nearest \$10,000) for *Initial Urban Development Area*

Cost Category	Implementation Period (Years)							Total
	0 ¹	1–5	6–10	11–15	16–20	21–25	26–30	
Total Costs								
Program Administration	\$590,000	\$3,060,000	\$2,910,000	\$2,980,000	\$2,790,000	\$2,770,000	\$2,700,000	\$17,800,000
Land Acquisition	\$0	\$30,340,000	\$29,500,000	\$29,500,000	\$29,500,000	\$29,500,000	\$29,500,000	\$177,850,000
Management, Restoration, and Recreation Planning and Design	\$260,000	\$1,850,000	\$1,140,000	\$850,000	\$860,000	\$520,000	\$560,000	\$6,030,000
Habitat Restoration/Creation	\$10,000	\$3,220,000	\$3,510,000	\$3,470,000	\$3,480,000	\$3,140,000	\$3,180,000	\$19,990,000
Environmental Compliance	\$0	\$460,000	\$460,000	\$460,000	\$460,000	\$460,000	\$0	\$2,300,000
HCP/NCCP Preserve Management and Maintenance	\$70,000	\$3,090,000	\$3,590,000	\$5,400,000	\$5,970,000	\$6,680,000	\$7,590,000	\$32,390,000
Monitoring, Research, and Adaptive Management	\$10,000	\$2,030,000	\$2,840,000	\$3,090,000	\$3,400,000	\$3,360,000	\$3,690,000	\$18,410,000
Remedial Measures	\$0	\$30,000	\$30,000	\$270,000	\$270,000	\$270,000	\$690,000	\$1,550,000
Contingency Fund	\$50,000	\$690,000	\$720,000	\$830,000	\$860,000	\$860,000	\$920,000	\$4,920,000
Grand Total (in 2004 dollars)	\$980,000	\$44,760,000	\$44,690,000	\$46,840,000	\$47,580,000	\$47,560,000	\$48,820,000	\$281,230,000
Capital Costs								
Program Administration (office space and equipment)	\$90,000	\$110,000	\$120,000	\$100,000	\$140,000	\$100,000	\$110,000	\$760,000
Land Acquisition (acquisition, site improvements)	\$0	\$28,170,000	\$28,170,000	\$28,170,000	\$28,170,000	\$28,170,000	\$28,170,000	\$169,020,000
Management, Restoration, and Recreation Planning and Design (office equipment and vehicles)	\$10,000	\$80,000	\$90,000	\$50,000	\$50,000	\$10,000	\$40,000	\$330,000
Habitat Restoration/Creation (construction, office equipment, and vehicles)	\$10,000	\$2,190,000	\$2,220,000	\$2,160,000	\$2,160,000	\$2,120,000	\$2,150,000	\$12,990,000

Cost Category	Implementation Period (Years)							Total
	0 ¹	1–5	6–10	11–15	16–20	21–25	26–30	
HCP/NCCP Preserve Management and Maintenance (vehicles, equipment, and facilities)	\$10,000	\$1,240,000	\$850,000	\$1,840,000	\$1,500,000	\$1,510,000	\$1,770,000	\$8,720,000
Remedial Measures	\$0	\$30,000	\$30,000	\$270,000	\$270,000	\$270,000	\$690,000	\$1,550,000
Capital Cost Total (in 2004 dollars)	\$110,000	\$31,830,000	\$31,450,000	\$32,590,000	\$32,290,000	\$32,170,000	\$32,930,000	\$193,380,000
Operational Costs								
Program Administration (personnel, legal and financial assistance, insurance, in-lieu funding)	\$500,000	\$2,960,000	\$2,790,000	\$2,870,000	\$2,650,000	\$2,670,000	\$2,590,000	\$17,030,000
Land Acquisition (transactional costs)	\$0	\$2,170,000	\$1,330,000	\$1,330,000	\$1,330,000	\$1,330,000	\$1,330,000	\$8,830,000
Management, Restoration, and Recreation Planning and Design (personnel and vehicle maintenance)	\$250,000	\$1,760,000	\$1,050,000	\$800,000	\$800,000	\$510,000	\$510,000	\$5,690,000
Habitat Restoration/Creation (personnel and vehicle maintenance)	\$0	\$1,020,000	\$1,310,000	\$1,310,000	\$1,310,000	\$1,020,000	\$1,020,000	\$7,000,000
Environmental Compliance	\$0	\$460,000	\$460,000	\$460,000	\$460,000	\$460,000	\$0	\$2,300,000
HCP/NCCP Preserve Management and Maintenance (personnel and vehicle and equipment maintenance)	\$60,000	\$1,850,000	\$2,740,000	\$3,560,000	\$4,480,000	\$5,180,000	\$5,810,000	\$23,670,000
Monitoring, Research, and Adaptive Management	\$10,000	\$2,030,000	\$2,840,000	\$3,090,000	\$3,400,000	\$3,360,000	\$3,690,000	\$18,410,000
Contingency Fund	\$50,000	\$690,000	\$720,000	\$830,000	\$860,000	\$860,000	\$920,000	\$4,920,000
Operational Cost Total (in 2004 dollars)	\$870,000	\$12,930,000	\$13,240,000	\$14,250,000	\$15,290,000	\$15,390,000	\$15,880,000	\$87,860,000

Note: See the text in Chapter 9 for detailed descriptions of each cost category.

¹ Year 0 costs are costs that are incurred as a part of the initial start-up of the HCP/NCCP.

Table 9-2. Summary of East Contra Costa County HCP/NCCP Implementation Costs (Rounded to the Nearest \$10,000) for *Maximum Urban Development Area*

Cost Category	Implementation Period (Years)							Total
	0 ¹	1–5	6–10	11–15	16–20	21–25	26–30	
Total Costs								
Program Administration	\$590,000	\$3,070,000	\$2,910,000	\$2,990,000	\$2,810,000	\$2,790,000	\$2,720,000	\$17,870,000
Land Acquisition	\$0	\$36,830,000	\$35,780,000	\$35,780,000	\$35,780,000	\$35,780,000	\$35,780,000	\$215,740,000
Management, Restoration, and Recreation Planning and Design	\$260,000	\$1,860,000	\$1,150,000	\$860,000	\$870,000	\$530,000	\$570,000	\$6,110,000
Habitat Restoration/Creation	\$10,000	\$3,630,000	\$3,920,000	\$3,880,000	\$3,880,000	\$3,550,000	\$3,580,000	\$22,450,000
Environmental Compliance	\$0	\$460,000	\$460,000	\$460,000	\$460,000	\$460,000	\$0	\$2,300,000
HCP/NCCP Preserve Management and Maintenance	\$70,000	\$3,190,000	\$3,540,000	\$5,890,000	\$6,130,000	\$8,430,000	\$8,480,000	\$35,720,000
Monitoring, Research, and Adaptive Management	\$10,000	\$2,160,000	\$2,980,000	\$3,470,000	\$3,850,000	\$3,890,000	\$4,300,000	\$20,670,000
Remedial Measures	\$0	\$30,000	\$30,000	\$290,000	\$290,000	\$290,000	\$750,000	\$1,670,000
Contingency Fund	\$50,000	\$720,000	\$750,000	\$890,000	\$910,000	\$1,000,000	\$1,020,000	\$5,340,000
Grand Total (in 2004 dollars)	\$980,000	\$51,950,000	\$51,520,000	\$54,510,000	\$54,980,000	\$56,720,000	\$57,200,000	\$327,860,000
Capital Costs								
Program Administration (office space and equipment)	\$90,000	\$110,000	\$120,000	\$100,000	\$140,000	\$100,000	\$110,000	\$760,000
Land Acquisition (acquisition and site improvements)	\$0	\$34,360,000	\$34,360,000	\$34,360,000	\$34,360,000	\$34,360,000	\$34,360,000	\$206,160,000
Management, Restoration, and Recreation Planning and Design (office equipment and vehicles)	\$10,000	\$80,000	\$90,000	\$50,000	\$50,000	\$10,000	\$40,000	\$330,000
Habitat Restoration/Creation (construction, office equipment, and vehicles)	\$10,000	\$2,380,000	\$2,380,000	\$2,340,000	\$2,340,000	\$2,300,000	\$2,340,000	\$14,080,000

Cost Category	Implementation Period (Years)							Total
	0 ¹	1–5	6–10	11–15	16–20	21–25	26–30	
HCP/NCCP Preserve Management and Maintenance (vehicles, equipment, and facilities)	\$10,000	\$1,300,000	\$720,000	\$2,270,000	\$1,510,000	\$2,820,000	\$2,140,000	\$10,780,000
Remedial Measures	\$0	\$30,000	\$30,000	\$290,000	\$290,000	\$290,000	\$750,000	\$1,670,000
Capital Cost Total (in 2004 dollars)	\$110,000	\$38,260,000	\$37,700,000	\$39,410,000	\$38,690,000	\$39,870,000	\$39,730,000	\$233,790,000
Operational Costs								
Program Administration (personnel, legal and financial assistance, insurance, discretionary budget, in-lieu funding)	\$500,000	\$2,960,000	\$2,790,000	\$2,880,000	\$2,670,000	\$2,690,000	\$2,610,000	\$17,110,000
Land Acquisition (transactional costs)	\$0	\$2,470,000	\$1,420,000	\$1,420,000	\$1,420,000	\$1,420,000	\$1,420,000	\$9,580,000
Management, Restoration, and Recreation Planning and Design (personnel and vehicle maintenance)	\$250,000	\$1,780,000	\$1,070,000	\$820,000	\$820,000	\$530,000	\$530,000	\$5,780,000
Habitat Restoration/Creation (personnel and vehicle maintenance)	\$0	\$1,250,000	\$1,540,000	\$1,540,000	\$1,540,000	\$1,250,000	\$1,250,000	\$8,360,000
Environmental Compliance	\$0	\$460,000	\$460,000	\$460,000	\$460,000	\$460,000	\$0	\$2,300,000
HCP/NCCP Preserve Management and Maintenance (personnel and vehicle and equipment maintenance)	\$60,000	\$1,890,000	\$2,820,000	\$3,610,000	\$4,620,000	\$5,610,000	\$6,330,000	\$24,940,000
Monitoring, Research, and Adaptive Management	\$10,000	\$2,160,000	\$2,980,000	\$3,470,000	\$3,850,000	\$3,890,000	\$4,300,000	\$20,670,000
Contingency Fund	\$50,000	\$720,000	\$750,000	\$890,000	\$910,000	\$1,000,000	\$1,020,000	\$5,340,000
Operational Cost Total (in 2004 dollars)	\$820,000	\$13,690,000	\$13,830,000	\$15,100,000	\$16,290,000	\$16,840,000	\$17,470,000	\$94,030,000

Note: See the text in Chapter 9 for detailed descriptions of each cost category.

¹ Year 0 costs are costs that are incurred as a part of the initial start-up of the HCP/NCCP.

Table 9-3. HCP/NCCP Funding Sources

Program Name	Program Administrator	Funding Source	California Funding	Year	Description	Eligibility	East Contra Costa County NCCP/HCP Potential
Section 6 Grants	U.S. Fish and Wildlife Service	Federal	\$24,900,000	2001–2003 annual average	Grants for HCP land acquisition	HCPs	Strong
Byron Airport Acquisition	Federal Aviation Administration	Federal	\$6,500,000	Expected, one-time investment	About 800 acres in HCP planning area will be conserved as part of ongoing airport activity	Specific Project in East Contra Costa County	Established
Land and Water Conservation Fund	California Department of Parks and Recreation	Federal	\$7,832,545	2004	Dollar-for-dollar matching grants for planning, acquisition, and development of outdoor recreation areas and facilities	Cities, counties and districts with authority to acquire, develop, operate and maintain public park and recreation areas	Uncertain
Farm and Ranch Land Protection Program	Natural Resource Conservation Service	Federal	\$3,000,000	2004	USDA provides up to 50% of conservation easement value; requires partnerships with other agencies.	Active farm and ranch lands	Very limited
North American Wetlands Conservation Act Grant Program	U.S. Fish and Wildlife Service	Federal	\$1,000,000	2005	Program provides matching grants to aid in wetland conservation projects, including land acquisition, restoration, and enhancement. Non-federal match must be at least 1:1.	Non-federal agencies, organizations, or individuals	Uncertain
Central Valley Project Improvement Act Habitat Restoration Program	U.S. Fish and Wildlife Service and U.S. Bureau of Reclamation	Federal	\$1-4 million annually	1996 to present	Provides funds for land acquisition, management, monitoring, research, restoration for endangered / threatened species impacted by the CVP.	Federal and State government agencies, private non-profit or profit organizations, and individuals	Moderate

Table 9-3. Continued

Program Name	Program Administrator	Funding Source	California Funding	Year	Description	Eligibility	East Contra Costa County NCCP/HCP Potential
Habitat Conservation Fund	California Department of Parks and Recreation	State – Other ^a	\$2,174,400	2003	Program requires dollar for dollar match from non-state source for wetlands, riparian, trails/programs and anadromous/trout categories.	Cities, counties and districts	Well-tapped by EBRPD
Per Capita Grant Program	California Department of Parks and Recreation	State – Proposition 40	\$326,725,000	Total funding allocation through time	For the acquisition and development of neighborhood, community, and regional parks and recreation lands and facilities in urban and rural areas. No matching requirements.	40% will be made available to counties, regional park and open space districts. The rest (60%) is for cities and districts other than regional park and open space districts.	Well-tapped by EBRPD
Recreational Trail Fund	California Department of Parks and Recreation	Federal ^b	\$2,197,222	Recommended 2003	Federal money for non-motorized trail projects; RTP will provide up to 80% of total project costs.	Cities, counties, districts, state agencies and nonprofit organizations with management responsibilities over public lands	Well-tapped by EBRPD
Roberti-Z’Berg-Harris Non-Urbanized Area Need Basis Grant Program	California Department of Parks and Recreation	State – Proposition 40	\$27,855,000	Total funding allocation through time	For acquisition, development, rehabilitation, and special maintenance of park and recreation land and facilities. Requires non-state funding match of 30% of total project costs.	Cities, Counties, and eligible districts in non-urbanized areas	Well-tapped by EBRPD
Wildlife Conservation Board	California Department of Fish and Game	State – Proposition 40	\$324,000,000	Total funding allocation through time	Various programs funded by Proposition 40 and Proposition 50, including acquisition and protection of habitat, coastal and wetlands protection, and grazing lands and ranchlands program.	Federal, state, and local governmental agencies, and nonprofit conservation organizations; in some cases, private land owners.	Some funding to EBRPD; potential for additional funding.

Table 9-3. Continued

Program Name	Program Administrator	Funding Source	California Funding	Year	Description	Eligibility	East Contra Costa County NCCP/HCP Potential
		State – Proposition 50	\$914,000,000				
San Francisco Bay Area Conservancy ^c	California Coastal Conservancy	State – Proposition 40	\$40,000,000	Total funding allocation through time	Funding from Proposition 40 and Proposition 50 for acquisition, development, rehabilitation, restoration and protection of land recourses and for Bay Area coastal watershed and wetlands protection, plus acquisition of agricultural and open space properties.	The State Coastal Conservancy, public agencies and nonprofit organizations (land trusts)	Well-tapped by EBRPD
		State – Proposition 50	\$20,000,000				
California Farmland Conservancy Program	California Department of Conservation	State – Proposition 12	\$10,000,000	Final Proposition 12 allocation; 2003-04 funding	Grants for preservation of strategic agricultural lands	Cities, counties, nonprofit organizations (land trusts) and Resource Conservation District Assistance programs.	Very limited
		State – Proposition 40	\$40,000,000	Total funding allocation through time			Very limited
CalFed Bay-Delta Programs	California Bay Delta Authority and other California agencies	State – Proposition 50	\$270,000,000	Total funding allocation through time	Various programs funded by Proposition 50 for habitat restoration and protection, conservation and restoration of watersheds.	State, federal, local and non-governmental agencies are eligible.	Moderate

Table 9-3. Continued

Program Name	Program Administrator	Funding Source	California Funding	Year	Description	Eligibility	East Contra Costa County NCCP/ HCP Potential
“Mountain Lion Fund”	State Coastal Conservancy, California Department of Parks and Recreation, Wildlife Conservation Board	State – Proposition 117	\$30,000,000	Annual funding through 2020	Proposition 117 provides at least \$30 million statewide each year for wildlife habitat preservation, including wetlands, stream and riparian habitat. Half must be spent in northern California.	\$21 million is allocated to the WCB for purposes of the Dept. of Fish and Game. \$4.5 million is allocated for local park, recreation and open space agencies as matching awards from the state. \$4.5 million is for the Coastal and Tahoe Conservancy.	Moderate
Clean Water State Revolving Fund	Environmental Protection Agency	Revolving fund	\$95,741,300	2004	Revolving fund provides low-interest loans for projects that improve water quality and reduce nonpoint source pollution, including wetland preservation, restoration and creation, and the protection of vernal pools and associated habitat such as oak woodlands. Loans can cover 100% of project costs with no cash up front.	Revolving fund loans are available to local governments, non-profits, municipalities, farmers, and homeowners.	Strong

^a Initiated by the California Wildlife Protection Act of 1990.

^b Administered at the federal level by the Federal Highway Administration.

^c The San Francisco Bay Area Conservancy obtains funds via the Statewide California Coastal Conservancy program. The broader California Conservancy program also funds other projects in the San Francisco Bay Area, though they are all directly on the coastline, not in Contra Costa County.

Source: Economic & Planning Systems, Inc.

Table 9-4. HCP/NCCP Development Fee

	Fee Zone ¹			Total
	Zone I: Cultivated and Disturbed Lands	Zone II: Natural Areas	Zone III: Small Vacant Lots	
Development Fee per Acre at Start of Permit Term ²	\$11,468	\$22,936	\$5,734	
Estimated Cost per Housing Unit ³	\$2,867	\$5,734	\$1,433	
Estimated Fee Zone Acreage (Excludes Roads)⁵				
Initial Urban Dev. Area	6,306	2,368	191 ⁴	8,864
Max. Urban Dev. Area	8,717	4,634	191 ⁴	13,542
Estimated Revenue (2005 Dollars)⁵				
Initial Urban Dev. Area	\$65,737,682	\$49,365,692	\$996,786	\$116,100,160
Max. Urban Dev. Area	\$76,832,237	\$81,683,177	\$842,746	\$159,358,160

Notes:

¹ As defined in Figure 9-1. Fee amounts are defined solely by a parcel's position in Figure 9-1. Zone names are provided only as a general guide to dominant land cover.

² See text and Appendix H for calculation methods. Development fees will be adjusted for inflation or deflation according to Table 9-7 and the terms of the HCP/NCCP; consult planning staff with your participating jurisdiction for the latest HCP/NCCP development fee.

³ Assumes average housing density of 4.0 units per acre. This is an estimate only; fees will be charged on a per acre basis, not on a per unit unit basis.

⁴ Parcels less than 1 acre may be exempt depending on the jurisdiction.

⁵ Fee zone acreage and revenue projections assume a 10% contingency. The initial fee will be set to reflect the cost and revenue projections associated with the initial urban development area as described in Appendix H. The cost and revenue projections associated with the maximum urban development area are reflected in the revenue projections for that development scenario.

Table 9-5. Wetland Fee and Acreage Determination Methods

Land Cover Type	Fee per unit of Impact ¹	Required Compensation Ratio for Restoration/Creation ¹	Method for Determining Fee Boundary
Riparian woodland/scrub	\$57,000/acre	1:1	Limit of tree or shrub canopy (drip line)
Perennial wetlands	\$78,000/acre	1:1	Jurisdictional wetland boundary of state or federal government ² , whichever is greater
Seasonal wetland	\$169,000/acre	2:1	Same as above
Alkali wetland	\$160,000/acre	2:1	Same as above
Ponds	\$85,000/acre	1:1	Jurisdictional waters boundary of state or federal government ² , whichever is greater
Aquatic (open water)	\$86,000/acre	1:1	Wetted area during normal rainfall year or jurisdictional waters boundary, whichever is greater
Slough/channel	\$97,000/acre	1:1	Area of impact within banks
Streams			
Streams 25 feet wide or less	\$465/linear foot	1:1	Stream length measured along stream centerline. Stream width measured between top of bank.
Streams greater than 25 feet wide ³	\$700/linear foot	1:1	Stream length measured along stream centerline. Stream width measured between top of bank.

¹ See Appendix G for calculation of fee by wetland type. Wetland fee takes required compensation ratio into account.

² Using methods for determining state and federal jurisdictional waters and wetlands at the time of HCP/NCCP approval or the current approved methodology, whichever results in a larger boundary.

³ Impact fee for wider streams is 1.5 times the base stream fee to account for higher construction costs on wider streams.

Table 9-6. Rural Road Fees

Name	Footprint Estimate (acres) ¹			Fee Zone	Estimated Base Fee ²	Fee Multipliers		Net Multiplier		Fee Per Acre	Estimated Total Fee (All Design Measures)		
	Best available	Lower	Higher			A) Unavoidable Effects Besides Footprint ³	B) Avoidable Effects (Pay Only if Design Measures Not Implemented) ⁴	If Optional Design Measures Not Implemented	If Optional Design Measures are Implemented	If Design Measures Implemented	Footprint =	Footprint =	Footprint =
											Best Available	Lower	Higher
Balfour Road Widening	5	3	10	natural	\$22,932	1.50	1.50	2.25	1.50	\$34,398	\$172,000	\$103,200	\$344,000
Bethel Island and Cypress Road Widening	3	2	5	ag	\$11,466	1.00	1.00	1.00	1.00	\$11,466	\$34,400	\$22,900	\$57,300
Buchanan Bypass	30	15	60	natural	\$22,932	1.75	1.50	2.63	1.75	\$40,131	\$1,203,900	\$602,000	\$2,407,900
Byron Highway Northern Extension	10	6	15	ag	\$11,466	1.00	1.00	1.00	1.00	\$11,466	\$114,700	\$68,800	\$172,000
Byron Highway Widening	16	10	30	mixed	\$17,199	1.25	1.25	1.56	1.25	\$21,499	\$344,000	\$215,000	\$645,000
EBART	5	3	10	ag	\$11,466	1.00	1.00	1.00	1.00	\$11,466	\$57,300	\$34,400	\$114,700
Kirker Pass Road Widening	7	5	15	natural	\$22,932	1.50	1.50	2.25	1.50	\$34,398	\$240,800	\$172,000	\$516,000
Marsh Creek Road Realignment at Selected Curves	3	2	5	natural	\$22,932	1.50	1.00	1.50	1.50	\$34,398	\$103,200	\$68,800	\$172,000
Marsh Creek Road Widening (SR4 Bypass to SR4)	20	15	30	ag	\$11,466	1.00	1.25	1.25	1.00	\$11,466	\$229,300	\$172,000	\$344,000
SR4 Widening Oakley to Discovery Bay	30	20	50	ag	\$11,466	1.00	1.25	1.25	1.00	\$11,466	\$344,000	\$229,300	\$573,300
SR239 ⁴	30	20	50	mixed	\$17,199	1.25	1.25	1.56	1.25	\$21,499	\$645,000	\$430,000	\$1,074,900
San Marco Road Extension	12	8	20	natural	\$22,932	1.75	1.50	2.63	1.75	\$40,131	\$481,600	\$321,100	\$802,600

Table 9-6. Continued

Name	Footprint Estimate (acres) ¹			Fee Zone	Estimated Base Fee ²	Fee Multipliers		Net Multiplier		Fee Per Acre	Estimated Total Fee (All Design Measures)		
	Best available	Lower	Higher			A) Unavoidable Effects Besides Footprint ³	B) Avoidable Effects (Pay Only if Design Measures Not Implemented) ⁴	If Optional Design Measures Not Implemented	If Optional Design Measures are Implemented	If Design Measures Implemented	Footprint = Best Available	Footprint = Lower	Footprint = Higher
Sand Creek Road Extension	3	2	5	ag	\$11,466	1.00	1.00	1.00	1.00	\$11,466	\$34,400	\$22,900	\$57,300
Sycamore Ave. Extension	2	1	3	ag	\$11,466	1.00	1.00	1.00	1.00	\$11,466	\$22,900	\$11,500	\$34,400
Vasco-Byron Hwy Connector (N of Byron Hot Springs) ⁴	10	7	15	natural	\$22,932	1.50	1.50	2.25	1.50	\$34,398	\$344,000	\$240,800	\$516,000
Vasco-Byron Hwy Connector (S of Byron Hot Springs)	3	2	5	natural	\$22,932	1.75	1.00	1.75	1.75	\$40,131	\$120,400	\$80,300	\$200,700
Vasco Road Widening/SR 84	100	50	200	natural	\$22,932	1.50	1.00	1.50	1.50	\$34,398	\$3,439,800	\$1,719,900	\$6,879,700
Walnut Blvd. Widening	12	8	20	mixed	\$17,199	1.00	1.25	1.25	1.00	\$17,199	\$206,400	\$137,600	\$344,000
TOTAL	261	152	483								\$7,149,100	\$3,981,700	\$13,664,900

Notes:

- ¹ Rough estimates only. Design specifications for most of these facilities have not been completed. Footprint includes area of cut & fill. Fee would be charged against entire disturbed area.
- ² Base fee for projects that cross more than one fee zone have been roughly estimated. Actual fee would be based on proportion of impacts in the applicable fee zone. Base fee amounts in effect at the time of construction would apply.
- ³ Beyond direct footprint impacts, rural roads have more severe fragmentation, edge, and increased-mortality effects than other projects. The extent of these additional impacts depend on whether the proposed facility is new or expanded, on the length of the facility, on the type of habitat traversed by the road, and other factors. Some of these additional impacts can be partially reduced by wildlife-friendly design measures (see fee multiplier (B)). Other indirect effects of rural road projects (e.g., growth inducement) are addressed by the fee on new development. Consequently, multipliers are lower than they might be outside the HCP/NCCP.
- ⁴ These projects have been omitted from totals because they are an alternative to another covered project that is included in the total.

Table 9-7. Fee Adjustment Indices

Fee	Annual Adjustment Index ¹	Average Annual Rate (1991–2001) Example
Development Fees, Road Fees, and Temporary Impact Fees		
Portion for Land acquisition (66%)	Average annual increase in median home price per square foot in Contra Costa County for the prior calendar year (California Association of Realtors data)	5.14%
Portion for Preserve System Operation, Restoration, and Maintenance (34%)	Consumer Price Index for San Francisco Bay Region for the prior calendar year (U.S. Bureau of Labor Statistics)	2.81%
Wetland Fee	Same as above	2.81%
Notes:		
¹ Fee adjusted automatically at the beginning of each fiscal year. See Appendix G for more details on methodology and sources.		

Table 9-8. HCP/NCCP Cost and Funding Overview

Type	Amount		Source Category
	Initial Urban Development Area	Maximum Urban Development Area	
Estimated Costs (rounded to nearest \$10,000)			
Land Acquisition ¹ (%)	\$177,850,000 (63%)	\$215,740,000 (66%)	
Management costs over permit term (%) (including all other costs)	<u>\$103,380,000 (37%)</u>	<u>\$112,120,000 (34%)</u>	
Total Estimated Costs	\$281,230,000	\$327,860,000	
Total Assumed Costs (for funding projections)	\$285,000,000	\$330,000,000	
Projected Funding²			
Fee Funding			
Fees on new development in Urban Development Area	\$116,100,000	\$159,358,000	Local
Wetland Impact Fees	\$21,800,000	\$23,542,000	Local
Fees on rural infrastructure (e.g., roads, detention basins, pipelines)	<u>\$8,649,000</u>	<u>\$8,649,000</u>	Local
Total Projected Fee Funding	\$146,549,000	\$191,549,000	Local
Non-Fee Funding			
Maintenance of Existing Conservation Effort ³			
Local	\$52,000,000	\$52,000,000	Local
State	\$24,000,000	\$24,000,000	State
Federal	<u>\$4,000,000</u>	<u>\$4,000,000</u>	Federal
Subtotal, Maintenance of Effort	\$80,000,000	\$80,000,000	Mixed
Byron Airport Clear Zone Acquisitions	\$6,500,000	\$6,500,000	Federal
New Wildlife Agency Funds (Section 6, park bonds, etc.) ⁴	<u>\$55,000,000</u>	<u>\$55,000,000</u>	State/Fed
Total Non-Fee Funding	\$141,500,000	\$141,500,000	Mixed
TOTAL PROJECTED FUNDING (Permit Term)	\$288,049,000	\$333,049,000	
TOTAL FUNDING - TOTAL COSTS (Permit Term)	\$3,049,000	\$3,049,000	
Summary of Funding by Source⁵			
Local (%)	\$198,549,000 (69%)	\$243,549,000 (73%)	
State/Federal ⁴ (%)	\$89,500,000 (31%)	\$89,500,000 (27%)	
State/Federal Contribution in Units of Acres			
Total State/Federal contribution ⁶	13,350	13,350	
CDFG / USFWS share of state/federal contribution ⁷	8,700	8,700	
Contribution by other state/federal agencies	4,650	4,650	

Notes

¹ Land acquisition costs include due diligence, pre-acquisition surveys, site improvements, and appraisals.

² Funding estimates include projected monetary contributions and the monetary value of projected in-kind contributions.

³ Based on analysis of conservation performed over the past 30 years. Assumes 75% historic rate. See Appendix G.

⁴ Estimates only. State and federal contributions are described in the HCP/NCCP in terms of acres.

⁵ Costs of post permit term management and monitoring are not included. These costs are estimated at \$2.9M and \$3.2M per year for the initial and maximum urban development area, respectively. The net present value of these future costs is estimated at \$78M and \$87M respectively, assuming a net discount rate of 2% above inflation (expressed another way, the size of the non-wasting endowment necessary at the end of year 30 to fund these costs in perpetuity would be \$145M and \$160M, respectively). It is presumed that funding for these costs will come from local sources. See Table 9-9 and text of Chapter 9 for more information.

⁶ \$99,250,000 divided by \$6,702, the projected average per acre cost of land acquisition.

⁷ New wildlife agency funds (\$55,000,000) plus 15% of the state and federal component of maintenance of existing effort divided by \$6,702.

Table 9-9. Estimated Funding Availability for Post-Permit Management and Monitoring

Funding Source ¹	Estimated Amount Available ² (expressed in 2004 dollars)		Notes
	More Conservative Estimate	Conservative Estimate	
Cost savings during permit term relative to estimated Plan costs	\$5,900,000	\$15,100,000	More conservative estimate assumes 10% savings from initial urban development area; conservative estimate assumes 20% savings from maximum urban development area; in both cases, savings applied to program administration, design work, environmental compliance, preserve management, and monitoring. See text for rationale.
Cost savings after permit term relative to estimated Plan costs	\$7,800,000	\$21,700,000	Same assumptions as above.
Local tax or other funding measure	\$12,400,000 (If revenue was continued indefinitely, the net present value of the revenue stream would be \$27,600,000)	\$49,400,000 (If the revenue ceased after 30 years, the net present value of the revenue stream would be \$22,100,000)	A variety of local funding measures for parks and open space have been proposed over the last 15 years. Some have passed and some have failed. The most recent proposal, the Contra Costa County Open Space Funding Authority's proposed park and open space assessment district narrowly failed in 2004. It would have raised approximately \$40,000,000 for acquisitions and other projects compatible with the HCP/NCCP over its 30 year life, or approximately \$1.33 million per year. The more conservative estimate assumes a 30-year measure is passed in year 30 of the HCP/NCCP and yields \$1 million annually to the HCP. The conservative estimate assumes a measure is passed in year 15 of the HCP/NCCP, yields \$1.33 million annually, and is continued into the foreseeable future.
Assessments or real estate transfer fees on new development	\$5,300,000	\$18,400,000	Value depends heavily on how many developers/planning agencies choose this option in lieu of a paying a portion of their development fee. Estimates assume annual assessment rates after the permit term are set at 1.7% of the development fee. More conservative estimate assumes initial urban development area and 10% participation in the assessment option. Conservative estimate assumes max urban development area and 25% participation. Real estate transfer fee is an alternative to assessments, so projections for these two sources have been combined.

Funding Source ¹	Estimated Amount Available ² (expressed in 2004 dollars)		Notes
	More Conservative Estimate	Conservative Estimate	
Reduced frequency or intensity of monitoring or adaptive management after the permit term	\$1,900,000	\$5,700,000	Assumes reductions of 10-25% (or \$72,000-\$212,000) in monitoring and adaptive management costs annually after the permit term.
Grazing fees	\$1,400,000	\$8,100,000	Revenue could also come in the form of in-kind services from grazing operators such as fence repair. More conservative estimate assumes annual revenue of \$50,000 per year. Conservative estimate of \$300,000 per year is based on actual charges on Los Vaqueros Watershed lands by CCWD (B. Nuzum, pers. comm.) and on the Alameda Watershed in Alameda County by San Francisco Public Utilities Commission (J. Naras, pers. comm.).
Recreational use fees	\$0	\$1,400,000	Conservative estimate assumes \$50,000 per year in recreational use fees.
TOTAL¹	\$34,700,000	\$119,800,000	
Estimated post-permit costs for initial urban development area	\$78,000,000	\$78,000,000	
Estimated post-permit costs for maximum urban development area	\$87,000,000	\$87,000,000	

¹ Only funding sources for which cost estimates could be reasonably developed are listed. For other possible funding sources for post-permit management and maintenance, see Chapter 9.

² All estimates are expressed in terms of the net present value of future annual revenues or cost savings assuming a net discount rate 2% above inflation.