

CHAPTER 8. IMPLEMENTATION COSTS AND FUNDING SOURCES

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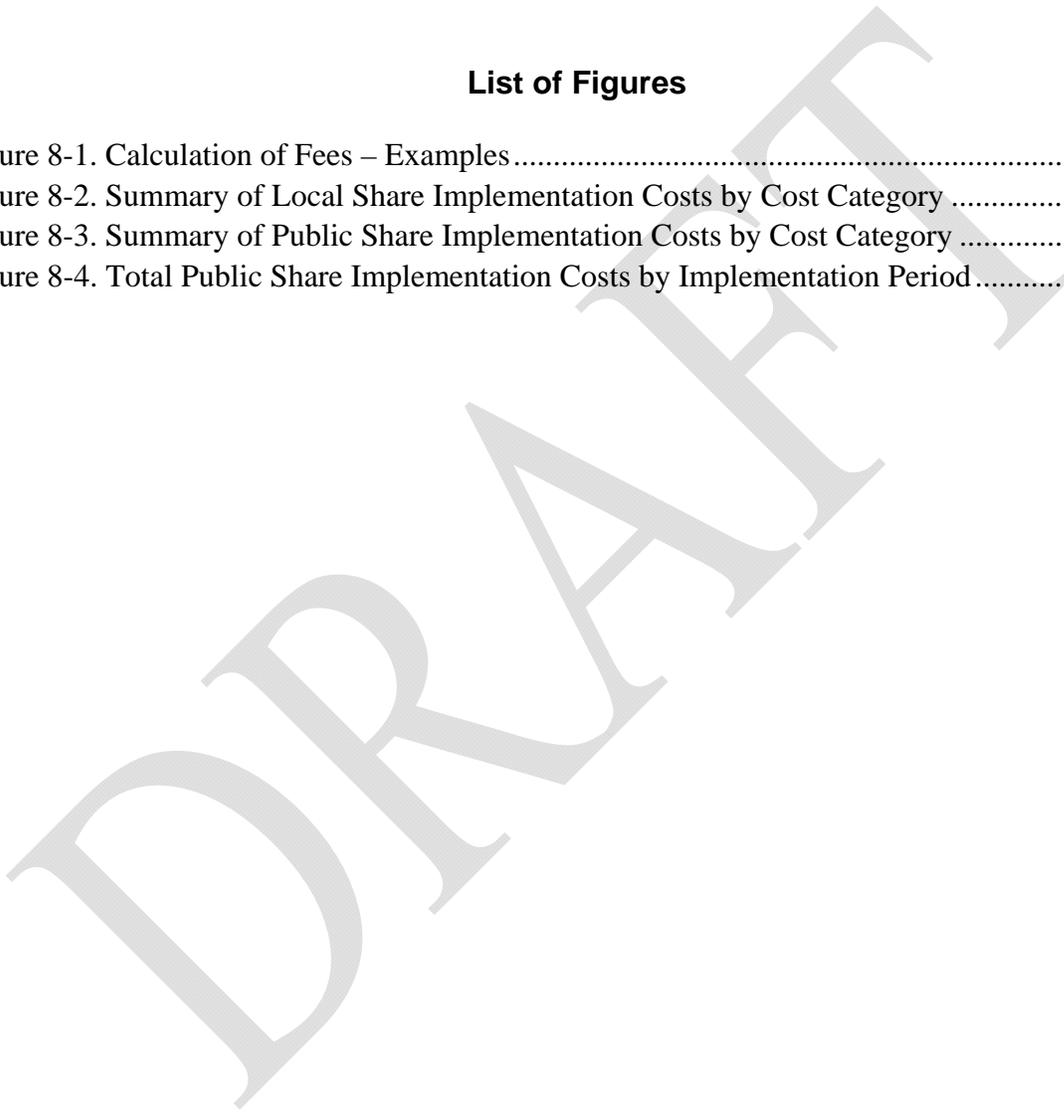
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1 **Note to Reviewers:** This is an administrative draft of BRCP Chapter 8, Implementation Costs
2 and Funding Sources. Details on implementation costs are provided in Appendix F,
3 Implementation Costs Supporting Materials.

4 **8.1 INTRODUCTION**

5 The ESA requires that habitat conservation plans specify “the funding that will be available to
6 implement” actions that minimize and mitigate impacts on covered species.¹ The NCCPA
7 requires that NCCPs contain “provisions that ensure adequate funding to carry out the
8 conservation actions indentified in the plan.”² In compliance with ESA and NCCPA, this
9 chapter identifies the sources of funding that will be relied upon for BRCP implementation, the
10 mechanisms that will be used to secure such funds, and the basis for the assurances provided by
11 the Permit Applicants that adequate funding will be available to support the implementation of
12 the Plan.

13 This chapter provides a description of the sources of funding to implement the BRCP. Costs and
14 funding sources are separated between the “local share” and the “public share” of plan
15 implementation.

- 16 • **Local Share:** The Local Share of implementation costs and funding sources relates to
17 components of the BRCP that are focused on the mitigation of impacts on covered
18 species and natural communities resulting from the covered activities (see Chapter 2,
19 *Covered Activities*; covered activities include implementation of city/county general
20 plans, BCAG and Caltrans District 3 transportation projects, and participating
21 water/irrigation district maintenance activities). The Local Share funding will be derived
22 from impact fees assessed as individual projects are implemented in the Plan Area.
- 23 • **Public Share:** The Public Share of implementation costs and funding sources relates to
24 components of the BRCP that contribute to the recovery of covered species and the
25 conservation of natural communities. Public Share funding will be derived from various
26 federal, state, and private sources.

27 Local Share funding sources are detailed in Section 8.2.1, *Local Share Funding Sources*. Public
28 Share funding sources are detailed in Section 8.2.2, *Public Share Funding Sources*. Separation
29 of Local Share and Public Share costs and funding sources is necessary to separate the
30 responsibilities of the Permittees and the public at large. The Permittees are responsible for
31 ensuring that the effects on biological resources of their actions and the actions they authorize
32 others to conduct (i.e., the covered activities) are minimized and mitigated and do not preclude
33 the recovery of covered species. Such actions by the Permittees are addressed by the Local
34 Share of funding. The responsibility for contributing to the recovery of covered species and the
35 conservation of natural communities within the Plan Area falls to the broader public. Funding of

¹ U.S.C. §1539(a)(2)(A)

² California Fish and Game Code § 2820(a)(10)

1 these portions of the BRCP will come from sources outside of the Permittees and, typically, from
2 outside of Plan Area. The Implementing Entity is responsible for securing both the Local Share
3 funding via collection of impact fees from the Permittees, and Public Share funding through
4 various public funding opportunities as described in Section 8.2.2, *Public Share Funding*
5 *Sources*.

6 Section 8.3, *Estimate of Implementation Costs*, outlines the approach used to estimate the costs
7 associated with implementation of the BRCP over its proposed 40-year permit duration and
8 ongoing costs beyond the permit term. Implementation costs are estimated for each of the
9 BRCP's primary components, such as conservation measures, monitoring, and administration.
10 Implementation costs are divided into the Local Share and Public Share costs based on the
11 primary purpose of BRCP conservation actions, i.e., mitigation of impacts or contribution to
12 recovery in the Plan Area. The cost estimates are used as the basis for determining the funding
13 needs.

14 **8.2 FUNDING SOURCES AND ASSURANCES**

15 **8.2.1 Local Share Funding Sources**

16 This section describes the Local Share sources of funding to implement the components of the
17 BRCP that will serve to mitigate the impacts of covered activities (see Chapter 2, *Covered*
18 *Activities*) on covered species and natural communities. These funds will be used by the
19 Implementing Entity to protect existing natural communities and species habitat and to restore
20 natural communities and species habitat as mitigation for impacts on natural communities and
21 species habitat as described in Chapter 5, *Conservation Strategy* (see Tables 5-4 and 5-5). The
22 description of the implementation costs (Section 8.3, *Estimate of Implementation Costs* and
23 Appendix F, *Implementation Costs Supporting Materials*) provides the details and rationale for
24 the breakdown of BRCP Conservation Strategy component costs between Local Share and
25 Public Share of total costs.

26 The Local Share of funding for BRCP relies on development-based mitigation fees. As
27 individual projects are proposed and approved in the Plan Area, public and private land
28 developers will be required to pay a mitigation fee for land that is developed (e.g., to construct
29 residential, commercial, industrial, and other structures; construct and improve transportation
30 infrastructure; and to install and maintain other infrastructure such as sewer and utility lines) and
31 removes natural communities or covered species habitat³. Local Share funds will be used to
32 acquire lands identified for habitat protection and restoration and to implement applicable

³ Habitat removal is defined as habitat that is physically removed (e.g., graded, paved over) or is isolated by the project from other areas of habitat such that the remaining land no longer functions as habitat for covered and other native species. The process for determining the extent of habitat that will be removed by a proposed project for the purpose of determining mitigation fees is described in Section 6.7, *Process for BRCP Implementation*.

1 conservation measures and monitoring for the purpose of mitigation.⁴ Under the BRCP,
2 payment of the mitigation fees by project applicants provides for part of their compliance with
3 the BRCP and their authorization to use the Permits⁵. The mitigation fees do not include the cost
4 of implementing the applicable BRCP avoidance and minimization measures (including field
5 surveys for specific habitats, covered species, and USACE jurisdictional wetlands and waters)
6 described in Section 5.4.4, *Avoidance and Minimization Measures*, which will be the
7 responsibility of and borne by the project applicant.

8 The BRCP includes a “Base Mitigation Fee (Base Fee),” a “Riparian Restoration Mitigation Fee
9 (Riparian Fee),” a “Vernal Pool Restoration Mitigation Fee (Vernal Pool Fee),” and an
10 “Emergent Wetland Restoration Mitigation Fee (Emergent Wetland Fee).” The Base Fee is
11 applied to all natural community and habitat acres removed (see Section 8.2.1.2, *Calculation of*
12 *Fees for Individual Projects*). The Base Fee will be used to pay for land acquisition costs,
13 administrative costs, monitoring costs, costs for implementation of responses to changed
14 circumstances,⁶ and endowment costs necessary to satisfy the mitigation requirements of the
15 BRCP.

16 The riparian, vernal pool, and emergent wetland restoration mitigation fees apply to the specific
17 amounts of riparian, vernal pool, and emergent wetland removed by covered activities. The
18 Riparian Fee, Vernal Pool Fee, and Emergent Wetland Fee cover habitat restoration
19 implementation costs, environmental compliance costs of restoration projects, and costs for
20 responses to changed circumstances related to habitat restoration. The Riparian Fee, Vernal Pool
21 Fee, and Emergent Wetland Fee are additive to the Base Fee (i.e., charged in addition to the Base
22 fee) and are applied only to projects that will remove riparian, vernal pool (and other seasonal
23 wetlands⁷), and emergent wetland natural communities.

24 **8.2.1.1 Determination of Mitigation Fees**

25 The primary BRCP mitigation fee is the Base Fee. This fee covers the costs of implementing
26 required mitigation for habitat impacts attributable to new development in the Plan Area, except
27 for habitat restoration-related mitigation actions (Table 8–1). The per acre Base Fee is calculated
28 by dividing the total estimated non-habitat restoration-related mitigation costs by the total
29 number of acres of habitat removed as a result of implementation of all the covered activities.
30 The BRCP Base Fee per acre of impact is provided in Table 8-1.

⁴ The Implementing Entity may opt to use Local Share funds to purchase credits at an existing private or public mitigation bank rather than implementing the mitigation actions directly.

⁵ Note, however, that avoidance and minimization measures apply in specific circumstances as well as specific species and habitat survey requirements under the BRCP.

⁶ The Base Fee addresses only changed circumstances responses that are not related to habitat restoration. Changed circumstances responses that are related to habitat restoration are paid for through the Vernal Pool, Emergent Wetland, and Riparian Fees.

⁷ Other seasonal wetlands are jurisdictional wetlands under section 404 under the Clean Water Act that are seasonally inundated or saturated but do not support plant species indicative of vernal pools.

1 The habitat restoration mitigation fees will be applied in addition to the Base Fee to projects that
 2 remove riparian, vernal pool (and other seasonal wetlands), and emergent wetland natural
 3 communities on a per-acre-removed basis. The restoration mitigation fees are applied to pay for
 4 costs that are incurred to restore riparian, vernal pool, and emergent wetland land cover types in
 5 addition to the protection of existing habitat for mitigation that is addressed through the Base
 6 Fee. The per acre restoration mitigation fee for riparian, vernal pool, and emergent wetland is
 7 calculated by dividing the total estimated habitat restoration-related mitigation costs for each of
 8 the land cover types by the total number of acres of each of these land cover types removed by
 9 implementation of all the covered activities (Table 8–1). The Riparian Fee, Vernal Pool Fee, and
 10 Emergent Wetland Fee per acre of impact are provided in Table 8-1.⁸

Table 8-1. Mitigation Fee Calculations

Mitigation Fee	Mitigation Cost ¹	Impacts (Acres)	Fee per Impact Acre
Base Fee	\$107,184,209	24,420	\$4,389
Riparian Fee	\$20,085,091	233	\$86,202
Vernal Pool Fee	\$12,728,845	224	\$56,825
Emergent Wetland Fee	\$3,246,264	35	\$92,750
Total	\$143,244,409		

11 ¹ Note that these fee calculations use mitigation cost estimates calculated to the nearest dollar, whereas cost estimates quoted in
 12 other parts of this chapter my use numbers rounded to the nearest thousand.

13 **8.2.1.2 Calculation of Fees for Individual Projects**

14 The Base Fee must be paid for the entire area of the proposed project site that supports BRCP
 15 natural communities, covered species habitat, or agricultural lands that support covered species
 16 habitat. Mapped BRCP land cover types that are not considered covered species habitat and
 17 therefore not included in the Base Fee calculation are orchard/vineyard, non-native woodland,
 18 urban, ranchettes-wooded, ranchettes-open, and disturbed ground.⁹ Figure 8–1 provides some
 19 hypothetical project examples for how the Base Fee and restoration mitigation fees will be
 20 calculated.

21 The Vernal Pool Fee must be paid for the total extent of all jurisdictional vernal pools and other
 22 seasonal wetlands directly and permanently affected by the proposed project. The effected
 23 jurisdictional wetlands acreage will be determined by a jurisdictional field survey that is verified
 24 by the USACE or other proper authority. If vernal pool impacts are avoided through project
 25 design, then the fee is not required. See examples in Figure 8-1.

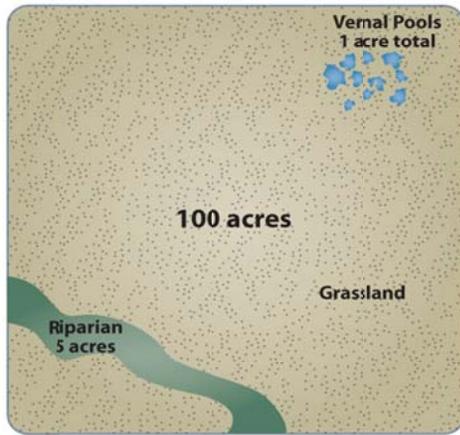
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⁸ These restoration mitigation fees incorporate any mitigation ratios for the given habitat type and therefore the fees are assessed per acre of impact on the habitat type. For example, the riparian habitat mitigation ratio is 3:1 and therefore the fee for 1 acre of riparian habitat impact (\$86,202) provides funding for 3 acres of riparian habitat restoration.

⁹ Some amount of chaparral and conifer dominated forest communities may be affected by BRCP covered activities. These communities and any listed species that may use them are not covered by the BRCP; therefore, additional mitigation under CEQA or other regulations may be required on a project-by-project basis.

HYPOTHETICAL PROPOSED DEVELOPMENT

EXAMPLE A: 100% BUILT

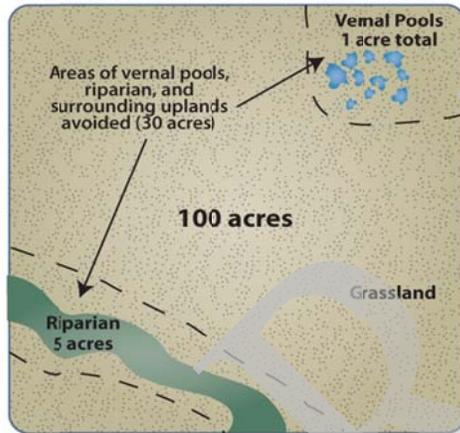


Fee Calculation

$$\begin{aligned}
 &\text{Base Fee:} \\
 &100 \text{ acres} \times \$4,389/\text{per acre} = \$438,900 \\
 &+ \\
 &\text{Vernal Pool Fee:} \\
 &1 \text{ acre} \times \$56,825/\text{per acre} = \$56,825 \\
 &+ \\
 &\text{Riparian Fee:} \\
 &5 \text{ acres} \times \$86,202/\text{per acre} = \$431,010
 \end{aligned}$$

Total Fee: = \$926,735

EXAMPLE B: AVOID SENSITIVE HABITATS - 70% BUILT

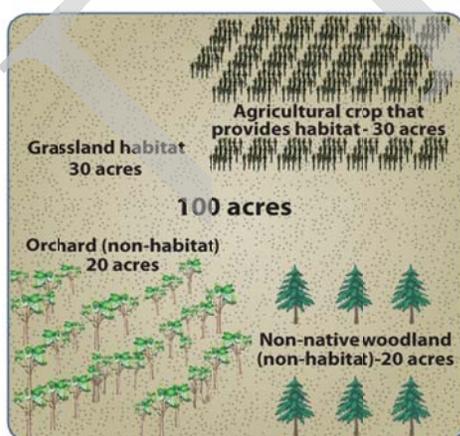


Fee Calculation

$$\begin{aligned}
 &\text{Base Fee:} \\
 &(100 \text{ acres} - 30 \text{ acres} = 70 \text{ acres}) \\
 &70 \text{ acres} \times \$4,389/\text{acre} = \$307,230 \\
 &+ \\
 &\text{Vernal Pool Fee:} \\
 &\text{none, no impacts} = \$0 \\
 &+ \\
 &\text{Riparian Fee:} \\
 &\text{none, no impacts} = \$0
 \end{aligned}$$

Total Fee: = \$307,230

EXAMPLE C: 100% BUILT - 40% NON-HABITAT



Fee Calculation

$$\begin{aligned}
 &\text{Base Fee:} \\
 &60 \text{ acres of habitat} \times \$4,389/\text{per acre} = \$263,340 \\
 &+ \\
 &\text{Vernal Pool Fee:} \\
 &\text{none, no impacts} = \$0 \\
 &+ \\
 &\text{Riparian Fee:} \\
 &\text{none, no impacts} = \$0
 \end{aligned}$$

Total Fee: = \$263,340

1

Figure 8-1. Calculation of Fees – Examples

1 The Emergent Wetland Fee must be paid for the total extent of all jurisdictional permanent
2 emergent wetlands directly and permanently affected by the proposed project. The effected
3 jurisdictional wetlands acreage will be determined by a jurisdictional field survey that is verified
4 by the USACE or other proper authority. If emergent wetland impacts are avoided through
5 project design, then the fee is not required.

6 The Riparian Fee must be paid for the total extent of all BRCP mapped riparian forest and scrub
7 land cover (i.e., cottonwood willow riparian forest, valley oak riparian forest, willow scrub, and
8 dredger tailings with riparian land cover types) and streams or other waters to which the riparian
9 habitat is associated that are directly and permanently affected by the proposed project. The
10 effected extent of riparian habitat and associated streams or other waters will be based on the
11 overlap between the proposed development and the BRCP GIS database location of riparian
12 natural communities. If riparian habitat impacts are avoided through project design, then the fee
13 is not required. See examples in Figure 8-1.

14 **8.2.1.3 Mitigation Fee Context**

15 The existing project-by-project process of compliance with federal and state endangered species
16 laws and regulations requires permit applicants to incur a range of costs associated with species
17 and habitat surveys, impact analyses, mitigation planning, negotiations with the regulatory
18 agencies (USFWS, NMFS, DFG), document preparation, permit application review and
19 processing, project delays, habitat set-asides and acquisition, habitat restoration, and short-term
20 and long-term monitoring. The mitigation fees associated with implementing BRCP covered
21 projects would replace these project-by-project costs.¹⁰

22 Mitigation costs for individual projects resulting from the existing state and federal endangered
23 species, wetlands, and other biological regulatory compliance processes are uncertain due to the
24 lack of data on such costs, but these additional costs are currently incorporated into the overall
25 pricing of new homes and commercial buildings.¹¹ With the BRCP, overall biological resources
26 mitigation costs are expected to be lower for a typical new project than under the existing
27 permitting process.

28 Compared with base mitigation fees applied under existing approved HCPs and NCCPs in
29 California, the proposed BRCP Base Fee is at the low end of the mitigation fee spectrum (Table
30 8–2). While comparisons across plans are imperfect due to varying fee structures, land costs,
31 and habitat categories, a review of existing mitigation fees from a number of approved HCPs and
32 NCCPs indicates that the per-acre base mitigation fees on residential development fall in the
33 range of \$5,000 to \$38,000 above the BRCP base fee of \$4,389 per acre.

¹⁰ Note that the BRCP includes requirements for specific species and habitat surveys and impact avoidance and minimization measures to be implemented by the project applicant in addition to the payment of mitigation fees.

¹¹ Federal ESA, California ESA, CEQA, NEPA, Clean Water Act Section 404/401, Fish and Game Codes such as Streambed Alteration Agreements, and other regulations can all drive requirements for biological resources mitigation that add the costs of project implementation.

1 For additive habitat restoration mitigation fees, BRCP restoration mitigation fees are generally
 2 comparable with those under existing approved HCPs and NCCPs (Table 8–3). A review of the
 3 current restoration mitigation fees from approved HCPs and NCCPs indicates that the per-acre
 4 restoration fees are in the range of \$64,500 to \$191,500, a range that overlaps with the BRCP
 5 restoration fee range of \$56,400 to \$92,100.

6 Per acre restoration mitigation fees are driven both by the estimated restoration cost per acre as
 7 well as by the plan’s habitat restoration mitigation ratios. For example, the estimated restoration
 8 cost for an acre of riparian habitat under the BRCP is lower than under the East Contra Costa
 9 County HCP/NCCP, but the riparian restoration mitigation fee is higher under the BRCP because
 10 the riparian mitigation ratio under BRCP is 3:1 compared to 1:1 under the East Contra Costa
 11 County HCP/NCCP¹².

Table 8-2. “Base” Mitigation Fees for Approved HCPs and NCCPs

Western Riverside County MSHCP (FY 2010–2011)	Coachella Valley MSHCP (2011)	East Contra Costa County HCP/NCCP (2011)	San Joaquin MSCP (2012)	Natomas Basin HCP (2011)
Residential (density <8 Dwelling Unit/acre) ¹	Residential (density <8 Dwelling Unit/acre) ²	Fee Zone 2 ³	Natural/Agricultural Lands	Authorized Development Sites
\$9,690	\$5,490	\$21,324	\$14,372	\$37,547

Notes:

¹ Assumes 5 units at a per-unit fee of \$1,938.

² Assumes 5 units at a per-unit fee of \$1,098.

³ Includes development fee. Excludes potential wetland mitigation fee and temporary fee.

12

Table 8-3. Restoration Mitigation Fees Comparison

Restoration Fee Category	BRCP Restoration Fee ¹	East Contra Costa County HCP/NCCP (2011) ²	San Joaquin MSCP (2012)
Riparian	\$86,202	\$64,570	Not applicable ³
Vernal Pools	\$56,825	\$191,445	\$81,989
Emergent Wetland	\$92,750	\$88,359	Not applicable ³

Notes:

¹ Fees based on: riparian at 3:1 mitigation ratio; vernal pools at 1:1 mitigation ratio; and emergent wetland at 2:1 mitigation ratio.

² Fees based on: riparian at 1:1 mitigation ratio; seasonal wetlands (assumed equivalent to BRCP vernal pools) at 2:1 mitigation ratio; and perennial wetlands (equivalent to BRCP emergent wetland) at 1:1 ratio.

³ Addressed by the base fee for all “Natural/Agricultural Lands” (\$14,372).

13 **8.2.1.4 Mitigation Fee Adjustment Process**

14 The dynamic nature of the costs associated with implementation of regional HCPs and NCCPs
 15 over long timeframes – including land acquisition costs, habitat restoration costs, and

¹² This mitigation ratio is higher for the BRCP because the majority of riparian vegetation impacted by BRCP covered activities is cottonwood-willow and valley oak forest; these riparian communities require a longer maturation period to provide habitat value for covered species than riparian scrub habitats. Riparian habitat impacted in the East Contra Costa HCP/NCCP plan area is comprised mainly of narrow stringers of trees and shrubs and does not provide the wildlife habitat functions found in the large patches of riparian forest in the BRCP Plan Area.

1 management, monitoring, and administration costs – requires a flexible approach to funding (and
2 mitigation fee adjustment) through time. To avoid mitigation fees becoming outdated, a process
3 of regular fee adjustment is critical. The mitigation fee adjustment process will involve two
4 primary updating mechanisms that the Permittees will use for adjusting fee levels:

- 5 1. Automatic Fee Increases through Cost Index – An automated increase through the
6 specified cost index will be applied in all years, except those for which a detailed cost/fee
7 review is conducted.
- 8 2. Periodic Detailed Cost/Fee Review – At specified intervals (adjustable by the
9 Implementing Entity), a thorough evaluation of BRCP implementation costs will be
10 conducted and used to recalculate the mitigation fee levels required to cover mitigation
11 costs.

12 This dual approach will be used to adjust funding levels during BCRP implementation as
13 described below.

14 8.2.1.4.1 Automatic Fee Adjustment

15 On April 1 of each year following issuance of BRCP permits, the BRCP Implementing Entity
16 will adjust all mitigation fees based on the change in the Consumer Price Index – West (western
17 United States), published by the Bureau of Labor Statistics, for the prior calendar year (or partial
18 year during first year of adoption). The Permittees will then approve and adopt the revised fee
19 schedule by July 1 of the same year. This refinement will allow for an annual inflationary (or
20 deflationary) adjustment of the fees.¹³

21 Automatic fee adjustments will be applied in all years when the periodic detailed cost/fee
22 adjustments are not conducted (see Section 8.2.1.4.2, *Period Cost Review and Fee Adjustment*).
23 The timing of the periodic reviews (as described below) will be years 3, 6, 10, 14 (and ongoing
24 in four-year increments) after issuance of BRCP permits, unless revised by the Implementing
25 Entity. As a result, the automatic fee increases will be applied in years 2, 4, 5, 7, 8, 9, 11, 12, 13,
26 15, 16, 17, etc. after permit issuance. Following periodic cost/fee reviews, the next year's
27 automatic fee adjustment will be based on the new fee approved in the year of the review.

28 The Implementing Entity may change the index applied for fee adjustments if alternative indices
29 are identified that better reflect cost changes.

30 8.2.1.4.2 Periodic Cost Review and Fee Adjustment

31 A detailed review of actual implementation costs will be conducted periodically during BRCP
32 implementation. Mitigation fee adjustments may be made by the Implementing Entity and the
33 Permittees based on this cost review. The cost/fee review process will include a review of the

¹³ There is no ideal cost index for habitat mitigation costs. An inflationary index provides an interim adjustment process to adjust costs until sufficient new data is available to conduct a detailed cost review.

1 cost estimates that underpin the current fee schedule (see Section 8.3, *Cost Estimation Methods*
2 and Appendix F, *Implementation Costs Supporting Materials*).

3 To conduct detailed cost/fee reviews, the BRCP Implementing Entity will review its actual cost
4 experience as well as other indicators of cost changes. This review will include the assembly
5 and analysis of data associated with actual land transactions after the start of implementation as
6 well as the actual costs of habitat restoration, management, maintenance, monitoring, and
7 administration. Actual Implementing Entity cost experience may be supplemented with other
8 relevant cost information where appropriate (e.g., other land transactions data). Once the revised
9 cost estimates are completed, the mitigation fees will be re-calculated to determine the fee level
10 necessary to cover mitigation costs and ensure sufficient funding is available to meet the BRCP's
11 mitigation obligations. These mitigation fee estimates will then be compared with the current fee
12 level to determine what fee adjustments are required. The Permittees must approve fee
13 adjustments.

14 The administrative burden of conducting detailed cost/fee reviews every year along with the
15 limited new information developed over the course of a single year makes annual reviews
16 impractical. Consequently, detailed reviews will be conducted in years 3, 6, 10, and ongoing every
17 four years through year 40. The Implementing Entity will initiate the technical cost/fee review
18 on January 1 of the relevant year with completion of the proposed revised fee schedule expected
19 by April 1. The Permittees will then approve and adopt the revised fee schedule by July 1 of the
20 same year.

21 In between the detailed reviews, annual indexed inflationary adjustments will be made to the fee
22 schedule (Section 8.2.2.3.1, *Automatic Fee Adjustment*). The Implementing Entity may adjust
23 the schedule for detailed reviews if deemed necessary and with the agreement of all Permittees.
24 Changes in the review schedule may be needed in periods of significant cost change, for example
25 when land values are rapidly increasing or decreasing, fee levels may become quickly outdated.

26 **8.2.2 Public Share Funding Sources**

27 This section describes the Public Share sources of funding to implement the components of the
28 BRCP that exceed mitigation requirements and contribute to the conservation and recovery of
29 covered species and provide for the conservation of natural communities in the Plan Area.
30 These funds will be used by the Implementing Entity to protect, enhance, and restore species
31 occurrences, species habitat, and natural communities as described in Chapter 5, *Conservation*
32 *Strategy*. As a regional joint HCP/NCCP the BRCP must provide for the conservation of species
33 within the biological and geographic context of the Plan Area; as such BRCP goals go beyond
34 the mitigation of impacts that result from covered activities and include contributions to the
35 conservation and recovery of covered species and the conservation of natural communities,
36 including ecological processes, habitat gradients, and biodiversity. These goals fall under the
37 responsibility of the people of the State of California and of the United States and therefore the

1 funding sources are via public and private programs not specifically tied to the Permittees or the
2 citizens of Butte County.

3 The description of the implementation costs (Section 8.3, *Estimate of Implementation Costs* and
4 Appendix F, *Implementation Costs Supporting Materials*) provides the details and rationale for
5 the breakdown of BRCP Conservation Strategy components between Public Share and Local
6 Share of total costs.

7 The Public Share of the BRCP costs are estimated at about \$607.9 million over the 40-year
8 permit term (see Section 8.3, *Estimate of Implementation Costs* and Appendix F, *Implementation*
9 *Costs Supporting Materials*). The Implementing Entity is responsible for acquiring sufficient
10 funding to implement the conservation actions within the timeframes presented in Section 6.1,
11 *Implementation Schedule*. The Public Share of the BRCP costs will be funded through sources
12 other than the mitigation fees on new development that compose the Local Share funding
13 described in Section 8.2.1, *Local Share Funding Sources*. Public Share funding will be provided
14 through multiple direct and indirect sources. The primary categories of public funding sources
15 include the following:

- 16 • Federal Grants
- 17 • State Grants
- 18 • Private Nonprofit Grant Sources
- 19 • Regional and Local Sources
- 20 • Private Donations
- 21 • Land Trust/Conservation Partner activities

22 The primary Public Share funding is expected to come from federal and state grants. This
23 federal and state grant funding will be complemented by grants from other sources (e.g., private
24 nonprofit), private donations in exchange for tax deductions from interested individuals, and
25 funds provided for acquisition of land or lands acquired by land trusts active in the Butte County
26 region (e.g., Northern California Regional Land Trust, The Nature Conservancy) that contribute
27 towards achieving BRCP biological objectives. Other regional and local funding sources will be
28 sought by the Implementing Entity to supplement these sources/efforts, as required, while
29 collateral benefits with other compatible programs might also emerge. The sections below
30 provide more detail on federal grants, state funding, and local and regional funding sources.

31 **8.2.2.1 Federal Grants**

32 Federal grant sources have played a critical role in funding the preservation of habitat
33 nationwide, including supporting the implementation of HCPs and NCCPs. Key programs over
34 the last 20 years include ESA section 6 grants for habitat land acquisition, the Land and Water
35 Conservation Fund, and the North American Wetlands Conservation Act Grant Program.
36 Funding for all these programs has or may be reduced in the face of the current economic

1 downturn and fiscal challenges, but may rebound when stronger economic conditions return.
2 Highlights of these funding sources include the following:

- 3 • **USFWS Section 6 Grants.** ESA section 6 land acquisition grants have been the most
4 important source of conservation funding for HCP implementation in recent years. The
5 level of funding increased from levels prior to 2001. Between 2001 and 2004, California
6 received an average of about \$24 million each year, about 50 percent of the total
7 nationwide funding. In 2010, funding estimated for California was about \$20 million.
8 HCP/ NCCPs throughout California have received significant funding from this source,
9 including plans in San Diego County, Riverside County, Sacramento County, and Contra
10 Costa County, among others. In 2011, land acquisition grant funding for California was
11 \$16.4 million (www.dfg.ca.gov).
- 12 • **Other Federal Grants.** The North American Wetlands Conservation Act grant program
13 is also administered by the USFWS. This program provides matching grants to private or
14 public organizations or to individuals who have developed partnerships to carry out
15 wetlands conservation projects. Nationwide annual funding availability has varied,
16 generally between \$40 million and \$100 million. Additional potential federal grant
17 funding sources include the Land and Water Conservation Fund that provides matching
18 grants to state and local governments for the acquisition and development of public
19 outdoor recreation areas and facilities, as well as funding for shared federal land
20 acquisition and conservation strategies.
- 21 • **Congressional Funding.** Funding for the conservation of habitat has been and can be
22 acquired directly through federal Congressional legislation. The Permittees and
23 Implementing Entity have the ability to lobby Congress for funding to support
24 implementation of the BRCP. Additionally, BRCP is a member of the Northern
25 California Conservation Planning Partners¹⁴ that can lobby collectively to attain Federal
26 funds for implementation of HCPs and NCCPs in northern California, including the
27 BRCP.

28 **8.2.2.2 State Grants**

29 State Bond funding, in particular, and the State’s General Fund have funded major investments
30 in natural resources, along with parks and recreation, over the last four decades. The State
31 administers the bond programs and funding, typically through competitive (e.g., Non-motorized
32 Trails Grant Program, California Heritage Fund Grant Program) and noncompetitive (e.g., per
33 capita) grant programs. The noncompetitive grants are allocated to local and regional
34 jurisdictions for use at the discretion of the jurisdiction for projects that meet State guidelines.

¹⁴ A consortium of counties that have completed or are preparing HCPs and NCCPs in northern California, including BRCP, East Contra Costa HCP/NCCP, Yolo Natural Heritage Program, Placer County Conservation Plan, Natomas Basin HCP, South Sacramento County HCP, San Joaquin County HCP, Sutter/Yuba HCP/NCCP, and Santa Clara Valley HCP/NCCP.

1 Between 1970 and 2003, Californians approved 27 of 37 natural resource bonds measures to
2 fund \$15.3 billion in park and water-related programs, an overall 73 percent approval rate.
3 During the 1970s and 1980s, 90 percent of bond referenda were approved though minimal parks
4 bonds passed during the 1990s. After 2000, however, some of the largest natural resource bonds
5 were passed by California voters, including the following:

- 6 • **Proposition 12**, 2000 Safe Neighborhoods, Clean Water and Coastal Protection Act, \$1.2
7 billion
- 8 • **Proposition 13**, 2000 Safe Drinking Water, Watershed Protection, and Flood Control
9 Bond, \$505 million
- 10 • **Proposition 40**, 2002 Bond for clean water, air, parks and coastal protection, \$2.3 billion
- 11 • **Proposition 50**, 2002 Bond to fund a variety of water projects, including coastal land
12 protection, \$1.5 billion
- 13 • **Proposition 84**, 2006 Parks and water bond to improve drinking water, flood control,
14 protection of coastlines, and state parks, \$5.4 billion

15 Revenues from most of these bonds have been fully exhausted or allocated, though Proposition
16 84 still has some revenues remaining. It is expected that as the economy recovers from the
17 recession of 2008-2011, future State Bonds will provide a strong potential funding source for
18 conservation efforts in California. There should be substantial opportunities for additional bond
19 funding over the 40-year implementation term of the BRCP.

20 **State Legislation.** Funding for the conservation of habitat has been and can be acquired directly
21 through State legislation. The Permittees and Implementing Entity have the ability to lobby the
22 California Legislature for funding to support implementation of the BRCP. Additionally, BRCP
23 is a member of the Northern California Conservation Planning Partners that can lobby
24 collectively to attain State funds for implementation of HCPs and NCCPs in northern California,
25 including BRCP.

26 **8.2.2.3 Regional and Local Funding Sources**

27 There are a broad range of local and regional funding sources that could provide funding for
28 conservation. Outside of mitigation fees, other local funding sources typically fall into tax-based
29 and fee-based categories. Over recent decades, California referenda, such as Proposition 218 and
30 the more recent Proposition 25/26, have tightened the definitions and requirements to raise new
31 revenues. As a result, HCPs and NCCPs typically have not adopted local funding sources to
32 complement their other funding sources. There are, however, examples, such as the San Diego
33 County transportation sales tax measure and the Riverside County solid waste “tipping fees” that
34 do provide supplemental funding for habitat conservation in those counties.

8.2.3 Funding Assurances

The Permittees and Implementing Entity are committed to securing sufficient funds within the required timeframe to implement the BRCP Conservation Strategy. Funding for the Local Share (i.e., payment of mitigation fees) will be provided by or acquired (from project applicants) by the Permittees and distributed to the Implementing Entity under the process described in Section 6.7, *Process for BRCP Implementation*. Funding for the Public Share will be sought by the Implementing Entity and the Permittees from the sources identified in Section 8.2.2, *Public Share Funding Sources*, and other appropriate sources. The Implementing Entity and the Permittees will secure sufficient funds within the timeframe identified in the BRCP implementation schedule (Figure 6-X [to come]) to implement the Public Share of the program. The BRCP Implementation Agreement contains more specific language on the funding assurances of the Permittees and Implementing Entity.

8.3 ESTIMATE OF IMPLEMENTATION COSTS

8.3.1 Scope and Purpose of the Implementation Cost Analysis

The BRCP identifies conservation actions that will be implemented over the 40-year implementation period to meet the biological goals and objectives (see Sections 5.3, *Biological Goals and Objectives* and Section 5.4, *Conservation Measures*) and to comply with the requirements of the ESA and the NCCPA. Among those actions are measures to avoid, minimize, and mitigate impacts of the covered activities (described in Chapter 2, *Covered Activities*) on natural communities and covered species (described in Chapter 3, *Existing Ecological Conditions*, and Appendix A, *Species Accounts*) and to provide for the conservation of natural communities and covered species. In addition, the BRCP includes the implementation of monitoring and adaptive management actions (Section 5.8, *Monitoring Plan* and Section 5.9, *Adaptive Management*) and steps to respond to changed circumstances (Section 6.4, *Changed Circumstances and Unforeseen Circumstances*).

The BRCP implementation cost analysis quantifies the estimated Local Share and Public Share cost components of these specific BRCP actions. The implementation cost estimates are used to establish the Local Share and Public Share funding requirements for BRCP implementation (Section 8.2, *Funding Sources and Assurances*). Cost estimates are provided for the Local Share and Public Share funding requirements for each of the following cost categories.

- **Conservation Measures.** Cost estimates are provided for each of the 19 conservation measures described in Section 5.4, *Conservation Measures*. The cost estimates for conservation measures only include, except where noted otherwise, costs directly associated with implementation of the actions required to physically implement each measure, including any associated avoidance and minimization measures (see Section 5.4.4, *Avoidance and Minimization Measures*). Costs associated with planning, permitting, monitoring, conducting surveys, and related actions that support the physical implementation of conservation measures are, except as noted in Appendix F,

1 *Implementation Costs Supporting Materials*, included under other cost categories in this
2 chapter.

- 3 • **Environmental Compliance.** This category includes costs associated with complying
4 with other laws and regulations and obtaining associated permits necessary to implement
5 some of the conservation measures. Conservation measures that are expected to require
6 such compliance are those that require vegetation and ground disturbing activities such as
7 restoring habitat (e.g., riparian and wetlands habitat restoration) or require disturbance of
8 streams, such as in-channel placement of spawning gravels and removal of riprap.
- 9 • **Monitoring and Other Surveys.** This category includes costs associated with
10 implementing the monitoring plan (see Section 5.8, *Monitoring Plan*) and conducting pre-
11 land acquisition and other surveys related to the management of conservation lands.
- 12 • **Administration and Management.** This category includes costs necessary to administer
13 implementation of the BRCP, including hiring of personnel and the ongoing costs of
14 personnel expenses, office equipment and supplies, contracted services, and other
15 overhead and related expenses. A description of BRCP administrative functions is
16 described in Chapter 7, *Implementation Structure*.
- 17 • **CEQA/NEPA Mitigation Costs.** This category includes costs that could be required in
18 the BRCP EIR/EIS to mitigate non-biological impacts of implementing BRCP restoration
19 actions. *[Note to Reviewers: These costs will be estimated in the EIR/EIS and will be*
20 *provided in this Chapter on completion of the administrative draft BRCP EIR/EIS*
21 *document. Costs may be incurred to implement actions to address such issues as air*
22 *quality, noise, or traffic if the EIR/EIS lead agencies find that impacts are at a level such*
23 *that mitigation action is required.]*
- 24 • **Changed Circumstances.** This category includes costs of implementing measures to
25 respond to changed circumstances. The range of measures to address changed
26 circumstances is described in Section 6.4.2.2, *Changed Circumstances Addressed by the*
27 *BRCP*.
- 28 • **Post-BRCP Permits.** This category includes the costs associated raising an endowment
29 that would fund ongoing management of conservation lands after the expiration of BRCP
30 incidental take permits 40 years following their issuance.

31 **8.3.2 Cost Estimation Methods**

32 This section summarizes the methods and assumptions used to estimate implementation costs for
33 each of the cost categories. Detailed descriptions of methods and assumptions used to estimate
34 costs for each of the cost categories is presented in Appendix F, *Implementation Costs*
35 *Supporting Materials*. Implementation cost estimates represent average planning-level cost
36 estimates in 2011 dollars. Specific investments (such as specific land acquisitions, restoration
37 projects, or monitoring efforts) are expected to show significant unit cost volatility around the
38 assumed averages, given the unique effects of parcel-specific characteristics on costs. The

1 implementation cost estimates are considered best estimates in 2011 dollar terms given the
2 information available and current market conditions.

3 Major considerations and assumptions used to estimate total implementation and per unit costs
4 included the following parameters:

- 5 • **Land Protection and Restoration Goals.** Total BRCP costs are driven by the natural
6 community and covered species habitat protection and restoration objectives (Tables 5–1,
7 5–2, and 5–12) which will require protection of about 150,800 acres, mainly through
8 permanent conservation easements.
- 9 • **Acquisition Approach.** Land can be acquired for habitat protection through either fee
10 title or permanent conservation easement. In most instances, permanent conservation
11 easement acquisitions are preferred, as they allow for continued land use practices in the
12 working landscapes of Butte County (e.g., farming, ranching, and other land uses) and
13 can be less costly to acquire and maintain compared to fee title acquisitions. In some
14 instances, fee title acquisition will be necessary, such as areas where habitat will be
15 restored, conservation lands requiring frequent access and more intensive habitat
16 management, and instances where landowners are only interested in fee title sale of the
17 land. In all cases, the BCAG JPA Board will need to approve fee title acquisitions of
18 land (see Section 6.7, *Process for BRCP Implementation*).
- 19 • **Acquisition Size.** Some cost estimates are determined on a per transaction basis rather
20 than a per acre basis. Larger area acquisitions will generally be preferred, but smaller
21 parcels with particularly high biological value will be pursued. Based on a review of the
22 available parcel sizes, an average transaction size of 160 acres was assumed.
- 23 • **Implementation Schedule.** The proposed term of the BRCP is 40 years and includes the
24 full range of conservation activities and investments. The BRCP includes a general
25 timeline for conservation activities that can be divided into four periods, each a decade
26 long, for costing purposes (see Figure 6–X [to come]). Mitigation actions are required to
27 be conducted as covered activities occur and, since there is no set schedule for covered
28 activities, there is no set schedule for implementation of mitigation actions and costs.¹⁵
29 In the absence of a mitigation implementation schedule, the cost analysis used the
30 assumption that the acquisition of lands to protect and restore habitat for mitigation
31 would be implemented proportionately on the same schedule as land acquisitions for
32 conservation (Figure 6–X [to come]).
- 33 • **Unit Cost Research.** Unit cost research (including additional estimates of unit cost
34 drivers, e.g., number of preserve management contractors required) was conducted as
35 necessary to ensure that total cost estimates could be developed for all conservation

¹⁵ Mitigation actions must be initiated prior to or concurrent with the impacts of the covered activities, but the timing of most covered activities will be determined by specific markets within the regional economy (e.g., housing market, commercial markets, transportation needs and funding, etc.)

1 measures and cost categories. In general, the unit cost driver and unit cost estimates were
2 based on one or both of the following approaches:

- 3 ○ **County-Specific Data.** In some cases, most notably for land values, per acre
4 values were developed primarily based on information directly from Butte County
5 examples. Land value estimates were developed based on information on land
6 transactions in Butte County as provided by recent appraisals, County assessor
7 information, commercial land value databases, and interviews with selected
8 appraisers, brokers, and land trust operators active in the area.
- 9 ○ **Literature Review and Case Studies.** A number of the conservation measure
10 implementation and monitoring costs were developed based on a review of
11 available literature on the costs of planning, implementing, and monitoring
12 different conservation activities. Some of these case studies provided unit costs
13 from Butte County cases, though literature from other locations where the
14 conservation activity and habitat characteristics were similar was also considered.
- 15 ● **Existing Conservation Plans.** While all regional conservation plans are different,
16 experiences associated with administration and management of approved HCPs and
17 NCCPs provide useful cost indications for the BRCP. Cost assumptions used in several
18 other California regional conservation plans were considered while developing the cost
19 estimates in this analysis. Information from the East Contra Costa HCP/NCCP, San
20 Joaquin County HCP, and Natomas Basin HCP proved useful to costing the aspects of
21 the BRCP where activities were similar. Experiences in other plans with ongoing
22 endowments and other costs where circumstances are sufficiently similar provided useful
23 cost indications.
- 24 ● **BRCP-Specific.** BCAG, as the BRCP Implementing Entity, will be responsible for
25 undertaking all necessary tasks to implement the BRCP (Chapter 7, *Implementation*
26 *Structure*). The specific activities required under the BRCP as well as the existing
27 capabilities and capacities of BCAG were taken into account when estimating the
28 additional needs for staffing and equipment.

29 In instances where a cost could be included in more than one cost category, that cost was
30 allocated to the most appropriate cost category as described in Appendix F, *Implementation*
31 *Costs Supporting Materials*. All costs are expressed in 2011 dollar terms to allow for better
32 comparability of real costs through time and to avoid the impact of making specific assumptions
33 about the uncertain rate of inflation.

34 The following sections provide a general overview of the methods and assumptions used to
35 prepare cost estimates for each of the BRCP cost categories. Detailed descriptions of methods
36 and assumptions are provided in Appendix F, *Implementation Costs Supporting Materials*.

1 **8.3.2.1 Conservation Measure Cost Estimation Methods**

2 Conservation measure CM1: Protect Natural Communities requires acquisition of lands that
3 support existing habitat and lands that are suitable for habitat restoration to achieve natural
4 community and covered species habitat objectives (see Section 5.4.1.1, *CM1 Protect Natural*
5 *Communities* and Tables 5–1, 5–2, and 5-12). Available lands meeting BRCP natural
6 community protection and restoration requirements will be acquired through conservation
7 easement or in fee title ownership at fair market value. The values of fee title ownership and
8 conservation easement on land is based on land value research on transactions in Butte County.
9 The average per acre values used were based on information on land transactions as provided by
10 recent appraisals, County Assessor information, commercial land value databases, and interviews
11 with selected appraisers and brokers active in the Plan Area. Estimated costs for *CM1* also
12 captures all costs associated with implementation of conservation measures *CM14* through
13 *CM18* because these conservation measures only incur land acquisition costs.

14 Cost estimates for conservation measures *CM2*, *CM4* through *CM13*, and *CM19* are based on
15 actual or estimated costs of similar conservation actions implemented or planned under other
16 conservation programs and conservation measure-specific assumptions regarding how each of
17 these conservation measures will be implemented in the Plan Area (see Appendix F,
18 *Implementation Costs Supporting Materials*). Costs for implementing conservation measure
19 CM3: Improve Urban Stormwater Quality are strictly administrative and are included in the
20 Administration and Management cost category.

21 **8.3.2.2 Environmental Compliance Cost Estimation Methods**

22 Environmental compliance costs are applicable to BRCP terrestrial and aquatic habitat
23 restoration projects (see Sections 5.4.2.1–5.4.3) and encompass costs necessary to prepare
24 National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA),
25 Clean Water Act (CWA), National Historic Preservation Act (NHPA), and other environmental
26 compliance documents and secure associated permits and authorizations. The cost estimates
27 included in this analysis assume an average restoration project size of about 90 acres. The
28 average environmental compliance cost per restoration project is estimated at \$115,000,
29 including \$60,000 for NEPA and CEQA, \$25,000 for CWA, \$15,000 for NHPA, and \$15,000 for
30 other environmental compliance laws and regulations. The NHPA costs only include the cost of
31 a cultural inventory; if significant cultural resources were found, the NHPA compliance cost
32 could increase considerably. It is assumed that other BRCP implementation actions, such as land
33 acquisition, will not require environmental compliance and therefore would not incur any
34 environmental compliance costs.

35 **8.3.2.3 Monitoring and Other Surveys Cost Estimation Methods**

36 Surveys and other activities associated with BRCP monitoring requirements are described in
37 Section 5.8, *Monitoring Plan*. Other survey costs include surveys necessary to evaluate lands for
38 acquisition into the BRCP conservation lands system, to locate new occurrences of covered plant

1 species, monitoring seed source populations in support of establishment of new covered plant
2 species occurrences, and habitat, wildlife, and plant surveys for implementing BRCP avoidance
3 and minimization measures (Section 5.4.4, *Avoidance and Minimization Measures*) associated
4 with implementation of the conservation measures. The costs associated with surveys for
5 implementing BRCP avoidance and minimization measures (Section 5.4.4, *Avoidance and*
6 *Minimization Measures*) for covered activities that are not conservation measures (e.g.,
7 development projects, maintenance activities and other activities as described in Chapter 2,
8 *Covered Activities*) are not included in this cost estimate because the conduct and funding of
9 such surveys will be the responsibility of the project proponents for those covered activities.

10 Most costs for this cost category are labor costs, since equipment needs are assumed to be
11 minimal. The monitoring and other survey cost estimates included in this cost analysis represent
12 planning-level “best estimates” based on standardized assumptions. These assumptions may not
13 fully encompass the inherent flexibility and variability of each parameter considered. System-
14 wide monitoring involves monitoring the overall status of the covered species over the term of
15 the BRCP and is conducted specifically to inform adaptive management decisions. System-wide
16 monitoring costs are assumed to be 15 percent of the total costs for all other monitoring actions.
17 Appendix F, *Implementation Costs Supporting Materials* provides a detailed description of the
18 assumptions and calculations for estimating the monitoring and other survey costs.

19 **8.3.2.4 Administration and Management Cost Estimation Methods**

20 The structure of and responsibilities for implementing the BRCP program are described in
21 Chapter 7, *Implementation Structure*. BCAG will be responsible for implementation of the
22 BRCP, including all costed elements of the mitigation and conservation components. To carry
23 out the responsibilities associated with implementing the BRCP, BCAG will require funding to
24 support additional staff, expense/supply costs, and legal and other advisory services provided by
25 outside professional services organizations. Costs were estimated based on current BCAG
26 operating costs and expenditures for advisory services reported by other approved HCP/NCCP
27 implementing entities in California. Specific assumptions used to calculate administration and
28 management costs are presented in Appendix F, *Implementation Costs Supporting Materials*.

29 **8.3.2.5 CEQA/NEPA Mitigation Costs Cost Estimation Methods**

30 *[Note to Reviewers: BRCP CEQA/NEPA mitigation costs are costs that could be required in the*
31 *BRCP EIR/EIS to mitigate identified non-biological impacts of implementing BRCP restoration*
32 *actions. These costs and cost estimation methods will be estimated and described in the EIR/EIS*
33 *and will be summarized in this section on completion of the administrative draft BRCP EIR/EIS*
34 *document.]*

35 **8.3.2.6 Changed Circumstances Cost Estimation Methods**

36 Changed circumstances are described in Chapter 6, *Plan Implementation*. Changed
37 circumstances for which costs are estimated are those that affect covered species habitat

1 conditions on BRCP conservation lands. Any costs associated with changed circumstances that
2 require only an administrative response (e.g., coordination with the permitting agencies) are
3 included in administration and management costs. In the event that changed circumstances
4 affecting habitat conditions on conservation lands occur, BCAG may implement, as appropriate,
5 the planned responses identified for each of the changed circumstances described in Section
6 6.4.2.2, *Changed Circumstances Addressed by the BRCP*. Conservation measures that address
7 habitat conditions on conservation lands are:

- 8 • CM2: Develop and Implement an Invasive Species Control Program
- 9 • CM4: Restore Riparian Habitat
- 10 • CM5: Restore Vernal Pool Complex
- 11 • CM6: Restore Emergent Wetland
- 12 • CM7: Enhance and Manage Protected Natural Communities

13 The cost analysis assumes that the cost for implementing responses to changed circumstances
14 will be 10 percent of the total implementation costs for the conservation measures listed above.

15 **8.3.2.7 Post-BRCP Permit Endowment Cost Estimation Methods**

16 In the post-BRCP permit period (i.e., when BRCP incidental take permits expire 40 years
17 following their issuance), the management and maintenance of BRCP conservation lands will
18 continue in perpetuity. To pay for these on-going costs in the post-BRCP permit period, a non-
19 depleting endowment will be built over the 40 years of the BRCP implementation period. This
20 endowment will be sufficient to generate interest payments that annually support BRCP
21 administration and management and conservation land maintenance costs in perpetuity. The cost
22 estimate for funding the endowment is based on an assumed real interest rate of 2 percent.
23 Estimated costs are developed for three endowment funds: 1) administration and management; 2)
24 conservation land maintenance; and 3) legal and other contingency reserve.

25 To determine the necessary size of the three endowments, an estimate was developed for
26 conservation land maintenance, management, and administration costs on an ongoing annual
27 basis in the post-BRCP permit period. Specific assumptions are described in Appendix F,
28 *Implementation Costs Supporting Materials*. By the end of the BRCP permit period, all
29 conservation measures will have been implemented and compliance and effectiveness
30 monitoring requirements achieved. Consequently, there are no post-BRCP permit
31 implementation costs associated with the environmental compliance, monitoring and other
32 surveys, and changed circumstances categories. Administration and management costs during
33 the post-BRCP permit period are assumed to be substantially reduced from such costs during
34 BRCP implementation. Conservation land maintenance costs in the post-BRCP permit period
35 include labor and material and supply costs necessary to maintain conservation land
36 infrastructure (e.g., fences, fire breaks, roads) and management of water for specific species
37 habitats.

8.3.3 Local Share and Public Share Cost Estimates

Using the methods summarized in Section 8.3.2, *Cost Estimation Methods* and described in Appendix F, *Implementation Costs Supporting Materials*, a total cost estimate for each of the cost categories was calculated based on full implementation of the BRCP. The Local Share of the implementation costs was estimated by disaggregating the costs of mitigating the effects of the covered activities on natural communities and covered species from the costs for implementing the full BRCP Conservation Strategy (see Appendix F, *Implementation Costs Supporting Materials* for a description of assumptions used to identify the Local Share costs for each of the cost categories). The remaining costs of the full BRCP Conservation Strategy implementation comprise the Public Share costs.

8.3.3.1 Local Share BRCP Implementation Cost Estimate

Total Local Share costs under the BRCP are estimated to be \$143.2 million in 2011 dollar terms (Table 8-4 and Figure 8-2). These costs address the mitigation requirements for impacts on biological resources resulting from 24,420 acres of new development within the Plan Area that will require mitigation (Table 4-5). The total Local Share costs reflect the mitigation requirements if all of the covered activities (see Chapter 2, *Covered Activities*) are implemented (i.e., full build-out of the County's and cities' general plans, transportation plans, and other plans and activities). For those covered activities that are not implemented, mitigation will not be required and the total mitigation costs will be lower than indicated in Table 8-4.

Table 8-4. Summary of BRCP Mitigation Implementation Costs by Cost Category¹

Cost Category	Estimated Cost
Conservation Measures	\$113,659,000
Environmental compliance	\$1,265,000
Monitoring and other surveys	\$8,639,000
Administration and Management	\$6,931,000
CEQA/NEPA mitigation costs ²	[To come]
Changed circumstances	\$3,939,000
Endowment Costs for Post-BRCP implementation	
Administration and management endowment fund	\$1,401,000
Conservation land maintenance endowment fund	\$6,082,000
Legal and other contingency reserve fund endowment	\$1,329,000
<i>Subtotal</i>	\$8,812,000
Total	\$143,244,000

Notes:

Discrepancies in total values due to rounding.

¹Cost estimates are rounded to the nearest \$1,000.

²CEQA/NEPA mitigation costs are for requirements to mitigate impacts of implementing BRCP habitat restoration conservation measures on non-biological resources that are identified in the BRCP EIR/EIS.

To provide context for the estimated Local Share costs for mitigating impacts of BRCP covered activities, a single project completed in the Plan Area in 2008, the Highway 149 improvement project, had mitigation costs that totaled approximately \$15 million.

1 **8.3.3.2 Public Share BRCP Implementation Cost Estimate**

2 Total Public Share costs for BRCP implementation over 40 year BRCP implementation period
3 are estimated to be \$623.6 million in 2011 dollar terms (Table 8–5 and Figure 8–3) and are
4 distributed over the 40-year implementation as shown in Figure 8-4. These costs address the
5 implementation of conservation actions that contribute to the conservation of natural
6 communities and the conservation and recovery of covered species and do not include costs for
7 avoiding, minimizing, and mitigating impacts of the covered activities. As shown in Table 8–5
8 and Figure 8–3, the total estimated conservation cost over 40 years includes approximately
9 \$530.9 million in conservation measure implementation costs, representing 85 percent of Public
10 Share costs. Protecting approximately 110,800 acres of natural communities (*CMI*) requires the
11 largest investment, with an estimated cost of approximately \$317.8 million (see Appendix F,
12 *Implementation Costs Supporting Materials*). Consequently, Public Share costs are highest
13 during the second and third decades of implementation when the majority of conservation lands
14 are assumed to be acquired (Figure 8–4).

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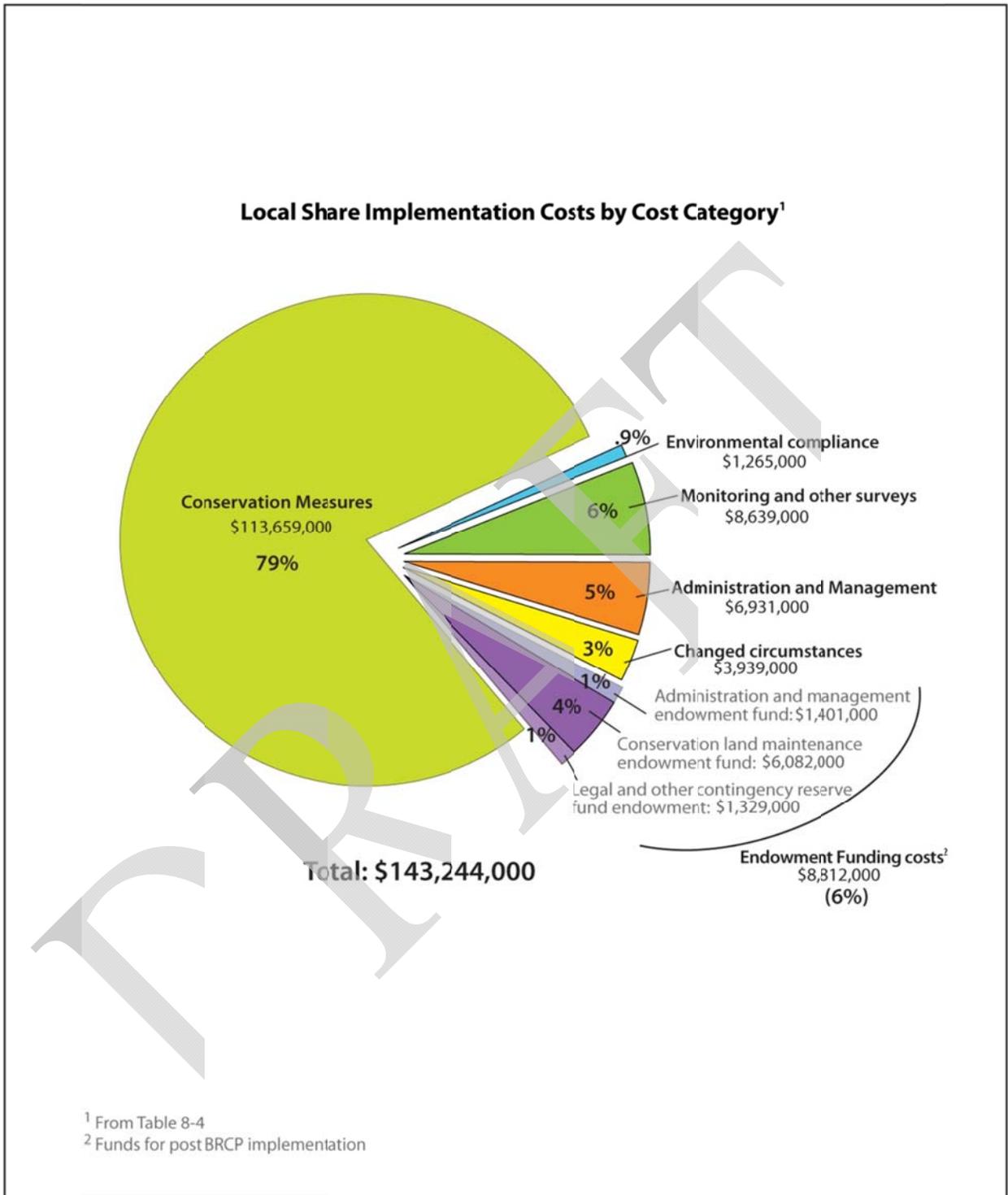


Figure 8-2. Summary of Local Share Implementation Costs by Cost Category

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Table 8-5. Summary of BRCP Conservation Implementation Costs by Cost Category¹

Cost Category	Conservation Costs by Implementation Period					Average Annual Cost
	Years 1–10	Years 11–20	Years 21–30	Years 31–40	Total	
Conservation measures	\$78,276,000	\$138,953,000	\$202,196,000	\$111,431,000	\$530,857,000	\$13,271,000
Environmental compliance	\$1,035,000	\$1,725,000	\$2,415,000	\$1,380,000	\$6,555,000	\$164,000
Monitoring and other surveys	\$4,449,000	\$4,459,000	\$9,464,000	\$5,061,000	\$23,433,000	\$586,000
Administration and Management ⁴	\$4,308,000	\$4,945,000	\$4,945,000	\$4,945,000	\$19,145,000	\$479,000
CEQA/NEPA mitigation ²	[To come]	[To come]	[To come]	[To come]	[To come]	[To come]
Changed circumstances	\$2,819,000	\$4,609,000	\$7,244,000	\$4,662,000	\$19,334,000	\$483,000
Endowment for Post-BRCP implementation						
Administration and management	\$590,000	\$990,000	\$1,552,000	\$737,000	\$3,869,000	\$97,000
Conservation land maintenance	\$2,562,000	\$4,297,000	\$6,739,000	\$3,200,000	\$16,798,000	\$420,000
Legal and other contingency	\$560,000	\$939,000	\$1,473,000	\$699,000	\$3,671,000	\$92,000
<i>Subtotal</i>	\$3,712,000	\$6,226,000	\$9,764,000	\$4,636,000	\$24,338,000	\$608,000
Total	\$94,600,000	\$160,918,000	\$236,030,000	\$132,115,000	\$623,663,000	\$15,592,000

Notes:

Discrepancies in total values due to rounding.

¹Cost estimates are rounded to the nearest \$1,000.

²CEQA/NEPA mitigation costs are to mitigate impacts of implementing BRCP habitat restoration conservation measures on non-biological resources that are identified in the BRCP EIR/EIS.

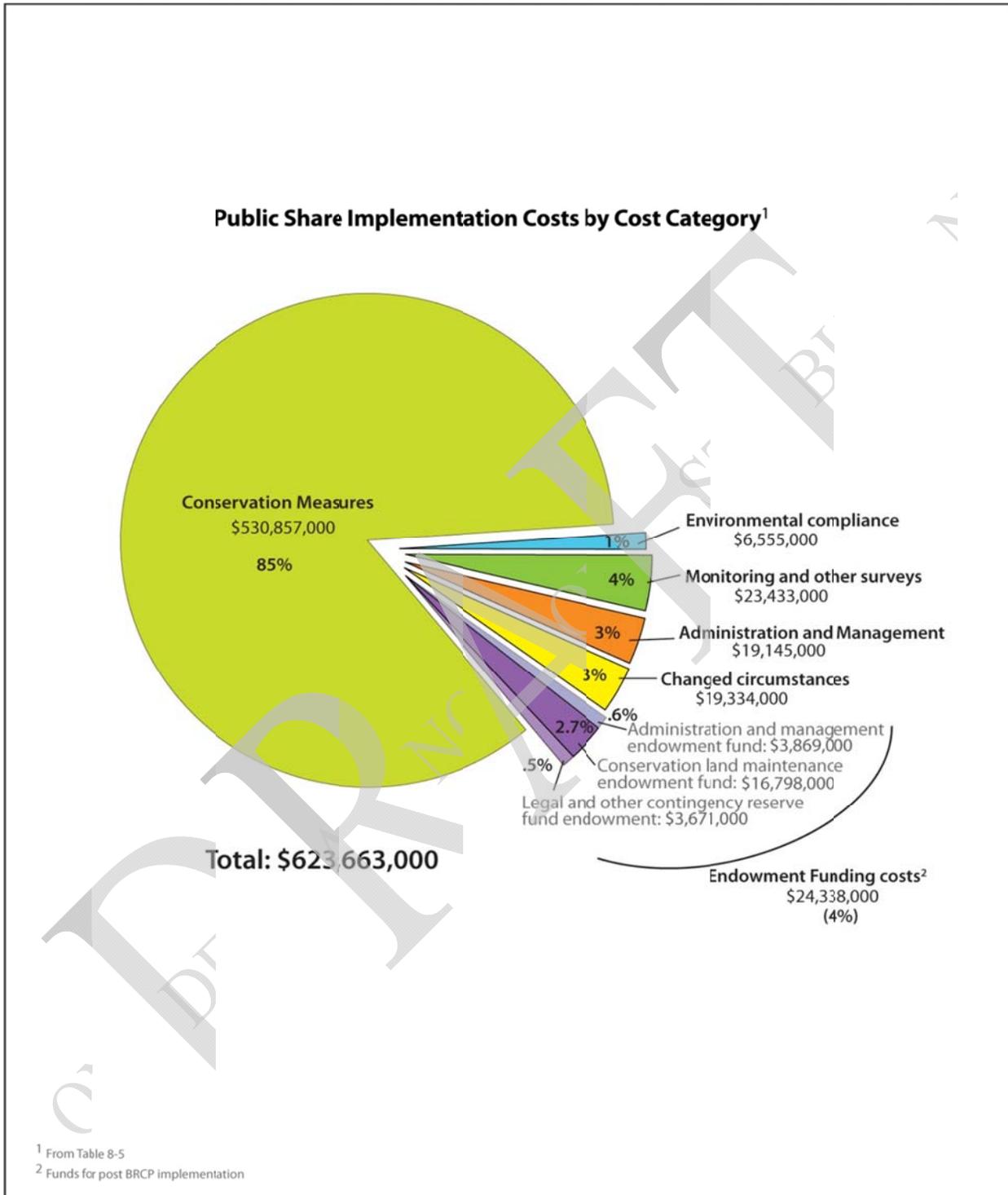


Figure 8-3. Summary of Public Share Implementation Costs by Cost Category

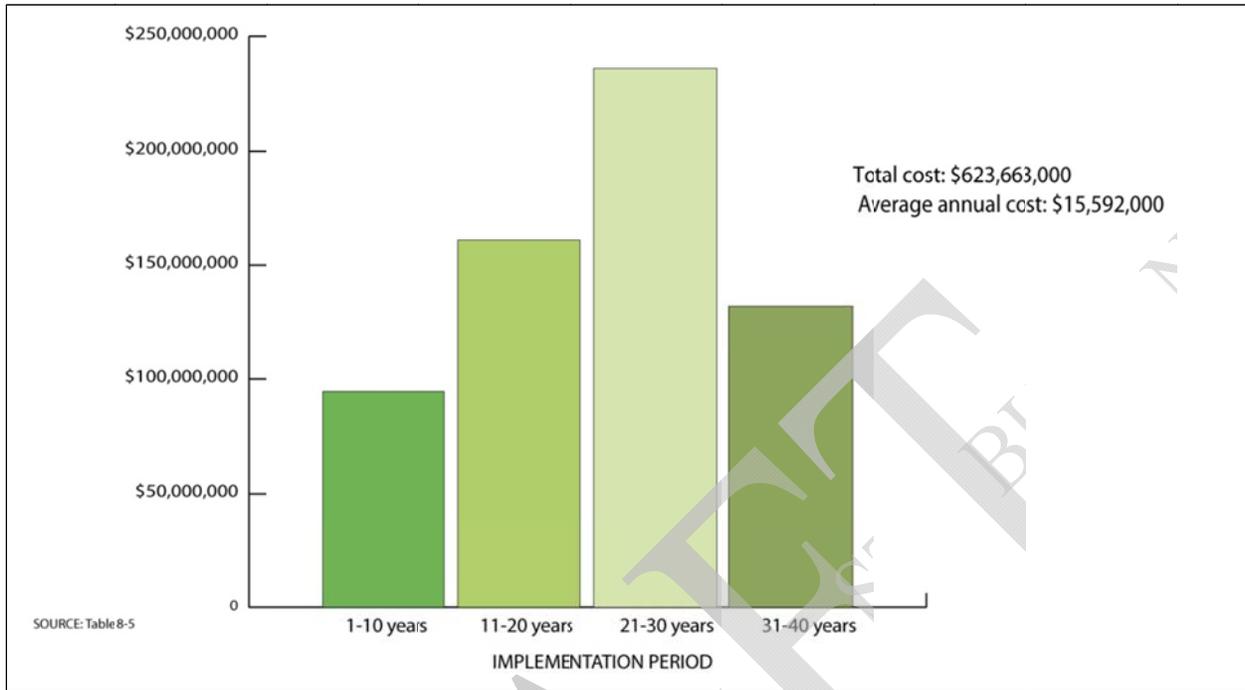


Figure 8-4. Total Public Share Implementation Costs by Implementation Period