Appendix H

HCP/NCCP Funding Analysis

Economic &
Planning Systems
Real Estate Economics
Regional Economics
Public Finance
Land Use Policy

MEMORANDUM

To: John Kopchik, Contra Costa County
David Zippin, Jones & Stokes

From: Teifion Rice-Evans, Jason Tundermann

Subject: Non-Fee Funding and On-Going Conservation Efforts; EPS #11028

Date: August 3, 2006

Chapter 9 describes non-fee funding from grant funding sources and from other sources. This memorandum provides additional detail on estimating the contributions existing conservation organizations may make toward accomplishing HCP/NCCP conservation objectives by continuing to follow their own goals. The East Bay Regional Park District (EBRPD) is the focus of this analysis because they have been consistently acquiring lands in the East County area and are expected to continue such acquisitions in the future.

Table 1 shows the historical land acquisitions of the East Bay Regional Park District both in the two-County area and in the East County. As shown, the EBRPD acquired an average of about 2,300 acres each year between 1967 and 2000. An average of about 440 acres each year was acquired in the HCP inventory area, with acquisitions fluctuating by decade. If this acquisition trend continues, a total of about 13,300 acres will be acquired over the next 30 years. Two other acquisition projections are also shown, one at half and one at three-quarters the historical acquisition rate. These projections result in the acquisition of 6,700 and 10,000 acres.

Most acquisitions by the EBRPD are expected to be consistent with the NCCP/ HCP land conservation requirements. The value of these acquisitions relative to the overall Plan cost depends on the type and location of the land purchased. Based on past EBRPD acquisitions, an average land value of $6,500 per acre is assumed and applied to their projected acquisitions. This results in an estimated acquisition value of between $43.3 million and $87 million over the next 30 years (in 2004 dollar terms), depending on the acquisition projection (see **Table 1**). For the purposes of this analysis, the three-quarters land acquisition projection is used, resulting in the equivalent of a land contribution of $65 million. As further described in Chapter 9 and Section 9.4 of the Implementing Agreement, the EBRPD expects to maintain its land acquisition effort at its historical level, though rate of EBRPD land acquisition is discounted in this analysis because some

of the past acquisitions were funded through mitigation payments, because some EBRPD acquisitions may not be suitable as HCP/NCCP preserves and because land available for acquisition may become more limited over time.

In recent years, the EBRPD has received between one-third and one-half of its land acquisition budget from grants, the remaining coming from local property taxes and assessments. Most of this grant funding comes from State sources. As a result, it is estimated that of the $65 million in land acquisition value provided by the EBRPD, about $35 million will be from local funding sources, $25 million from State funding sources, and $5 million from federal funding sources. The grant funding sources that the EBRPD has been particularly successful in tapping in the past include the Habitat Conservation Fund, the per capita grant program, the Roberti-Hertzberg-Harris Need Basis Grant Program, and the San Francisco Bay Area Conservancy programs.

The land EBRPD acquires would also need to be maintained, and such maintenance expenses constitute another component in valuing EBRPD's continued efforts. For the HCP as a whole, total maintenance and operation costs over 30 years are assumed to be about 50 percent of land acquisition costs. To be conservative, this analysis assumes EBRPD operation and maintenance activities on the future acquisitions over the next 30 years has a value of $20 million, approximately 30 percent of the estimated land value of its acquisitions. As a result, the total contribution of the on-going efforts of the EBRPD and its funding partners is estimated to be $85 million.

Table 1
Past and Projected EBRPD Land Acquisitions
East Contra Costa County NCCP/ HCP; EPS #11028

Land Type/Item	1967-77	1978-88	1989-2000	Total/ Average
EBRPD				
New Acres Acquired	29,600	20,900	25,400	75,900
Annual Acres Acquired	2,691	1,900	2,117	2,300
EBRPD in HCP Planning Area				
New Acres Acquired	5,770	2,164	6,731	14,664
Annual Acres Acquired	525	197	561	444

Projected EBRPD Acquisition	Annual Acres	30-Year Acres	Value/ Acre	Total Value
Conservative Projection (half historical rate)	222	6,665	$6,500	$43,300,000
Aggressive Projection (average historical rate)	444	13,331	$6,500	$86,700,000
Selected Projection (1) (75% of historical rate)	333	9,998	$6,500	$65,000,000

Funding Source	30-Yr Projection	Annual Projection
Local Taxes/ Assessments (2)	$35,000,000	$1,167,000
State Grants (3)	$25,000,000	$833,000
Federal Grants (3)	$5,000,000	$167,000
Total Acqusition Value	**$65,000,000**	$2,167,000
Local Taxes/ Assessments for Land Maintenance (30 yr)	$20,000,000	$667,000
Total Value of Projected EBRPD Land Acquition	**$85,000,000**	**$2,834,000**

(1) The EBRPD expects to continue its historical level of acquisition effort. This analysis discounts the acquisition to account for uncertainties over land availability, to reflect the fact that not all EBRPD acquisitons will be suitable for the HCP/NCCP Presrve System, and to avoid double-counting some of the revenues received by the EBRPD via mitigation agreements between the regulatory agencies and developers.
(2) EBRPD achieves some revenue via mitigation agreements between developers and regulatory agencies. This revenue has effectively been removed by applying the 75 percent rate of the land acquisition projections (see Note 1).
(3) Proportion of EBRPD land acquisitions budget from grants based on interviews with EBRPD staff and the EBRPD budget documents.

Source: EBRPD; Economic & Planning Systems, Inc.

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Planning Systems
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TECHNICAL MEMORANDUM

To: John Kopchik, East Contra Costa County Habitat Conservation Plan Association

From: Teifion Rice-Evans and Jason Tundermann

Subject: Calculating and Adjusting Fees on New Development; EPS #11028

Date: August 3, 2006

This memorandum provides background information on how the HCP/NCCP development fees were calculated. The memo begins by summarizing the various approaches considered for apportioning the costs of the HCP/NCCP between the public and future development. The method selected, the fair share apportionment, is then explained in detail. Finally, the fee adjustment process is also discussed. This memorandum is based on the prior work products produced by EPS.

APPORTIONMENT OF PLAN COSTS

The Principles of Participation that were adopted prior to initiating the HCP/NCCP called for Plan implementation costs to be shared between the public (i.e., local, state, and federal sources) and future development (i.e., fees levied on private development receiving take coverage under the Plan). Likewise, the Plan provides for a level of conservation well beyond what could be required to mitigate for the covered activities, meaning that some cost-sharing is a necessity. Four approaches to apportioning the public/private contribution to funding the Plan were considered, each of which is summarized below.

A.) ***Fair Share Apportionment Approach***. Different plans have taken different approaches to the allocation of implementation costs to new development. Several smaller HCPs, for example, have placed the large majority of the cost burden on new development. Larger HCPs and joint HCP/NCCPs tend to attribute a share of the costs to existing development, funded through sources other than developer mitigation fees. For example, the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan attributes about 60 percent of the HCP implementation costs associated with certain habitat types to new development through mitigation fees, with the remaining 40 percent attributed to existing development. This breakdown was based on an estimate of the proportion of habitat lost that was associated with past development versus the

amount of habitat loss expected with future development assumed under the plan. Such an approach must also take account of existing levels of conservation that serve to balance existing development.

The Fair Share Apportionment approach has the advantage of "prorating" the development contribution by the amount of development that has already occurred. Similarly, this method takes into account past contributions of open space by the public and developers (i.e., open space existing now) in calculating future contributions. The Fair Share Apportionment method also has the advantage of being used in other contexts (e.g., transportation funding). The primary disadvantages of this method are its complexity and the potential difficulties with assembling enough public funding to pay the publics' calculated fair share of costs.

B.) ***Financial Feasibility Approach***. There are already a number of fees levied on development projects by local jurisdictions. If the fees levied by the HCP/NCCP place too high a burden on development, the rate of development could be significantly affected, resulting in a range of unintended economic and land use consequences. While every development is different, there are general standards that indicate when mitigation cost burdens, when added to other imposed cost burdens, may render a number of projects financially infeasible. Under this approach, additional fees are imposed on development up to the standard, maximum cost burden levels.

The advantage of this approach to determining private/public apportionment is that such an analysis theoretically demonstrates the maximum fee that would be financially feasible for developers. Disadvantages include the substantial uncertainties in the calculations and the differing abilities of different developments to bear additional cost burdens. Likewise, compliance with endangered species and other natural resource protection regulations is an existing cost facing new development and it would be very difficult to reflect this fact in the analysis. Setting a fee at or near the limit of financial feasibility for developers also leaves no room for other fees that may need to be imposed in the future for other reasons nor does it allow for fluctuations in market conditions.

C.) ***Mitigation vs. Contribution to Recovery Approach***. Development projects are typically only required to mitigate their impacts, while the HCP/NCCP is required by the NCCP Act to contribute to the recovery of the covered species. It may be possible to categorize the conservation actions in the plan by whether the action simply mitigates impacts covered by the plan (i.e., developer responsibility) or whether it goes beyond what would be required under a project-by-project approach to permitting and contributes to species recovery (i.e., public responsibility). Such a categorization could inform cost allocations.

This approach has the advantage of allocating costs to developers that are clearly their responsibility (mitigation). However, categorizing conservation actions by mitigation versus conservation is difficult because there are no recovery plans for most of the covered species and because it is very difficult to use biology or regulatory standards to draw a clear line between the conservation actions needed for mitigation and those that contribute to recovery (except in special cases, such as wetlands and riparian woodlands).

*D.) **Availability of Other Funding Sources Approach***. Defining the amount of other, non-developer funding that is available for implementing the goals and objectives of the HCP/NCCP could inform a decision on how much funding must be raised from development. This approach has the advantage of guaranteeing filling any funding gap left by public sources. Under this approach, however, the fees can be higher than is financially infeasible and can often exceed the developer's "fair share".

Following extensive discussion with the HCPA Coordination Group, a Coordination Group subcommittee, and the HCPA Executive Governing Committee, the Fair Share Apportionment approach was ultimately selected. The development mitigation fees described in Chapter 9 of the HCP/NCCP were calculated based on this approach.

FAIR SHARE APPORTIONMENT

The purpose of conservation efforts under NCCPs is to assemble a preserve system to conserve species and ecosystem processes. New conservation lands must be added to existing conservation lands in sufficient quantity and quality to achieve conservation goals while accommodating existing and proposed urban growth. Since past and future development as well as past conservation are factors affecting the amount and location of future conservation needed under an NCCP, it is reasonable to consider all these factors when apportioning NCCP implementation costs. This HCP/NCCP used such an approach, the Fair Share Apportionment approach, to allocate implementation costs between fees on future development and public funding sources. This approach was adapted from the cost apportionment concept employed for the San Joaquin County HCP.

The Fair Share Apportionment approach is based on the premise that the costs allocated to future development should be in proportion to the impacts caused by future development. Past and proposed development impacts and past and proposed conservation acquisitions were quantified and compared. The costs attributable to future development were allocated to fees on future development. Costs attributed to past development were allocated to public sources of funding. The results of this analysis are summarized in Table 1, the Development Fee Calculator.

Section 1 of the Development Fee Calculator shows how a Fair Share cost allocation ratio was derived[1]. As shown, existing conservation efforts, funded through a variety of sources and entities, have resulted in the conservation of about 43,000 acres, a ratio of about 1.07 relative to the developed acres[2]. Under the Maximum Urban Development

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[1] Acreage figures used in the Fair Share analysis reflect conditions in 2003, near the beginning of the HCP/NCCP planning process when the NCCP Planning Agreement was signed. The NCCP Planning Agreement provides a benchmark for distinguishing between conservation and development that precedes the Plan and conservation and development that are addressed in the Plan.

[2] Irrigated and intensively farmed lands were considered to provide approximately 50% of the habitat and open space value of natural lands in this analysis. Consequently, to calculate the amount of acres impacted

Area (UDA) scenario, the Plan requires the conservation of an additional 30,300 acres while permitting up to an additional 15,000 acres of impact (see footnotes 1 and 2), an overall ratio of 2.75.

In order to ensure new development pays approximately its "fair share", the costs of future conservation would need to be allocated between existing and new development such that they both end up contributing at the average ratio of 1.43. Applying this ratio, about 14,600 acres of the 30,300 acres needed in the future, or 48 percent of Plan costs under the Maximum UDA scenario, are allocated to public funding sources (i.e., existing development). The other 52 percent of Plan costs under the Maximum UDA scenario are allocated to future development.

Section 2 of the Development Fee Calculator applies the fair share results to the Plan costs. Under the Maximum UDA scenario, future development would pay 52% or approximately $170,000,000 of the total plan costs. The remaining costs of approximately $156,000,000, would be paid by public funding sources (approximately $8.9 from rural infrastructure fees and approximately $148,000,000 from other local, state and federal funding sources). Under the Initial UDA scenario, the public funding commitment is assumed to be the same as for the Maximum UDA scenario (unlike mitigation, public investment in efforts to contribute to the recovery of species does not depend on how much development occurs). Future development would pay 43% or approximately $118,000,000 of Plan costs under this scenario.

Section 3 of the Development Fee Calculator calculates the required per-acre fees by dividing the total costs for future development by the estimated number of acres to be impacted in each of the three Fee Zones (see Chapter 9 of the HCP/NCCP for additional information on Fee Zones). The fees calculated for the Initial UDA scenario are the Development Mitigation Fees that will be required in the first year of implementing the HCP/NCCP.

FEE ADJUSTMENT PROCESS

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 in part due to the impossibility of perfectly predicting future cost changes, though there are also a number of approaches that can minimize funding shortfalls. This section provides additional background on two inter-related systems that will be used to improve the proximity of HCP funding to costs and is intended to more fully explain the

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prior to the Plan, 50% of the existing cultivated acres were added to the existing urban acres. Acres of proposed development on cultivated lands were reduced by 50% to calculate future impacted acres. The fee amounts to be charged under the HCP/NCCP also reflect the estimate that development of intensively cultivated lands has half as much impact to habitat and open space as development of natural lands.

rationale those provisions. For a description of the fee adjustment requirements of the HCP/NCCP, please see Chapter 9.

Cost Review and Fee Adjustment

There are two mechanisms for adjusting fee levels, one through a more thorough evaluation of changes in plan costs, and the other through an automated increase through a specified cost index or inflator. Indexed adjustments, discussed in more detail below, are generally used in the intervening years between more thorough reviews.

The cost review process includes, in effect, a review of the costs and their underlying assumptions that were developed as part of the original funding plan. Actual land sales transacted after the start of the HCP are evaluated and compared to the original land cost assumptions to determine the level of land cost inflation. The actual costs of operating, maintaining, and managing the HCP are also compared to the original estimates of these costs to determine the level of "other" cost inflation. Once the revised cost estimates are completed, the fee is adjusted to ensure it continues to cover its share of the costs.

The appropriate timing of such reviews requires a balanced consideration of the administrative costs of such reviews, the time before sufficient additional data is available, and the choice of automated fee increase index incorporated in the plan. As further discussed in Chapter 9, the HCP/NCCP provides for fee reviews in Plan years 3, 6, 10, 15, 20, and 25.

Fee Increase Index

Land costs and other HCP costs generally increase at different rates. Land costs in many areas of California, including the San Francisco Bay Area, generally increase at 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 HCP costs, including the cost of the personnel, supplies, and equipment involved in managing, operating and maintaining, and doing restoration work for HCP programs, generally increase more closely in line with the general rate of inflation.

A number of different fee programs that are not tied directly to construction costs will use a measure of general inflation, such as the consumer price index (CPI). As shown in **Table 2**, inflation rates vary by area. Increases in the price index for the combined San Francisco/ Oakland/ San Jose metropolitan areas are greater than those for the Western Region of the U.S. (which includes the western states), which are, in turn, greater than the increases in the national consumer price index. As shown, the average annual inflation rate over the full economic cycle from 1991 to 2001 ranged from 2.66 percent to 3.25 percent depending on the geography evaluated. The San Francisco-plus metropolitan area consumer price index showed a higher consumer price index during the boom years, from 1996 to 2000, while the western and national indices showed lower rates of increase over this period compared to their rates over the full economic cycle.

The variation in the cost of land due to site-specific factors means that it is difficult to develop land cost indices, and, as a result, there are no such indices available. However, given the link between the housing market, housing prices, and land costs, housing prices will 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 two primary sources of information available on housing prices, include information developed by the California Association of Realtors for California cities and counties as well as an index developed by the Office of Federal Housing Enterprise Oversight (OFHEO) for California as a whole.

As shown in **Table 2**, annual housing price increases in Contra Costa County and the East Contra Costa County cities were significantly above all the measures of general inflation at 5.1 percent and 4.5 percent, respectively, over the period from 1991 to 2001. The disparity was especially significant during the economic boom period (1996-2000) when housing prices increased by an annual average of about 10 percent. A separate housing price index developed by the OFHEO estimates increases in the east San Francisco Bay Area. As shown in **Table 2**, the index showed an average annual increase of 5.2 percent from 1991 to 2001, an average annual increase of 11.3 percent during the economic booms years and an average of 10.4 percent in the period from 2000 and 2003.

As further discussed in Chapter 9 of the HCP/NCCP, since full cost reviews will not be conducted every year, a housing price measure will be used to adjust the portion of the fees intended to cover land costs each year. A CPI measure of general inflation will be used to adjust the portion of the fees intended for other costs each year. Again, during formal cost reviews, the divergences of these cost indices from actual cost increases will be corrected.

Table 1: ECCC HCP/NCCP Development Fee Calculator

1. Determining Future Development's FAIR SHARE of Implementation Costs (assumes Maximum Urban Development Area)

	Urban Acres	Irrigated Ag. Acres	Total Impacted Acres (urban + 0.5*irrigated ag)	Conservation Acres	Conservation Ratio	Fair Share Ratio	Fair Share of New Conservation Acres	Fair Share	
Existing (2003)	23,828	33,028	40,342	43,000	1.07	1.43	14,596	48%	(public share)
Affected during HCP	15,000	(8,000)	11,000	30,300	2.75	1.43	15,704	52%	(future development share)
Status after HCP	38,828	25,028	51,342	73,300	1.43	1.43	30,300	100%	

2. Gross Cost Allocations

	Item	Amount: Initial Permit Area	Amount: Max. Permit Area
a	Total Plan Cost	$297,090,000	$350,040,000
b	**Wetland Mitigation Cost** (Creation & Restoration) (to be paid by wetland fee)	**$22,240,000**	**$23,650,000**
c	Adjusted Plan Cost	$274,850,000	$326,390,000
d	Future Urban Development's "Fair Share" %	43%	52%
e=c*d	**Future Impacts "Fair Share" $**	**$118,182,800**	**$169,722,800**
f	**Contribution by Rural Infrastructure Projects**	**$8,931,600**	**$8,931,600**
g=c-e-f	**Remaining Cost** (to be funded by a variety of public sources)	**$147,735,600**	**$147,735,600**
i=b+e+f+g	Total revenues	$297,090,000	$350,040,000

Key Assumptions:	
Ag. habitat & open space value relative to natural land	50%
New development's share of rural road mitigation costs	0%
Rural road mitigation costs	$7,431,600
Other rural infra. mitigation costs	$1,500,000
Total rural infra. mitigation costs	$8,931,600
Fee zone ratio:	
Zone 1: Eastern and Ag:	2
Zone 2: S/W and Natural:	4
Zone 3: Infill:	1
Paying acres contingency (see note 4)	10%
Units / acre	4

3. Estimated Development Mitigation Fee by Fee Zone

ITEM	FEE ZONES: Eastern and Agricultural Zone I	South + West Natural Areas Zone II	Infill (less 10 acres) Zone III	Total/ Weighted Avg
Total Acres of Impacts (n/incl Rural Infrastructure)				
Initial Plan Area	6,212	2,306	166	8,684
Maximum Plan Area	7,533	4,180	166	11,879
Relative Fee Weighting by Zone (1)	2	4	1	
Relative Funding Burden by Zone -- Percent (2)				
Initial Plan Area	57%	42%	0.8%	100%
Maximum Plan Area	47%	52%	0.5%	100%
Relative Funding Burden by Zone -- Amount (3)				
Initial Plan Area	$67,310,127	$49,973,327	$899,347	$118,182,800
Maximum Plan Area	$80,027,657	$88,813,383	$881,760	$169,722,800
Fee Per Developed Acre (4)				
Initial Plan Area	**$11,919**	**$23,838**	**$5,960**	$13,906
Maximum Plan Area	$11,686	$23,372	$5,843	$13,634
Est. Fee Per Housing Unit for Residential Dvlpmt (5)				
Initial Plan Area	$2,980	$5,960	$1,490	$3,476
Maximum Plan Area	$2,921	$5,843	$1,461	$3,408

Notes:
(1) Relative fee contribution of an acre in each zone.
(2) Relative funding contribution of each zone, taking into account total zone acreage and fee weighting factor.
(3) Relative funding burden times total fee-funded HCP costs.
(4) Funding burden divided by zone acreage. Also includes a 10% contingency factor to account for incomplete buildout.
(5) Assumes average housing density of 4.0 units per acre.

Table 2
Comparison of Various Consumer Price and Home Price Indices
East Contra Costa County NCCP/ HCP; EPS #11028

Year	Consumer Price Index National (1)	Consumer Price Index - Western Region (2)	CPI - San Francisco/ Oakland/ San Jose (3)	Median Home Price / Sq Ft Contra Costa County (4)	Median Home Price / SqFt (Avg East Contra Costa cities [5])	OFHEO Housing Price Index, Oakland-Hayward-Fremont MSAD (6)
1988	118.3	119.0	120.5	n/a	n/a	83.2
1989	124.0	124.6	126.4	n/a	n/a	101.3
1990	130.7	131.5	132.1	n/a	n/a	110.1
1991	136.2	137.3	137.9	126.0	115.5	108.2
1992	140.3	142.0	142.5	126.0	114.5	107.7
1993	144.5	146.2	146.3	124.0	117.3	105.6
1994	148.2	149.6	148.7	123.0	114.8	102.2
1995	152.4	153.5	151.6	120.0	106.3	101.0
1996	156.9	157.6	155.1	120.0	105.8	100.9
1997	160.5	161.4	160.4	126.0	105.8	105.0
1998	163.0	164.4	165.5	131.0	114.0	115.3
1999	166.6	168.9	172.5	146.0	134.5	128.1
2000	172.2	174.8	180.2	179.0	154.0	155.0
2001	177.1	181.2	189.9	208.0	179.3	179.5
2002	179.9	184.7	193.0	230.0	187.8	193.6
2003	184.0	188.6	196.4	n/a	n/a	208.5
Avg. Annual Rate						
1991 - 2001	2.66%	2.81%	3.25%	5.14%	4.49%	5.19%
1996 - 2000	2.35%	2.62%	3.82%	10.51%	9.85%	11.33%
2000 - 2003	2.23%	2.57%	2.91%	--	--	10.40%

(1) From U.S. Bureau of Labor Statistics. ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt
(2) From U.S. Bureau of Labor Statistics. http://data.bls.gov/cgi-bin/surveymost
(3) From U.S. Bureau of Labor Statistics. http://data.bls.gov/servlet/SurveyOutputServlet
(4) From RAND: California Association of Realtors data. http://ca.rand.org/stats/economics/houseprice.html
(5) Average of city data from Brentwood, Antioch, Byron, and Clayton.
(6) From Office of Federal Housing Enterprise Oversight. http://www.ofheo.gov/media/pdf/1q04hpi.pdf
The Oakland-Hayward-Fremont MSAD includes Alameda and Contra Costa Counties.

Sources: Footnoted organizations; Economic & Planning Systems, Inc.