

MEMORANDUM

To: East Contra Costa County Habitat Conservation Plan Association
From: Teifion Rice-Evans, Jason Tundermann
Subject: Draft Land Valuation Memorandum; EPS #11028
Date: January 16, 2002

This memorandum describes the results of the land valuation research effort and presents the land value model that will be used to calculate total HCP land acquisition costs. The land value estimates and the results of the land value model will ultimately be included in the cost section of the *Funding Chapter* of the HCP. Estimates of land acquisition costs will also be used to evaluate the conservation strategy and to help ensure that the strategy supports optimal conservation levels given finite financial funding.

Land acquisition costs, whether for fee title or conservation easement acquisition, are a key component of overall HCP/ NCCP implementation costs, generally representing over 60 percent of costs associated with regional, multi-species HCPs. Other costs that will be addressed in subsequent memoranda include restoration costs and operating, monitoring, and management costs. This memorandum is divided into four sections. The first presents estimates of per acre fee title land values; the second illustrates potential land savings through conservation easement acquisitions; the third provides estimates of potential land value inflation; and, the fourth demonstrates the use of the land value model under a hypothetical conservation scenario.

LAND VALUE ESTIMATES

This section provides estimates of average per acre fee title land values for the types of undeveloped land areas that are likely to be conserved as part of the HCP. These per acre land values represent planning-level estimates of average land values. They can be combined with expected conservation areas to provide a general estimate of the acquisition costs that must be covered by the HCP funding plan. These average land value estimates are based on their private market value, derived, as described below, from either arms-length sales transactions or pro forma residual land value analysis.¹ Actual sales prices of individual properties will vary considerably around these averages based on the specifics of the property. The results of this analysis are presented in the land value matrix in **Table 1**. Results are provided for five distinct land categories.

¹ The potential effects of existing State and Federal environmental regulation on land value have not been taken into account. Also, the regulation of land use via additional local land use regulations, such as the agricultural core designation east of Brentwood and Oakley, have not been integrated into the per acre land value estimates.



As shown the highest average per acre values are commanded by land inside the Urban Limit Line currently designated for development (Category V) as well as small estate parcels in the 5 to 10 acre range that are close to urbanized areas and are suitable for development (Category III). Per acre land values are lower for both land inside the Urban Limit Line that is not currently designated for development (Category IV) and larger parcels suitable for homesites (Category II). Large, steep, remote parcels (Category I) command the lowest prices, though, as discussed further below, even these parcels associate a significant portion of their value with speculative homesite development potential.

The five land categories were developed for analytical purposes and reflect five land groupings with distinctly different value drivers and thus land values. The categories are primarily distinguished by their geographic relationship to the Urban Limit Line, their size, their slope, and their remoteness. The methodology and data used to develop per acre land values for each of these categories is provided below.

OUTSIDE URBAN LIMIT LINE

Categories I, II, and III include land outside the urban limit line and are distinguished from each other by their size, which is also generally correlated with their proximity to urbanized areas. This land obtains most of its value from its potential as rural residential homesites with agricultural/ grazing use providing a component of value in some cases. The methodology applied to estimate the land values associated with this land follows the “comparables approach” to land value. Under this approach, land transactions of a similar size and type are used as indicators of value. The results from this approach were cross-checked against information provided by East County real estate and land brokers.

Relevant comparables were obtained from appraisals of land over the last ten years and from County Assessor parcel transactions data for the last four years. In some cases appraisers used land transactions to the south of I-580 due to the limited number of sales in the East County area. The comparables for different parcel sizes are shown in **Table 2, 3 and 4**, with average per acre land values noted as follows:

- **Category I** – Large parcels of over 160 acres generally fall in remote and hilly areas. As shown in **Table 2**, the majority of comparables fall within the \$2,000 to \$4,250 per acre price range, with \$3,000 per acre representing an approximate average. Land value is driven by a mix of rural residential and agricultural/ grazing market values.
- **Category II** – Medium sized parcels in the 10 -80 acre range derive most of their value from their potential as rural residential homesites, often with small-scale, lifestyle equestrian or ranching uses. In some cases, a component of value may also be related to agricultural production. As shown in **Table 3**, comparable sales prices ranged widely from \$125,000 to \$625,000 per parcel, with a weighted average land value of about \$11,500 per acre. The further away from the major arterials and other infrastructure, the higher the associated infrastructure costs and hence the lower the land value.



- **Category III** – Small parcels in the 5 -10 acre range that lie close to urbanized areas derive their value from their potential as rural residential homesites. As shown in **Table 4**, Comparable sales tended to be in the \$125,000 to \$275,000 range per parcel, with a weighted average land value of about \$34,000 per acre. The further away from the main roads they lie the higher the associated infrastructure costs and hence the lower the land value.

INSIDE URBAN LIMIT LINE

Land categories IV and V include land inside the Urban Limit Line including land with and without development designations under the relevant jurisdiction's current General Plan. This land derives its value from its speculative, urban development potential. The land valuation methodology applied follows the "income approach". Under this approach, estimates of the value of fully entitled land are discounted based on the expected time before all entitlements will be obtained and development can proceed. Residential development represents the majority of land development and so the analysis focuses on entitled residential land.

More specifically, the potential income from the sale of an entitled acre of raw land is derived from the total development value of this acre (based on the average sales price of a new home and the average number of units constructed per gross acre) and the average ratio of raw, entitled land to total development value. This raw, entitled land value is, in turn, discounted at a discount rate that accounts for the loss in value associated with the time lag before the average parcel of land will be entitled and this level of land sale income obtained. As shown in **Table 5**, the residual land value analysis reveals the following results:

- **Category IV** – Parcels inside the ULL that are not currently designated for development by existing General Plans derive their value from their urban development potential. As shown in **Table 5**, a raw, entitled acre of land has an estimated value of \$160,000. The average parcel of land in this category is assumed to be developed in the next fifteen to thirty years and is an average of 22.5 years away from development. Discounting at 12 percent, the average land value per acre is about \$12,500 per acre.
- **Category V** – Parcels inside the ULL that are designated for development by existing General Plans derive their value from their urban development potential. As shown in **Table 5**, a raw, entitled acre of land has an estimated value of \$160,000. The average parcel of land in this category is assumed to be developed in the next twenty five years and is an average of 12.5 years away from development. Discounting at 12 percent, the average land value per acre is about \$39,000 per acre.

CONSERVATION EASEMENT LAND VALUES

The purchase of conservation easements rather than fee title acquisitions can reduce acquisition costs. Their applicability, however, is limited by a number of factors. For example, in cases where development potential is high, the value differential between fee title and conservation



easement can be too low to justify the administrative effort. Conservation easement efforts also often require an outreach and informational effort, and many landowners seeking to divest all interest in the land are primarily interested in fee title sales.

The purchase of conservation easements, rather than fee title purchase, represents the acquisition of a subset of legal rights associated with the land. Agricultural conservation easements generally represent the acquisition of development rights associated with the land. Conservation easements are similar to agricultural conservation easements, though sometimes also include the acquisition of the rights for certain kinds of management activities, including some agricultural and grazing practices tailored to meet the conservation goals. Parcel ownership and the right to sell remain with the existing landowner, though the easement stays with the land however it is transferred.

The cost of an agricultural conservation easement is the difference between its fee title value and its value as an agricultural or ranching use. The land value associated with agriculture varies significantly between areas and parcel sizes depending on soil type, water availability, and micro-climate. This land value also fluctuates based on agricultural market conditions. The agricultural value of raw land in California varies from \$200 per acre for remote, steep land with grazing potential to over \$75,000 per acre for prime grape-growing areas in Napa County. However, the average agricultural/ ranching land value lies in the \$500 to \$2,500 per acre range. If additional restrictions are placed on agricultural/ ranching uses, the land value will be reduced below this level.

In the East County, the land value of four of the five land categories is primarily driven by development potential, either urban or rural residential. As a result, conservation easements are less likely to be acquired for these categories as the differential between fee title value and conservation easement value may not be sufficient. There may be cases, however, where farmers wish to continue farming in conjunction with local policy goals, and easements may still be acquired². However, the most likely location for conservation easement activity is in Category I lands, where land values are lower and agricultural value makes up a more significant portion of land value. In these cases, conservation easement costs could be around \$1,500, about 50 percent of the average fee title value of \$3,000 per acre, with the remaining \$1,500 value attributed to agricultural use value. In these cases, a \$1,500 saving over fee title costs could potentially be obtained.

LAND VALUE INFLATION

The land values presented above are best-estimates for average land values at the current time based on current and historical data. Over time, land values fluctuate due to economic and demographic growth, business and real estate cycles, urban expansion, housing and land use preferences, and changes in land use regulation. While precise predictions of land value fluctuations over the course of HCP implementation are not possible, the funding mechanisms established must be flexible enough to accommodate the inevitable changes. Gross estimates of potential land value inflation based on historical data can serve to inform the selection of funding sources and to indicate the level of flexibility that may be required in these sources.

² To the extent that some parcels with homesites already developed can help meet conservation goals, conservation easement acquisition may be a possibility and would come at lower cost.



Changes in housing prices can serve as a useful proxy for changes in land values in areas where land value is driven by residential development potential. While the precise relation between home prices and land values vary, they are closely tied. Given the likelihood that the majority of land consumption inside the Urban Limit Lines will be associated with single family home development, historical changes in the average single family home price in the East County provide an estimate of historical changes in land value. This estimate of historical change in land value likely provides the best estimate of future changes in land value. As shown in **Table 6**, the average single family home price in the four East County cities fluctuated with the business and real estate cycles, and increased at an average of 5.2 percent between 1991 and 2002. About 2.8 percent of this increase is equivalent to the general rate of inflation, while the remaining 2.4 percent increase represents a real increase in land values, over-and-above inflation.

Changes in land values outside the Urban Limit Line are even harder to predict. The values of land in categories II and III are primarily driven by the demand for and supply of small and medium-sized rural residential homesites. The demand for these homesites is driven by growth in the regional economy and the number of new, relatively affluent worker-households seeking to live in the East County. Given that the demand for urban homesites is also driven by expansions in the regional economy, the rate of land value inflation for these land categories is more likely to increase in line with areas inside the Urban Limit Line than with the large parcels outside it. As a result, estimates of land inflation follow those outlined above.

Changes in land value for large, remote parcels are the hardest to predict given the highly speculative nature of the rural residential homesite component of their value and the ever-fluctuating nature of the agricultural markets and their associated land value contribution. The East Bay Regional Park District has been acquiring land throughout Alameda and Contra Costa Counties since 1934, and changes in land acquisition costs can, at least, provide some indication of historical changes in land values.³ **Table 7** shows changes in the total number of acres, the total acquisition cost, the average price per acre of purchasing land for the regional preserve parks between 1967 and 2000. Regional preserve land was selected as it represents the land with the highest environmental values, and is thus most in line with the likely HCP acquisitions. As shown in **Table 7**, the average price per acre, in inflation adjusted terms, fluctuated between the three periods, and showed an average annual increase of 2.6 percent. This represents a real increase over-and-above the general rate of inflation over this period. For the purposes of this analysis, this rate of land value increase likely represents the best available planning-level estimate of future land value inflation for this land category.

LAND VALUE MODEL

The land value model or calculator represents the tool used to convert the conservation strategies and the land value estimates into an estimate of land acquisition costs, both for the whole HCP program, and for analytical purposes, for subareas and subgroups of the program. A number of assumptions will be made in finalizing the inputs to the model, including a translation of conservation strategies into approximate acreage requirements by land category as well as the potential for purchasing conservation easements in different areas and on properties with some development already present. At this stage, the model shows a hypothetical case in order to demonstrate the metric of the model where vacant land is purchased through fee title acquisitions.

³ This approach is imperfect given changes in EBRPD acquisition goals and strategies over time and the more limited number of potential acquisitions available over time as more land is developed and/or conserved in the region.



The actual numbers have no significance. The land value model includes the four attached tables, **Tables 8-11**, as described below.

- One of the primary sets of inputs is the per acre land value estimates as shown in **Table 8** (replica of **Table 1**). At this stage, it is assumed that all land acquisitions are fee title. The estimates reflect the research effort described above. Potential land value inflation is not incorporated into the estimates at this time.
- A second key set of inputs is the number of acres in each conservation zone and the land categories they fall within. A preliminary estimate of the overlap between the acquisition zones and the parcel map suggests the breakdown of acreage by zone and land category shown in **Table 9**.
- A subsequent and related assumption is the number of acres in each conservation zone that will have to be required to meet the HCP goals. For the purposes of this hypothetical analysis, it is assumed that 25 percent of the land in each zone is acquired and that this portion of the land follows the same land category distribution as the overall acreage in the acquisition zone. The resulting acquisition acreage assumptions are shown in **Table 10**.
- The application of the per acre values in **Table 8** to the acreage acquisition requirements in **Table 10** provide an hypothetical estimate of the overall HCP land acquisition cost broken down by zone and land category, as shown in **Table 11**. Under this scenario, the greatest financial investment occurs in Zone 5 with the smallest in Zone 3a. At the same time, about 10 percent of the acquired land is inside the ULL, representing about 30 percent of the overall cost.



Table 1
Preliminary Land Values by Land Type
East Contra Costa County Habitat Conservation Plan

Category #	Characteristics	Avg. Per Acre Land Value	Sources
I.	Large parcels, 160 acres+ Often multi-parcel sale Generally remote or steep slopes	\$3,000	Appraisal comparables last ten years
II.	10-80 acres Slopes on part of site	\$11,500	Appraisal comparables last four years County Assessor data last four years Realtors/ Brokers this year
III.	5-10 acres; Close to urbanized areas Largely flat land	\$34,000	County Assessor data last four years Realtors/ Brokers this year
IV.	Large developable areas inside Urban Limit Line Not currently designated for development 15 - 30 years to absorption	\$12,500	EPS real estate analysis based on \$395,000 home, 4.5 units per gross acre, and 12 percent discount rate
V.	Large developable parcels inside Urban Limit Line Designated for Development 0 - 25 years to absorption	\$39,000	EPS real estate analysis based on \$395,000 home, 4.5 units per gross acre, and 12 percent discount rate

Sources: East Bay Regional Park District; Trust for Public Land; Available Appraisal Data; East County Realtors/ Brokers; First Amercian Real Estate Solutions (FARES) - County Assessor Data; Economic & Plannings Systems, Inc.

Table 2
Transaction Data for Sales over 100 Acres (1)
East Contra Costa County Habitat Conservation Plan

Project Name/Grantor	Location (2)	# of Parcels	Zoning	Land Use	Infrastructure	Topography	Sales Date	Acres	Sales Price (2002 Dollars) (3)	Price per Acre	
East County											
1.	Clayton Ranch (2)	Marsh Creek Road (Clayton)	5	A-2	Ag/ranching/ grazing	Road frontage 5mi to Clayton T/E available W/S unavail.	8-50% grades 20% avg slope	Dec-99	1,031	\$2,246,347	\$2,179
2.	Foskell Trust	Marsh Creek Road (Antioch)	3	A-2	--	Indirect access 3mi to Ant/Brent No W/S	20-65% grades 20% avg slope	Dec-99	1,581	\$3,451,879	\$2,183
3.	Garavera Trust	Empire Mine Rd (Antioch)	4	A-2	--	Indirect access 1mi to Antioch ULL No W/S	15-65% grades 25% avg slope	Feb-98	772	\$2,592,117	\$3,358
4.	Murphy Ranch	Marsh Creek Rd (Brentwood)	1	--	Recreation	--	--	Jan-96	836	\$1,769,905	\$2,117
Other											
5.	Weaver Ranch	Laughlin Rd	4	A-100; A-160	Ranchette/Ag (public use: Open Space)	Road frontage No W/S 3.5mi to Livermore	20-45% grades 30% avg slope	Nov-99	1,121	\$3,662,090	\$3,268
6.	--	14777 Mines Rd (Castro Valley)	1	Non-subdividable	--	Raw, remote	Hillside	Nov-99	120	\$392,185	\$3,268
7.	--	La Costa Road (Pleasanton)	1	--	Recreation	Raw	Hillside	Aug-99	640	\$490,231	\$766
8.	Christensen	9530 Morgan Territory Rd. (Livermore)	006-280-007	A-80	--	--	--	Jul-99	127	\$531,083	\$4,189
9.	Sky Ranch	8749 Norris Canyon Rd (Castro Valley)	3	A-100	--	Road frontage No W/S 4mi to Castro Valley	20-50% grades	Nov-98	775	\$2,126,521	\$2,744
10.	Elwerby	Johansen Rd.	7	A-80	--	Road frontage No W/S 2mi to San Ramon	15-70% grades 30% avg slope	Jun-98	1,189	\$5,596,107	\$4,705
11.	--	6923 Johnston Rd (San Ramon)	1	--	Ranch	--	Hillside	Jun-98	1,190	\$5,596,107	\$4,703
12.	Carnegie Rec Are	12300 Tesla Rd. (Livermore)	1	--	Vehicle Rec.	--	--	Apr-98	937	\$1,993,333	\$2,127

Table 2
Transaction Data for Sales over 100 Acres (1)
East Contra Costa County Habitat Conservation Plan

Project Name/Grantor	Location (2)	# of Parcels	Zoning	Land Use	Infrastructure	Topography	Sales Date	Acres	Sales Price (2002 Dollars) (3)	Price per Acre
13. Scott Machado	7898 Hollis Canyon Rd (Dublin)	2	A	--	--	--	Jan-98	159	\$559,611	\$3,520
14. Tesla Ranching Group	12300 Tesla Rd. (Livermore)	3	A	--	--	--	Jan-98	938	\$1,993,333	\$2,126
15. 1934 Trust	Flynn Rd. (Livermore)	8	A,B,E-160	--	Road frontage 1.5mi to Livermore	15-35% grades 25% avg slope	Jun-97	873	\$2,166,047	\$2,481
16. Depaoli	Altamont Pass (Livermore)	3	A	--	--	--	May-97	860	\$2,166,047	\$2,518
17. Williamson Trust	Palomares Rd. (Castro Valley)	1	A	--	--	--	May-96	376	\$1,927,619	\$5,123
18. Dennis Gibbs	Tesha Rd. (Livermore)	1	A	--	--	--	Jan-96	1,963	\$5,666,032	\$2,886
19. Walker Family Trust	Dyer Rd. (Livermore)	1	A	--	--	--	Mar-93	507	\$1,627,276	\$3,210
Weighted Average										\$2,911

(1) Transaction data from sales comparables used for appraisals of land in the East County. Comparables includes sales of over 100 acres in the East County as well as sales of over 100 acres in Central County and eastern Alameda County considered comparable to land in the East County.

(2) Closest city stated in parentheses.

(3) Inflated based on CPI for western region.

Sources: Variety of Appraisals; East Bay Regional Park District; Economic & Planning Systems, Inc.

Table 3
Transaction Data for Sales between 10 and 80 Acres (1)
East Contra Costa County Habitat Conservation Plan

#	Closest City	Zoning	Land Use	Sales Date	Acres	Sales Price (2002 Dollars)	Price per Acre	Source
1	Clayton	A-4	Agricultural	November-00	80	\$421,053	\$5,263	Appraisals
2	Clayton	A-2	Pasture	November-01	66	\$172,627	\$2,618	County Assessor Data
3	Pittsburg		Agricultural (nec)	November-01	61	\$291,435	\$4,749	County Assessor Data
2	Clayton	A-2	Unknown	December-98	39	\$290,998	\$7,479	Appraisals
3	Clayton	A-2	Unknown	September-98	38	\$251,825	\$6,629	Appraisals
4	Danville	A-2	Pasture	February-99	33	\$130,728	\$3,929	County Assessor Data
5	Byron	A-3	Agricultural (nec)	June-02	26	\$540,000	\$21,102	County Assessor Data
6	Byron	A-2	Agricultural (nec)	December-99	25	\$623,138	\$24,611	County Assessor Data
7	Clayton	A-2	Pasture	February-02	23	\$350,000	\$15,237	County Assessor Data
8	Antioch		Agricultural (nec)	September-02	23	\$363,500	\$16,020	County Assessor Data
9	Brentwood	A-2	Pasture	May-02	21	\$325,000	\$15,476	County Assessor Data
10	Bay Point		Agricultural (nec)	August-02	20	\$395,000	\$19,750	County Assessor Data
11	Clayton	A-2	Agricultural (nec)	August-99	20	\$163,410	\$8,320	County Assessor Data
12	Clayton	A-2	Vacant Land (nec)	November-01	17	\$177,704	\$10,453	County Assessor Data
13	Antioch		Agricultural (nec)	September-02	13	\$363,500	\$28,510	County Assessor Data
14	Byron	A-3	Agricultural (nec)	October-02	12	\$329,000	\$26,362	County Assessor Data
15	Brentwood	A-3	Pasture	July-01	12	\$195,475	\$16,036	County Assessor Data
16	Brentwood	A-2	Agricultural (nec)	June-01	11	\$377,748	\$32,962	County Assessor Data
17	Brentwood	A-2	Agricultural (nec)	June-01	11	\$377,748	\$32,962	County Assessor Data
18	Byron	A-2	Pasture	October-99	11	\$261,456	\$23,943	County Assessor Data
Weighted Average							\$11,371	

(1) Transaction data from County Assessor land transaction database and appraisals over last four years.

Source: First American Real Estate Solutions (FARES) - County Assessor Data; Economic & Planning Systems.

Table 4
Transaction Data for Sales between 5 and 10 Acres (1)
East Contra Costa County Habitat Conservation Plan

#	Closest City	Zoning	Land Use	Sales Date	Acres	Sales Price (2002 Dollars)	Price per Acre
1	Byron	A-3	Agricultural Land	April-02	10	\$267,000	\$26,673
2	Brentwood	--	Agricultural (nec)	June-02	10	\$210,000	\$20,979
3	Brentwood	A-3	Agricultural (nec)	May-02	10	\$275,000	\$27,500
4	Clayton	A-2	Pasture	April-00	10	\$218,947	\$21,895
5	Byron	A-3	Agricultural Land	October-99	10	\$217,880	\$21,788
6	Brentwood	A-2	Agricultural Land	November-99	8	\$147,069	\$17,913
7	Clayton	A-2	Agricultural Land	February-02	8	\$370,000	\$46,020
8	Pittsburg	--	Vacant Land (nec)	August-02	7	\$407,000	\$58,646
9	Antioch	--	Agricultural (nec)	October-02	6	\$313,500	\$48,984
10	Brentwood	--	Agricultural Land	April-02	6	\$240,000	\$42,105
11	Byron	--	Agricultural Land	July-01	5	\$241,678	\$44,508
12	Clayton	A-2	Agricultural Land	July-01	5	\$167,550	\$31,494
13	Byron	--	Agricultural Land	April-02	5	\$250,000	\$47,801
14	Byron	A-3	Agricultural Land	October-99	5	\$185,198	\$35,547
15	Byron	A-3	Agricultural Land	July-00	5	\$173,684	\$33,401
16	Clayton	A-2	Agricultural Land	July-02	5	\$150,000	\$29,586
17	Brentwood	--	Agricultural (nec)	August-02	5	\$200,000	\$39,761
18	Brentwood	A-2	Agricultural Land	January-99	5	\$136,175	\$27,073
19	Byron	--	Agricultural Land	June-01	5	\$233,554	\$46,618
20	Byron	A-3	Agricultural Land	August-02	5	\$210,000	\$42,000
21	Clayton	A-2	Agricultural Land	November-98	5	\$167,883	\$33,577
22	Clayton	--	Agricultural Land	February-00	5	\$132,105	\$26,421
23	Brentwood	A-2	Agricultural Land	July-01	5	\$152,318	\$31,406
24	Brentwood	--	Agricultural (nec)	October-02	5	\$272,500	\$57,008
25	Brentwood	A-2	Agricultural Land	October-99	5	\$179,751	\$37,922
Weighted Average							\$34,234

(1) Transaction data from County Assessor land transaction database over last four years.

Source: First American Real Estate Solutions (FARES) - County Assessor Data; Economic & Planning Systems.

Table 5
Inside the ULL Per Acre Land Value Calculation (Category IV and V)
East Contra Costa County Habitat Conservation Plan

Item	Value		Source
Average Sales Price Per Single Family Unit	\$395,000	a	New Residential Project Sales Prices, including Shea, Seeno, and KB Homes
Units per Gross Acre	4.5	b	Average Lot Size of 7,000 sqft and net to gross ratio of 75 percent
Total Development Value	\$1,777,500	c=a*b	Calculated
Raw Entitled Land Value as % of Development Value	9.0%	d	Based on standard 10 percent ratio, adjusted down slightly based on real estate broker conversations
Raw Entitled Land Value	\$160,000	e=c*d	Calculated
Discount Rate	12%	f	Average land speculator discount rate
Category IV - 12.5 years to entitlement/ development	\$38,800	g=e/(1+f)^12.5	Calculated
Category IV - 22.5 years to entitlement/ development	\$12,500	h=e/(1+f)^22.5	Calculated

Sources: Selected Residential Developers with projects active in the East County; Selected East County Real Estate Brokers; Economic & Planning Systems, Inc.

Table 6
Average Home Prices, Single Family Homes, Contra Costa County (1991-2002)
East Contra Costa County Habitat Conservation Plan

Jurisdiction	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Avg. Ann. Increase (Nominal \$\$)	Avg. Ann. Increase (1) (2002 \$\$)
Antioch	\$171,897	\$179,787	\$168,391	\$165,073	\$155,613	\$154,710	\$147,482	\$159,628	\$179,906	\$213,359	\$263,214	\$286,596	4.76%	1.95%
Brentwood	\$190,113	\$207,342	\$198,886	\$179,853	\$179,927	\$193,355	\$199,391	\$206,595	\$225,378	\$267,364	\$322,091	\$333,808	5.25%	2.45%
Oakley	\$161,162	\$161,429	\$159,884	\$157,452	\$146,658	\$144,961	\$143,808	\$150,855	\$176,437	\$205,434	\$245,650	\$273,152	4.91%	2.11%
Pittsburg	\$135,878	\$144,800	\$134,318	\$132,779	\$129,813	\$138,140	\$125,689	\$136,340	\$150,459	\$186,269	\$223,418	\$258,182	6.01%	3.20%
ECCC (2)	\$164,763	\$173,340	\$165,370	\$158,789	\$153,003	\$157,792	\$154,093	\$163,355	\$183,045	\$218,107	\$263,593	\$287,935	5.21%	2.40%

(1) Average rate of inflation over the period was 2.8 percent. Constant dollar increase equals nominal increase minus inflation.

(2) East Contra Costa County numbers are the average of Antioch, Brentwood, Oakley, and Pittsburg numbers.

Sources: RAND; U.S. Department of Labor - Bureau of Labor Statistics; Economic & Planning Systems, Inc.

Table 7
Changes in EBRPD Land Acquisition Costs for Regional Preserve Areas
East Contra Costa Habitat Conservation Plan

Item	1967-77	1978-88	1989-2000	Avg. Ann. Increase
Acres Acquired	13,729	12,259	9,483	--
Total Price Paid	\$21,987,992	\$13,134,556	\$26,961,688	--
Average Price per Acre	\$1,602	\$1,071	\$2,843	2.6%

Sources: East Bay Regional Park District; Economic & Planning Systems, Inc.

Table 8
Preliminary Land Values by Land Type
East Contra Costa County Habitat Conservation Plan

Category #	Characteristics	Avg. Per Acre Land Value	Sources
I.	Large parcels, 160 acres+ Often multi-parcel sale Generally remote or steep slopes	\$3,000	Appraisal comparables last ten years
II.	10-80 acres Slopes on part of site	\$11,500	Appraisal comparables last four years County Assessor data last four years Realtors/ Brokers this year
III.	5-10 acres; Close to urbanized areas Largely flat land	\$34,000	County Assessor data last four years Realtors/ Brokers this year
IV.	Large developable areas inside Urban Limit Line Not currently designated for development 15 - 30 years to absorption	\$12,500	EPS real estate analysis based on \$395,000 home, 4.5 units per gross acre, and 12 percent discount rate
V.	Large developable parcels inside Urban Limit Line Designated for Development 0 - 25 years to absorption	\$39,000	EPS real estate analysis based on \$395,000 home, 4.5 units per gross acre, and 12 percent discount rate

Sources: East Bay Regional Park District; Trust for Public Land; Available Appraisal Data; East County Realtors/ Brokers; First Amercian Real Estate Solutions (FARES) - County Assessor Data; Economic & Plannings Systems, Inc.

PRELIMINARY

Table 9
Preliminary Estimate of Zone Acres by Location, Designation, and Size
East Contra Costa County Habitat Conservation Plan

Zone	Inside ULL: Designation			Outside ULL: Parcel Size			Total	Grand Total
	Development	Other	Total	5-10 ac.	10-100 ac.	100+ ac.		
Zone 1	431	1,204	1,635	14	1,314	4,448	5,776	7,411
Zone 2	1,664	1,507	3,171	29	892	10,593	11,514	14,685
Zone 3a	168	0	168	39	637	896	1,572	1,740
Zone 3b	0	0	0	115	1,412	13,741	15,268	15,268
Zone 4	0	728	728	32	1,638	11,178	12,849	13,577
Zone 5 *	<u>289</u>	<u>1,391</u>	<u>1,679</u>	<u>1,777</u>	<u>8,884</u>	<u>16,675</u>	<u>27,335</u>	<u>29,015</u>
Total	2,552	4,829	7,381	2,006	14,778	57,531	74,315	81,696

* 40 percent of acreage outside the ULL in Zone 5 is in the agricultural core.

Sources: Contra Costa County; Jones & Stokes; Economic & Planning Systems, Inc.

HYPOTHETICAL

Table 10

Hypothetical HCP Preserve Acreage Total - Assumes Preserve One Quarter of Acquisition Zone Areas
East Contra Costa County Habitat Conservation Plan

Zone	Inside ULL: Designation			Outside ULL: Parcel Size			Total	Grand Total	
	Development (Cat. I)	Other (Cat. II)	Total	5-10 ac. (Cat. III)	10-100 ac. (Cat. IV)	100+ ac. (Cat. V)			
Zone 1	108	301	409	4	329	1,112	1,444	1,853	9%
Zone 2	416	377	793	7	223	2,648	2,879	3,671	18%
Zone 3a	42	0	42	10	159	224	393	435	2%
Zone 3b	0	0	0	29	353	3,435	3,817	3,817	19%
Zone 4	0	182	182	8	410	2,795	3,212	3,394	17%
Zone 5 *	72	348	420	444	2,221	4,169	6,834	7,254	36%
Total	638 3%	1,207 6%	1,845 9%	501 2%	3,694 18%	14,383 70%	18,579 91%	20,424 100%	100%

* 40 percent of acreage outside the ULL in Zone 5 is in the agricultural core.

Sources: Contra Costa County; Jones & Stokes; Economic & Planning Systems, Inc.

HYPOTHETICAL

Table 11
Hypothetical HCP Land Acquisition Cost *
East Contra Costa County Habitat Conservation Plan

Zone	Inside ULL: Designation			Outside ULL: Parcel Size			Total	Grand Total	
	Development (Cat. V)	Other (Cat. IV)	Total	5-10 ac. (Cat. III)	10-100 ac. (Cat. II)	100+ ac. (Cat. I)			
Zone 1	\$4,202,890	\$3,760,983	\$7,963,873	\$122,746	\$3,778,064	\$3,335,815	\$7,236,625	\$15,200,498	11%
Zone 2	\$16,226,083	\$4,708,080	\$20,934,162	\$244,679	\$2,565,533	\$7,944,877	\$10,755,090	\$31,689,252	22%
Zone 3a	\$1,640,727	\$0	\$1,640,727	\$334,017	\$1,830,216	\$671,963	\$2,836,196	\$4,476,923	3%
Zone 3b	\$0	\$0	\$0	\$973,346	\$4,060,381	\$10,306,021	\$15,339,748	\$15,339,748	11%
Zone 4	\$0	\$2,275,507	\$2,275,507	\$273,037	\$4,709,891	\$8,383,847	\$13,366,776	\$15,642,283	11%
Zone 5 *	\$2,814,618	\$4,345,531	\$7,160,150	\$15,102,834	\$25,541,558	\$12,505,967	\$53,150,359	\$60,310,508	42%
Total	\$24,884,318 17%	\$15,090,101 11%	\$39,974,419 28%	\$17,050,660 12%	\$42,485,643 30%	\$43,148,491 30%	\$102,684,794 72%	\$142,659,213 100%	100%

* Based on acreage in Table 3 and land values per acre in Table 1. Acreage in agricultural core (40 percent on outside ULL Zone 5 acreage) is presumed to have a 25 percent lower market value.

Sources: Contra Costa County; Jones & Stokes; Economic & Planning Systems, Inc.