



**Economic &
Planning Systems**

*Real Estate Economics
Regional Economics
Public Finance
Land Use Policy*

MEMORANDUM

To: John Roberts, *Natomas Basin Conservancy*

From: Tim Youmans, Georgette Lorenzen, and Allison Shaffer

Subject: Natomas Basin Habitat Conservation Plan; EPS #10175

Date: May 29, 2001

At the request of the Natomas Basin Conservancy (NBC) and the City of Sacramento, EPS has revised the Natomas Basin Habitat Conservation Plan (NBHCP) fee based on a number of factors that are detailed below. The proposed fee also takes into consideration the Agreement to Settle Litigation (or the "Settlement Agreement") adopted by the Sacramento City Council in May 2001 that allows for development of 1,668 acres.

As a result there are essentially two fee levels proposed: the Base fee, which is similar to the current NBHCP fee with noted changes as described below, and a second fee that is the Base fee plus a land acquisition premium that is intended to reflect the projected increase in land prices in zones where habitat acres are directed to be purchased as indicated in the Settlement Agreement.

Figure 1 below presents the proposed NBHCP fee including both the Base fee amount and the Base fee amount plus Settlement Land Acquisition (LA) Premium fee amount. The proposed fee level continues to assume the current HCP mitigation requirement of one half acre of mitigation land for each gross acre of developed land. Therefore the fee as shown reflects 50 percent of the cost per acre of habitat mitigation as shown in **Figure 1**. The Base Fee component and the Settlement LA Premium component are discussed in more detail below.

The Base fee is comprised of fee components for five funds: Land Acquisition (LA), Restoration and Enhancement (RE), Administration/O&M, O&M Endowment, and a Supplemental Endowment fund for land acquisition. The first four funds have historically been included in the NBHCP fee program. The fifth fund, Supplemental Endowment fund for land acquisition, is a newly recommended fund that will address judicial concerns regarding the ability of the NBC to purchase the last mitigation acres once all fees are paid. In other words, it will provide a contingency that will either allow the NBC to purchase mitigation acres in advance of requirements or provide a cushion in the case that land prices are higher than what the NBHCP fee allows for in acquisition costs.

Figure 1
Proposed NBHCP Fee
Including the Settlement Land Acquisition Premium

Item	Cost per Acre of Habitat (a)	Mitigation Fee per Acre of Development (b)= (a) x 0.5
<u>Base Cost/Fee</u>		
Land Acquisition Cost (LA)		
Land Cost	\$4,750	\$2,375
Transaction Costs & Contingency	\$1,250	\$625
Total Land Acquisition Cost	\$6,000	\$3,000
Restoration/Enhancement (RE)	\$736	\$368
Administration/O&M	\$3,110	\$1,555
O&M Endowment Fund	\$1,600	\$800
Supplemental Endowment Fund	\$300	\$150
Fee Collection Administration (2%)		\$120
Subtotal	\$11,746	\$5,993
<u>Land Acquisition (LA) Premium</u>		
Land Acquisition Cost Premium		
Land Cost	\$6,250	\$3,125
Transaction Costs & Contingency	\$1,645	\$822
Fee Collection Administration (2%)		\$81
Subtotal LA Premium	\$7,895	\$4,028
Total		\$10,021

The following briefly describes the major revisions to the NBHCP Base fee.

NBHCP BASE FEE

The proposed Base fee is estimated based on an updated cash flow analysis prepared by EPS in connection with the revised HCP and preparation of the Environmental Impact Study (EIS). The cash flow analysis was last updated in July 2000. The Base fee cash flow analysis incorporates updates based on the revised HCP and other revisions such that the cash flow modeling more accurately reflects the experience and projected operations of the NBC. These updates include:

- **Rice Revenue Projections:** Rice revenues were modeled to more precisely match current estimates of projected revenue over the next two years.

- **Revised Administrative Cost Estimates:** Administrative costs were revised based on the current budget estimates of the NBHCP.
- **Fund Balance Adjustments:** The cash flow analysis was adjusted such that beginning balances in 2001 match actual fund balances of the NBHCP as of December 31, 2000.
- **Transfer from O&M/Admin to Restoration & Enhancement:** The HCP fee program, since conception, was structured to allow transfers of funds between the Land Acquisition, Restoration & Enhancement, and Administration/O&M funds based on any surpluses or deficits that might exist in those funds. Currently, the O&M/Administration fund has operating surpluses due to operating and administrative efficiencies of the NBC while the revenues for Restoration & Enhancement need to be supplemented over the next few years due to higher than anticipated restoration and enhancement costs for marsh lands. Not only is the cost to restore and enhance managed marsh significantly higher than the original plan estimated, it is also anticipated that managed marsh restoration and enhancement obligations will be far more intense and concentrated than provided in the original plan due to a more condensed period of development activity. Therefore, a transfer from the O&M/ Administration fund to the Restoration & Enhancement fund was assumed in 2003 and 2004 in the cash flow model.
- **Hunting Revenues:** The NBC has recently entered into a contract for the management of hunting operations on NBC lands. Based on projected revenues to the NBC from the providers of these services, projected hunting revenues were revised to reflect a more realistic projection of the likely net operating income. The current cash flow analysis assumes \$12 per hunting acre whereas the July 2000 update assumed hunting revenues of approximately \$37 per hunting acre.
- **Administrative Costs Post-Land Acquisition:** Previous versions of the financial analysis have assumed that administration costs would be reduced by 67 percent after all mitigation lands have been acquired. Based on discussions with the NBC and information provided by John Roberts, we have come to the conclusion that it is unrealistic to assume a significant decrease in administrative costs once all land acquisition has been completed. Therefore we have assumed a 15 percent reduction in administration costs. The reduction allows for a decrease in legal expenses, but leaves intact funding for most other administrative expenses. This revision to administration costs over the long term represents approximately a 20 percent increase in the Admin./O&M expenditures on an annual basis. However, the Admin./O&M fee is a relatively small component, approximately 16 percent, of the overall fee program including the Settlement Agreement Premium for land acquisition.
- **Acceleration of Fees Paid (Grading Permits Pulled):** Past cash flow model analyses have assumed a 50- year development absorption schedule for the 17,500 acres of planned development in the Natomas Basin. Historical development over the last three years has been substantially greater than anticipated by the original cash flow analysis. Given recent market trends, it is likely that development activity will continue to be at higher levels than originally projected. Even if the market slows, and as a result development activity also slows, there is a very high probability that developers will pull grading permits even if they do not plan to develop the property in the immediate future in order to avoid future delays in the permitting process due to the legal

challenges to the NBHCP fee. Therefore, the current cash flow analysis assumes a 15-year development period, during which grading permits are projected to be pulled and the NBHCP fees paid. Actual development may substantially lag the grading permit stage.

CASH FLOW ANALYSIS

The assumption tables for the cash flow analysis are presented in **Figure 2** through **Figure 4**. A summary of the cash flow analysis is shown in **Figure 5** and **Figure 6**. The detailed cash flow analysis is presented in **Appendix A**.

SETTLEMENT LAND ACQUISITION PREMIUM

The City of Sacramento and Sutter County are currently revising the Habitat Conservation Plan to address judicial findings made by United States District Court for the Eastern District of California. In order to allow some increment of development to occur prior to the ultimate resolution of the litigation, specified parties including the City of Sacramento, environmental interest groups, and certain developer groups have entered into the "Agreement to Settle Litigation" (the Settlement Agreement) as of May 15, 2001.

The Settlement Agreement allows for the City of Sacramento to issue "Urban Development Permits" that will allow grading on 1,668 acres within the Natomas Basin. Mitigation land acquisition can only be accomplished in restricted areas within the Natomas Basin. This will likely result in increased land cost, therefore necessitating higher fees. Based on recent comparable transactions in the areas or zones specified in the Settlement Agreement, it is estimated that the per acre cost for habitat land is approximately \$11,000 per acre. The Base Fee assumes \$4,750 per acre cost for habitat land. Therefore, the fee schedule proposed herein includes a premium of \$6,250 per acre for the cost of habitat land bringing the total land cost per habitat acre to \$11,000. Transaction costs and contingencies are then added to the estimated acquisition cost for a total cost per acre of habitat land of \$13,895. The Land Acquisition fee component is 50 percent of the cost per acre of habitat land based on the mitigation ratio of 0.5 acre of habitat to 1.0 acre of development.

The NBC currently has acquired 258 acres of mitigation lands in excess of the number of mitigation acres required to mitigate the impacts of development within the Natomas basin under grading permits issued by the City to date. Therefore, an additional 576 acres in particular zones as specified in the Settlement Agreement will need to be acquired.

Figure 2
Natomas Basin HCP
Land Acquisition and Restoration/Enhancements Cost
and Acquired Habitat Land Utilization Assumptions

<p>Base Case 17,500 acres of development 1/2 acre of mitigation land per gross acre of developed land 25% marsh</p>

<i>Part A - Assumptions</i>				Notes:
Inflation	0.0%			
Interest Rate	3.0%			
Land Acquisition Values per Acre	<u>Land Value</u>	<u>Permitted by Plan</u>	<u>Assumed in Financial Analysis</u>	
In-Basin Lands	\$4,750	80%	100%	Estimated \$4,500-\$5,500 per acre range Estimated \$2,500-\$3,500 per acre range per Recent Experience of NBHCP
Out-of-Basin Lands	\$3,000	20%	0%	
Average Land Value (1)	\$4,750	Use In-Basin Land Value		
Plus Transaction Costs & Contingency	\$1,250	per Acre		
Average Land Acquisition Cost	\$6,000 per acquired acre			Beginning 1/1/01
Estimated Use of In-Basin Lands				
Marsh	25%			
Existing Rice	50%			
Other/Upland	25%			
Total Initial Use	100%			
Rice Converted to Marsh	After year 5, 324 acres in marsh 25% thereafter			
Rice Lands				
Uplands/Fallow	10%			
Leased for Other Crops	0%			
Leased Rice Base Land	90%			
Total Rice Lands	100%			
Initial Restoration/Enhancement	<u>Use of Land</u>	<u>Initial Costs</u>	<u>Weighted Cost (5)</u>	
Expended At Time Land Is Acquired				
Marsh (2)	0%	\$0	\$0	Note (3)
Existing Rice	75%	\$0	\$0	Note (3)
Dry Converted to Rice	0%	\$0	\$0	Note (3)
Other Upland	25%	\$0	\$0	Note (3)
Subtotal	100%	\$0		
Expended At Time Land Is Converted				
Rice/Other Converted to Marsh	25%	\$2,482	\$621	Note (4)
Site Specific Plan Costs			\$116 per acre	Based on initial Site Specific Plan for 1,297 acres
Average Cost per Habitat Acre			\$736	Weighted average cost per acre

assumptions

Source: Natomas Basin Conservancy

- (1) Assumes all acquisition occurs at the average in-basin land value.
- (2) Initial use of marsh land estimated at 0% because NBHCP estimates that little to no marshland is available for acquisition. However, rice land will be converted to marsh land.
- (3) The initial costs of marsh, existing rice, dry land converted to rice and other upland have been set to zero as no initial restoration or enhancement costs are anticipated.
- (4) The current estimate of \$2,482 per acre is calculated from the May 2001 cost estimate of \$2.13 million for 858 acres and is based on creation/maintenance of habitat for the giant garter snake and the Swainson's hawk.
- (5) The cost of restoration and enhancement is weighted by the percent of acres assumed to be converted or used for that particular land use.

Figure 3
Natomas Basin HCP
Operations & Maintenance Assumptions

Base Case
 17,500 acres of development
 1/2 acre of mitigation land per gross acre of developed land
 25% marsh

Part A - Assumptions Con't		Notes:	
Operations & Maintenance Costs			
Marsh	\$281 per acre	Updated Cost -- May 2001 Based on Wildlands, Inc. Estimates Based on Wildlands, Inc. Estimates alfalfa, safflower, etc. Updated Cost -- May 2001 Based on Wildlands, Inc. Estimates	
Upland/Fallow	\$18 per acre		
Land Leased for Planted Rice Base	\$3 per acre		
Land Leased for Other Crops	\$3 per acre		
Other	\$0 per acre		
Hunting	\$0 per acre		
Misc./Monit./Adapt. Management	\$27 per acre		
Special Assessment & Property Tax Costs			
<u>Sacramento County</u>			
Reclamation District #1000	\$13.1 per acre	Based on Existing Sacramento County Lands Based on Existing Sacramento County Lands Based on Existing Sacramento County Lands Based on Existing Sacramento County Lands Assumes average assessed value of land at \$2,400 per acre	
NCMWA	\$0.4 per acre		
SAFCA O&M Assessment #1	\$5.7 per acre		
CSAI Safety Lights	\$0.1 per acre		
Property Tax [1]	\$25.6 per acre		
Subtotal Sacramento County	\$45 per acre		
<u>Sutter County</u>			
Reclamation District #1000	\$13.1 per acre		
NCMWC	\$0.4 per acre		
Property Tax	\$24.0 per acre		
Subtotal Sutter County	\$37 per acre		
Administrative Costs			
During Development	\$447,695 per year	Figure 5 for detail phased in over 3- 5 years	
After All Land Acquired	\$380,541 per year		
Operations & Maintenance Revenues			
Crop Land Leases			
<u>Through 2002</u>			
Planted Rice Base Acreage	\$160 per acre/year	normal ag. practices	\$135 - \$210 range
Other Crops (Flex. acreage)	\$80 per acre/year	normal ag. practices	\$75 - \$100 range
<u>2003 +</u>			
Planted Rice Base Acreage	\$160 per acre/year	normal ag. practices	\$135 - \$210 range
Other Crops (Flex. acreage)	\$80 per acre/year	normal ag. practices	\$75 - \$100 range
Hunting			
Hunting Revenue per Acre	\$12 per acre		Based on Wildlands Estimate for initial Site Plan

"assumptions2"

Source: Natomas Basin Conservancy

[1] Includes G.O. bond assessment.

Figure 4
Natomas Basin HCP
Estimated Annual Natomas Basin Conservancy (NBC) Administrative Costs

	Annual Cost	Notes
<u>Administrative Expenses</u>		
Staff	\$150,000	
Benefits	\$49,500	
Board Expense	\$6,000	
Subtotal	\$205,500	
<u>Office Expense</u>		
Rent	\$15,000	
Telephone	\$1,700	
Copying & Printing	\$16,000	
Office Supplies	\$5,000	
Postage	\$600	
Equipment	\$2,500	
Auto Expense	\$6,500	
Subtotal	\$47,300	
<u>Miscellaneous Expense</u>		
Insurance	\$23,000	Liability and E&O
Accounting	\$16,500	
Legal	\$60,000	
Corporate Taxes	\$1,000	
Subtotal	\$100,500	
Contract Work/ Public Education/ Publications/Monitoring/Reports, etc.	\$36,000	
Subtotal Costs	\$389,300	
Contingency	\$58,395	15% Contingency
Total Administration During Habitat Acquisition Phase	\$447,695	
Total Administration After Habitat Acquisition	\$380,541	[1]

"admin"

Source: NBC FY 2001 budget estimate

[1] Administrative costs are reduced by 15% after all habitat lands have been acquired.

Figure 5

**Natomas Basin HCP
Cash Flow Summary**

*Land Acquisition, Supplemental Endowment, and
Restoration and Enhancement Funds*

Base Case

*17,500 acres of development
1/2 acre of mitigation land per gross acre of developed land
25% marsh*

Assumes:	0.0%	Inflation
	3.0%	Interest Rate

	Total 1995-2045	0 1995	1 1996	5 2000	10 2005	20 2015	30 2025	40 2035	50 2045
LAND ACQUISITION									
Beginning Balance		\$0	\$0	\$587,176	\$1,902,545	\$6,382,454	\$7,009,270	\$7,009,270	\$7,009,270
Less Land Costs	(\$43,320,901)	\$0	\$0	(\$1,614,279)	(\$2,182,526)	(\$2,182,526)	\$0	\$0	\$0
Plus LA Fee Revenue	\$48,453,077	\$0	\$55,641	\$1,220,119	\$2,534,546	\$2,534,546	\$0	\$0	\$0
Plus Interest Earnings	\$1,574,349	\$0	\$0	\$67,352	\$66,556	\$133,755	\$0	\$0	\$0
Plus Transfer from O&M	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plus Drawdown on Supp. Endowment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plus Adjustment (to balance to 2000 end bal)	\$302,745								
Ending Balance	\$7,009,270	\$0	\$55,641	\$260,368	\$2,321,121	\$6,868,229	\$7,009,270	\$7,009,270	\$7,009,270
SUPPLEMENTAL ENDOWMENT									
Beginning Balance	\$0	\$0	\$0	\$0	\$722,767	\$2,424,124	\$3,423,171	\$4,600,455	\$6,182,627
Less Drawdown on Supp. Endowment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plus Supplemental Endowment Fee Revenue	\$2,088,119	\$0	\$0	\$0	\$126,727	\$126,727	\$0	\$0	\$0
Plus Interest Earnings	\$4,279,986	\$0	\$0	\$0	\$21,683	\$72,724	\$102,695	\$138,014	\$185,479
Ending Balance	\$6,368,106	\$0	\$0	\$0	\$871,177	\$2,623,575	\$3,525,866	\$4,738,469	\$6,368,106
RESTORATION & ENHANCEMENTS									
Beginning Balance		\$0	\$0	\$589,200	\$1,100,820	\$766,024	\$127,745	\$127,745	\$127,745
Less Restoration/Enh. Costs	(\$6,441,343)	\$0	\$0	\$0	(\$751,710)	(\$310,968)	\$0	\$0	\$0
Plus R&E Fee Revenue	\$5,839,422	\$0	\$0	\$132,951	\$310,968	\$310,968	\$0	\$0	\$0
Plus Transfer from O&M/Admin. Fund	\$600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plus Interest Earnings	\$282,132	\$0	\$0	\$12,373	\$23,117	\$16,087	\$0	\$0	\$0
Plus adjustment (to balance to 2000 end bal)	(\$152,466)	\$0	\$0	(\$152,466)	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$127,745	\$0	\$0	\$582,058	\$683,196	\$782,111	\$127,745	\$127,745	\$127,745

"cash_flow_sum1"

Figure 6
Natomas Basin HCP
Cash Flow Summary

Base Case
17,500 acres of development
1/2 acre of mitigation land per gross acre of developed land
25% marsh

Assumes:	0.0%	Inflation
	3.0%	Interest Rate

Administration/Operations & Maintenance Fund,
Endowment Fund, and Ending Balances Summary for All Funds

	Total 1995-2045	0 1995	1 1996	5 2000	10 2005	20 2015	30 2025	40 2035	50 2045
ADMINISTRATION / OPERATIONS & MAINTENANCE									
Beginning Balance		\$0	\$0	\$1,203,378	\$5,823,281	\$13,734,117	\$10,632,160	\$4,836,878	\$0
Less O & M Costs	(\$64,768,078)	\$0	\$0	(\$502,829)	(\$1,084,975)	(\$1,584,646)	(\$1,517,492)	(\$1,517,492)	(\$1,517,492)
Plus Admin/O&M Fee Revenue	\$23,568,011	\$0	\$4,561	\$475,466	\$1,313,740	\$1,313,740	\$0	\$0	\$0
Plus Rice Revenues	\$25,436,070	\$0	\$0	\$176,148	\$325,856	\$630,002	\$630,002	\$630,002	\$630,002
Plus Hunting Revenues	\$2,410,524	\$0	\$0	\$0	\$20,366	\$63,000	\$63,000	\$63,000	\$63,000
Plus Other Revenues (1)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plus Interest Earnings	\$10,125,364	\$0	\$0	\$36,101	\$174,698	\$412,024	\$318,965	\$145,106	\$0
Subtotal Revenues	\$61,539,968	\$0	\$4,561	\$687,715	\$1,834,660	\$2,418,765	\$1,011,967	\$838,108	\$693,002
Less Transfer to RE Fund	(\$600,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Less Transfer to Land Acquisition Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Plus Adjustment (to balance to 2000 end bal)	\$161,275	\$0	\$0	\$161,275	\$0	\$0	\$0	\$0	\$0
Drawdown on Endowment Fund	\$3,666,835	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$824,490
Subtotal of Fund Transfers & Adjustment	\$3,228,110	\$0	\$0	\$161,275	\$0	\$0	\$0	\$0	\$824,490
Ending Balance	\$0	\$0	\$4,561	\$1,549,539	\$6,572,966	\$14,568,236	\$10,126,635	\$4,157,495	\$0
ENDOWMENT									
Beginning Balance	\$0	\$0	\$0	\$323,846	\$4,393,039	\$13,728,746	\$19,445,653	\$26,301,336	\$32,643,989
Less Drawdown on Endowment Fund	(\$3,666,835)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$824,490)
Plus Endowment Fee Revenue	\$11,554,990	\$0	\$3,041	\$113,645	\$675,879	\$675,879	\$0	\$0	\$0
Plus Interest Earnings	\$24,923,590	\$0	\$0	\$26,490	\$137,415	\$420,188	\$595,693	\$807,282	\$1,006,322
Plus Adjustment (to balance to 1999 end bal)	\$14,076	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$32,825,821	\$0	\$3,041	\$463,981	\$5,206,333	\$14,824,812	\$20,041,346	\$27,108,618	\$32,825,821
SUMMARY OF FUND ENDING BALANCES									
Land Acquisition	\$7,009,270	\$0	\$55,641	\$260,368	\$2,321,121	\$6,868,229	\$7,009,270	\$7,009,270	\$7,009,270
Supplemental Endowment	\$6,368,106	\$0	\$0	\$0	\$871,177	\$2,623,575	\$3,525,866	\$4,738,469	\$6,368,106
Restoration and Enhancements	\$127,745	\$0	\$0	\$582,058	\$683,196	\$782,111	\$127,745	\$127,745	\$127,745
Operations and Maintenance	\$0	\$0	\$4,561	\$1,549,539	\$6,572,966	\$14,568,236	\$10,126,635	\$4,157,495	\$0
Endowment	\$32,825,821	\$0	\$3,041	\$463,981	\$5,206,333	\$14,824,812	\$20,041,346	\$27,108,618	\$32,825,821
COMBINED FUNDS ENDING BALANCE	\$46,330,942	\$0	\$63,242	\$2,855,946	\$15,654,793	\$39,666,963	\$40,830,862	\$43,141,597	\$46,330,942

(1) "Other" revenues represents upfront funding from Federal, State or development fees to fund the initial acquisition and restoration/enhancement costs.

"cash_flow_sum2"