

MEMORANDUM

To: John Roberts, *The Natomas Basin Conservancy*

From: Allison Shaffer and Tim Youmans

Subject: NBHCP Fee Update—2004 (Final); EPS #13677

Date: March 5, 2004

Economic & Planning Systems, Inc., (EPS) has updated the cash flow model used to estimate the Natomas Basin Habitat Conservation Plan (NBHCP) mitigation fee (fee) based on a number of factors that are detailed in this correspondence. This memorandum details the updated assumptions used to derive the 2004 fee amount.

The fee contains components for these 5 funds:

- Land Acquisition (LA)
- Restoration and Enhancement (R&E)
- Administration/Operations and Maintenance (Admin/O&M)
- O&M Endowment
- Supplemental Endowment (for LA)

Figure 1 graphically illustrates the purpose of and interaction between the 5 fee components. **Figure 2** summarizes the cost per acre of habitat and the proposed fee for each of the 5 fee components. 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 shown in **Figure 2** reflects 50 percent of the cost per acre of habitat mitigation.

The cash flows for each fund are summarized in **Figure 3**. The assumption tables used in the cash flow analysis are presented in **Figure 4** through **Figure 10**.

The updated fee amount was estimated based on a revised cash flow analysis prepared by EPS for each of the 5 funds. Many of the changes reflect estimated costs based on the Final NBHCP (April 2003) or input from The Natomas Basin Conservancy (TNBC). The updated assumptions are described below.



1. *Cash Flow Adjustments:* Several adjustments were made to the cash flow analyses as discussed below.

- **2004 Beginning Balances**

The cash flows for each fund were updated such that the beginning balances in 2004 matched actual fund balances of the NBHCP as of November 30, 2003. The November account statements were used since the end of year December statements were not yet available.

- **Supplemental Mitigation Funds**

The R&E, Admin/O&M, and O&M Endowment cash flows were all updated to account for the fund balances attributable to the "Huffman West" supplemental mitigation habitat land that was acquired by TNBC in 2003. As supplemental mitigation land, this habitat is in addition to the mitigation required by the NBHCP and does not contribute toward the required one-half acre of habitat for each acre of development. The expenses and revenues associated with Huffman West, and any future supplemental mitigation habitat, therefore should be excluded from the cash flows, which serve as the basis of setting the NBHCP fee. The City of Sacramento provides accounting services for the accounts associated with each fee component, but does not separate out supplemental mitigation revenues and expenses. The balances for each of the accounts include any amounts that are attributable to supplemental mitigation. Consequently, for each mentioned account, the estimated ending balance for Huffman West was subtracted from the account's total ending balance to arrive at a balance that pertained to the regular mitigation habitat only.

Because Huffman West was donated in lieu of land acquisition fees, no similar adjustment was necessary for the LA account. Also, while the developers did pay an assessment for the Supplemental Endowment component, because this amount will be used to provide additional habitat, it does not specifically pertain to Huffman West, and thus was not be subtracted from the Supplemental Endowment overall balance.

- **Transfers between Funds**

The LA, Admin/O&M, and R&E cash flows were updated to show interfund loans from the Admin/O&M and R&E funds to the LA fund for the purchase of habitat in 2002. The cash flows reflect that the borrowing between funds was partially paid back by the end of 2003, and the funds are anticipated to be completely restored in 2004. Given the current level of surplus habitat based on acquisitions in 2003, it is projected that no new habitat will be acquired in 2004, and thus there will be sufficient nonobligated LA funds to pay back all of the interfund borrowing.

- **LA Adjustment for Supplemental Endowment Fee Revenue**

The LA cash flow was updated to include a 2004 adjustment to account for Supplemental Endowment revenue. Originally, the two funds were blended together, as the City of Sacramento accounts for them together in one LA account. With the adoption of the 2003 NBHCP and the issuance of new incidental take permits, the Supplemental Endowment fund was modeled into a separate fund for fee calculation purposes. Consequently, an adjustment was made to reduce the LA funds by an amount equal to the estimated Supplement Endowment fees collected to date plus the estimated interest earned on these fees. The Supplemental Endowment cash flow also reflects this fee and interest revenue.

To comply with the 2003 NBHCP, the Supplemental Endowment fund contains a changed circumstance portion that must be set aside to provide revenue in the event that costs are greater than currently anticipated because of changed circumstances. As defined in the NBHCP, changed circumstances are changes in circumstances that will affect the habitat and its species and that can be anticipated and planned for, such as fire, flood, the listing of new species, or the invasion of nonnative species.

2. *LA Costs:* LA costs were increased from \$9,000 per acre to \$15,000 per acre (67 percent increase). The increase in costs reflects increasing price pressure in the Natomas Basin for land as witnessed by TNBC. The updated land acquisition cost of \$15,000 per acre was based on TNBC's knowledge of available parcels and their asking prices and confirmed by an appraisal performed by R.E. Stover Appraisers for TNBC in late 2003. The land acquisition transaction and contingency cost per acre, however, was decreased to reflect more current estimates from TNBC based on actual experience over the past year.
3. *R&E Costs:* R&E costs decreased from \$1,940 to \$1,871 per habitat acre (4 percent decrease). This decrease was attributable to reduced R&E contingency costs. The R&E costs are composed of 4 components as described below.

- **Base R&E**

The cost to convert rice acres into managed marsh was estimated at \$5,200 per acre, based on the actual cost of completing the first conversion of acquired acres into managed marsh (Betts/Kismat/Silva [BKS] property totaling 192.5 acres). This cost has been reaffirmed with more recent actual projects that also have been competitively bid. It was the same cost estimate assumed in the 2003 Fee Update. Because managed marsh will represent 25 percent of the total acquired

acres, the conversion cost was weighted by 25 percent to arrive at a cost of \$1,300 per acquired acre (i.e., 25 percent of \$5,200 = \$1,300). Also, a small amount of land was anticipated to be converted from rice to upland, at a weighted cost of \$6 per acre.

- **Biological Site Assessment and Preconstruction Survey**

The cost to conduct a formal biological site assessment and preconstruction survey for acquired mitigation land, as required by the 2003 NBHCP, was estimated at \$146 per acre based on information provided by TNBC.

- **Site Specific Management Plan**

The cost estimated for completing the site specific management plans for acquired mitigation land is \$175 per acre. This cost was estimated as the average cost per acre of all site specific plans that have been prepared to date.

- **Contingency Costs**

This fee update assumes a contingency cost of 15 percent of all other R&E costs, which translates into \$244 per habitat acre. This contingency cost represents a decrease from the 2003 contingency cost of 25 percent. The contingency was reduced to reflect cost estimates and assumptions from TNBC based on its increasing experience over the years that the habitat has been restored and enhanced. The contingency component is essential to ensure adequate funding for restoration and enhancement, particularly given the lag time between when the fee is paid (and the habitat preserves are acquired) versus when the restoration and enhancement actually occurs. TNBC has 3 years to restore and enhance the designated preserves after approval of the site specific management plan, which comes 1 year after acquisition. In that time frame, biological studies also need to be completed. There is significant risk that the cost of restoring and enhancing a project will increase between the time the land has been acquired and when the R&E construction begins. Typically, there has been a 2-year to 3-year lag between these events.

4. *Admin/O&M Cost Estimates:* Admin/O&M cost estimates were revised. The Admin/O&M costs increased from \$6,900 per acre to \$8,307 per acre (20 percent increase). The two major components that made up this cost increase were certain administrative costs and property taxes. As a result of the O&M cost increase, the estimated amount of drawdown necessary on the O&M Endowment fund in future years also increased, causing an overall increase in O&M Endowment fund costs. Cost estimates for each of the Admin/O&M cost components are discussed below.

- **O&M Costs**

O&M costs were updated based on the June 2003 estimates from Wildlands, Inc. In addition, a new line item was added for the annual cost of establishing a well reserve. This cost was estimated at \$9,600 per year (\$1,200 per month for 8 months of the year). The amount collected for this item should be set aside as a well reserve to use in the event that the fish farm that currently provides water to TNBC's BKS preserve becomes unable to deliver free water in the future. This cost could be reduced in a future year when ongoing interest on the well reserve becomes adequate to generate the needed annual revenue to cover the anticipated well costs. Overall, there was very little change in the O&M costs.

- **Property Tax Costs and Special Assessments**

Over the past year, a large amount of mitigation property has been added to the tax rolls. Because of rapidly increasing land acquisition costs, these properties have substantially greater assessed values than previous habitat land.

Consequently, property tax assumptions were updated to reflect the current conditions as reported on tax assessor valuation notices. In addition, because of timing and other factors, not all TNBC properties were fully accounted for in the last fee update. This update contains information gathered from the tax assessor valuation notices received in late 2003. The assessed value used in the property tax calculation was estimated as the average land acquisition cost of all habitat properties to date. Property taxes were estimated as 1 percent of the estimated assessed value of all habitat lands. Updating property tax assumptions to reflect current conditions resulted in a substantial increase in the property tax cost and Admin/O&M fee component.

In addition to updating property tax assumptions, Reclamation District 1000 and Natomas-Central Mutual Water Company (NCMWC) assessment assumptions were also updated based on the current rates.

- **Mitigation Monitoring and Adaptive Management**

Mitigation monitoring and adaptive management costs were revised based on a competitive bid process that resulted in the selection of Jones & Stokes to perform the monitoring work. Other than the costs associated with the midpoint program reviews, the preacquisition biological reconnaissance (included as a LA cost), and the site specific management plan (included as a R&E cost), all of the mitigation monitoring costs were inflated by 3 percent annually to reflect likely cost increases as habitat preserve acreage increases to 8,750 acres over time. Once all habitat acres are acquired, the costs are no longer escalated.

- **Administrative Costs**

Costs were revised based on the current budget estimates of TNBC. These estimated costs increased from \$650,000 in 2003 to \$780,000 per year in 2004. The largest increase was in the miscellaneous category, which includes insurance, legal, and accounting costs, as well as fees and taxes. These cost increases reflect the growth of TNBC and its mission, as well as significantly higher insurance costs.

5. *Rice and Other Crop Revenue Estimates:* Rice revenue estimates remained unchanged at \$160 per acre. This estimate accounts for a blend of highly productive rice fields, which produce higher cash rents, and fallow fields and fields with no eligibility to participate in the federal farm program, which produce substantially lower cash rents.

Other crop revenue estimates were updated based on actual experience. Below are the 2 main assumptions used to project other crop revenues:

- Annual farming income was estimated at \$30 per upland acre.
- Fifty percent of all upland acres were estimated to be used for farming.

6. *Hunting Revenues:* Projected hunting revenues were decreased based on actual hunting leases in the habitat and the exclusion of substantial acreage within Sacramento County's No Shoot Zone ordinance area. Below are the 2 main assumptions used to project hunting revenues:

- Annual hunting income was estimated at \$10 per acre.
- The percentage of mitigation land used for hunting increased from 29 percent in 2003 to 33.3 percent in 2009, and was maintained at 33.3 percent thereafter.

7. *Supplemental Endowment Cost Estimates:* The increase in supplemental costs from \$860 per acre to \$945 per acre, (10 percent increase), was due largely to the increased land acquisition cost of \$15,000 per acre.

8. *Habitat Acquisition and Conversion:* The projected habitat acquisition schedule was updated to reflect current estimates from TNBC that no new habitat will be acquired in 2004 because of an existing surplus of habitat over the required mitigation ratio. The projected habitat conversion schedule also was updated to reflect current estimates from TNBC of the number of acres to be converted to marsh and upland in 2004.

NBHCP FEE ANALYSIS AND FEE HISTORY

The following table shows the NBHCP fee history.

Fee Component	Adopted							Current Proposed w/ Revised HCP
	1996/97	1998	1999	2000	2001	2002	2003	2004
Land Acquisition Cost (LA) [1]	\$1,830	\$1,830	\$2,036	\$2,500	\$3,000	\$3,750	\$5,275	\$7,750
Land Acquisition Settlement [2]					\$3,947	\$3,947		
Restoration/Enhancement (R&E)	\$140	\$198	\$200	\$423	\$368	\$782	\$970	\$935
Administration/O & M	\$150	\$475	\$800	\$750	\$1,555	\$1,555	\$3,450	\$4,154
O & M Endowment Fund	\$75	\$100	\$190	\$190	\$800	\$1,500	\$1,900	\$2,490
Supplemental Endowment Fund	\$0	\$0	\$0	\$0	\$150	\$188	\$430	\$473
Fee Collection Administration	\$45	\$53	\$66	\$78	\$201	\$240	\$245	\$322
Total Mitigation Fee	\$2,240	\$2,656	\$3,292	\$3,941	\$10,021	\$11,962	\$12,270	\$16,124
Percent Increase		19%	24%	20%	154%	19%	3%	31%
Less Land Cost Portion of Land Acquisition Component							\$4,500	\$7,500
Total Mitigation Fee Excluding Land Cost Portion of Land Acquisition Component [3]							\$7,770	\$8,624

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[1] Land acquisition cost includes land cost, transaction costs, and contingency costs. Current land costs estimated at \$15,000 per acre.

[2] Fee through 2002 only.

[3] Includes land transaction costs and contingencies.

The fee currently charged by the City of Sacramento is \$12,270 per acre of development. The proposed fee is \$16,124 per acre. Because nearly all mitigation land is acquired by TNBC through land dedication, the cost to fee payers in this respect is \$8,624 per acre.

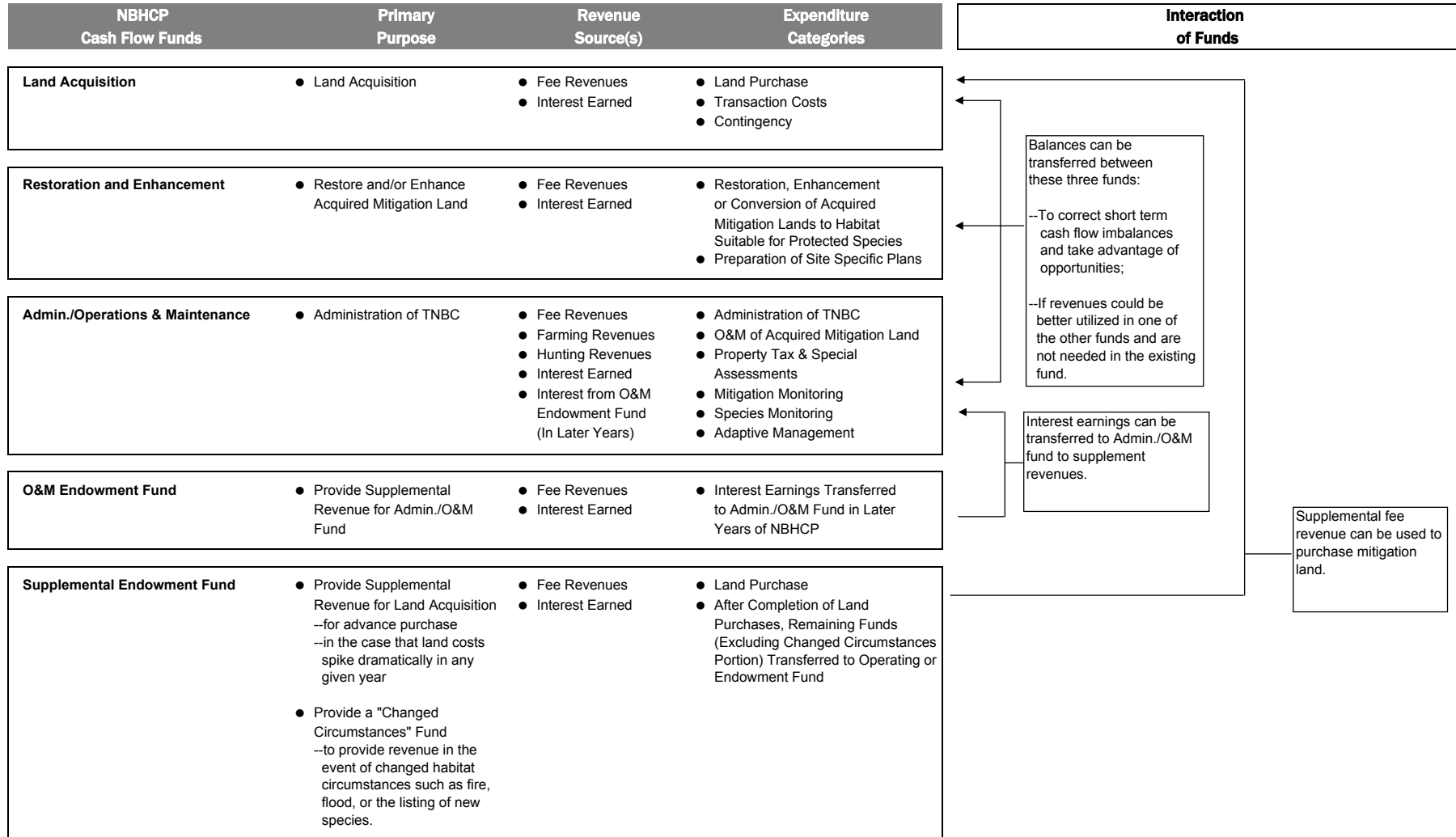
As detailed previously, the majority of the proposed fee increase can be attributed to LA and Admin/O&M cost increases. For land dedication transactions, the majority of the fee increase can be attributed to a rise in property taxes and insurance, legal, and accounting costs. In summary:

- Land acquisition cost estimates increased substantially from an estimated \$9,000 per acre used for the June 2003 fee update to the current estimate of \$15,000 per acre (excluding contingencies and transaction costs) based on actual transactions and an appraisal.
- Updated assessed value assumptions, property tax assumptions, and administrative cost assumptions for insurance, legal fees, and related costs resulted in substantial increases in Admin/O&M costs. These cost increases reflect increasing land values, higher insurance premiums, and the growth of TNBC and the habitat that it maintains.

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**Figure 1
NBHCP Cash Flow Model and Interaction of Funds**



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Figure 2
Natomas Basin HCP -- May 2003
Estimation of Mitigation Fee

2004 Update

17,500 acres of development
 1/2 acre of mitigation land per gross acre of developed land
 25% marsh, 50% rice, 25% other

Estimation of Mitigation Fee				Notes:
Mitigation Requirement	1/2 Acre of Mitigation Land for Each Gross Acre of Developed Land			
Habitat Mitigation Fee	<u>Cost per Acre of Habitat</u> <i>a</i>	<u>Mitigation Fee per Acre of Development</u> <i>b=a x .5</i>	<u>Percent of Base Fee</u>	
BASE FEE				
Land Acquisition Cost (LA)				
Land Cost	\$15,000 [1]	\$7,500		
Transaction Costs & Contingency	\$500 [1]	\$250		
Total Land Acquisition Cost (LA)	\$15,500	\$7,750	48%	See Figure 4
Restoration/Enhancement (RE)				
RE Cost	\$1,627	\$813		
RE Contingency	\$244	\$122		
Total Restoration/Enhancement (RE)	\$1,871	\$935	6%	See Figure 5
Administration/O & M	\$8,307 [2]	\$4,154	26%	
O & M Endowment Fund	\$4,980 [2]	\$2,490	15%	
Supplemental Endowment Fund	\$945	\$473	3%	See Figure 10
Subtotal Mitigation Fee	\$31,603	\$15,802		
Fee Collection Administration		\$322	2%	2% of fee for collection
Total Base Fee		\$16,124	100%	
FEE EXCLUDING LAND COST PORTION OF LAND ACQUISITION		\$8,624		[3]

"fee_sum_1"

[1] Based on information provided by the Natomas Basin Conservancy

[2] Administration/O&M and Endowment Fund costs set based on cash flow analysis, ensuring that fund balances are positive in year 50 and that annual interest earnings in endowment fund exceed drawdown by Admin/O&M fund.

[3] In some cases developers may choose to dedicate land to satisfy the land acquisition component of the NBHCP. Any land dedication will be subject to the terms of the NBHCP

Figure 3
Natomas Basin HCP
Cash Flow Summary- 2003\$

Assumes:	0.0% Inflation
	3.0% Interest Rate

	Total 1996-2045	1 1996	2 1997	3 1998	4 1999	5 2000	6 2001	7 2002	8 2003
LAND ACQUISITION		[1]	[1]	[1]	[2]				
Beginning Balance		\$0	\$55,641	\$247,608	\$2,773,665	\$545,571	\$563,113	\$2,225,278	\$1,775
Total Revenues	\$113,261,981	\$55,641	\$191,966	\$2,526,057	\$2,696,904	\$1,287,471	\$3,198,070	\$2,569,079	\$9,014,808
Total Expenditures	(\$107,671,003)	\$0	\$0	\$0	(\$4,924,998)	(\$1,558,606)	(\$1,535,905)	(\$8,854,102)	(\$6,330,571)
Transfers To/From O&M/Adm, R&E, Sup Endow.	(\$661,045)	\$0	\$0	\$0	\$0	\$0	\$0	\$4,061,520	(\$2,582,000)
Balance Adjustments	\$288,677	\$0	\$0	\$0	\$0	\$288,677	\$0	\$0	\$0
Ending Balance	\$5,218,611	\$55,641	\$247,608	\$2,773,665	\$545,571	\$563,113	\$2,225,278	\$1,775	\$104,012
RESTORATION & ENHANCEMENTS									
Beginning Balance		\$0	\$4,257	\$19,032	\$292,743	\$589,200	\$582,058	\$268,280	(\$12,244)
Total Revenues	\$13,435,707	\$4,257	\$14,775	\$273,711	\$296,457	\$145,324	\$146,644	\$363,017	\$1,121,847
Total Expenditures	(\$12,302,653)	\$0	\$0	\$0	\$0	\$0	(\$1,060,422)	(\$490,041)	(\$760,310)
Transfers To/From O&M/Admin & Land Acq	\$600,000	\$0	\$0	\$0	\$0	\$0	\$600,000	(\$153,500)	\$153,500
Supplemental Mitigation Balance Reduction	(\$55,539)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$55,539)
Balance Adjustments	(\$152,466)	\$0	\$0	\$0	\$0	(\$152,466)	\$0	\$0	\$0
Ending Balance	\$1,525,049	\$4,257	\$19,032	\$292,743	\$589,200	\$582,058	\$268,280	(\$12,244)	\$447,254
ADMINISTRATION/O&M									
Beginning Balance		\$0	\$4,561	\$70,261	\$621,109	\$1,207,334	\$1,549,539	\$1,154,659	\$98,614
Total Revenues	\$96,457,614	\$4,561	\$65,700	\$657,778	\$880,838	\$690,047	\$816,275	\$1,624,402	\$3,858,545
Drawdown on Endowment Fund	\$11,436,926	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenditures	(\$107,400,194)	\$0	\$0	(\$106,930)	(\$294,613)	(\$500,511)	(\$611,155)	(\$884,386)	(\$997,689)
Transfers To/From Land Acq and R&E	(\$600,000)	\$0	\$0	\$0	\$0	\$0	(\$600,000)	(\$3,908,020)	\$2,428,500
City of Sac Loan For 200 Acre Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,111,959	(\$2,111,959)
Supplemental Mitigation Balance Reduction	(\$47,015)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$47,015)
Balance Adjustments	\$152,668	\$0	\$0	\$0	\$0	\$152,668	\$0	\$0	\$0
Ending Balance	\$0	\$4,561	\$70,261	\$621,109	\$1,207,334	\$1,549,539	\$1,154,659	\$98,614	\$3,228,996
O&M ENDOWMENT									
Beginning Balance		\$0	\$3,041	\$13,622	\$152,066	\$323,846	\$463,981	\$1,003,066	\$1,914,434
Total Revenues	\$88,482,446	\$3,041	\$10,581	\$138,445	\$157,704	\$140,135	\$539,085	\$911,368	\$2,951,862
Total Expenses	(\$14,923)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$14,923)
Drawdown on Endowment Fund	(\$11,436,926)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	(\$337,131)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$337,131)
Balance Adjustments	\$14,076	\$0	\$0	\$0	\$14,076	\$0	\$0	\$0	\$0
Ending Balance	\$76,707,543	\$3,041	\$13,622	\$152,066	\$323,846	\$463,981	\$1,003,066	\$1,914,434	\$4,514,242
SUPPLEMENTAL ENDOWMENT									
Beginning Balance		\$0	\$0	\$0	\$0	\$0	\$0	\$58,799	\$206,791
Total Revenues	\$11,055,811	\$0	\$0	\$0	\$0	\$0	\$58,799	\$147,992	\$454,254
Total Expenditures	(\$3,187,749)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$7,868,062	\$0	\$0	\$0	\$0	\$0	\$58,799	\$206,791	\$661,045
Changed Circumstances Fund Balance	\$8,168,172	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$260,494

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Figure 3
Natomas Basin HCP
Cash Flow Summary- 2003\$

	9 2004	10 2005	11 2006	12 2007	13 2008	14 2009	15 2010	16 2011	17 2012
LAND ACQUISITION									
Beginning Balance	\$104,012	\$812,713	\$884,942	\$958,254	\$1,070,001	\$1,183,425	\$1,389,106	\$1,597,873	\$1,809,772
Total Revenues	\$2,849,265	\$3,734,563	\$3,735,647	\$6,051,517	\$6,053,193	\$6,145,451	\$6,148,536	\$6,151,668	\$3,801,321
Total Expenditures	\$0	(\$3,662,334)	(\$3,662,334)	(\$5,939,769)	(\$5,939,769)	(\$5,939,769)	(\$5,939,769)	(\$5,939,769)	(\$3,624,204)
Transfers To/From O&M/Adm, R&E, Sup Endow.	(\$2,140,565)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$812,713	\$884,942	\$958,254	\$1,070,001	\$1,183,425	\$1,389,106	\$1,597,873	\$1,809,772	\$1,986,889
RESTORATION & ENHANCEMENTS									
Beginning Balance	\$447,254	\$785,563	(\$3,901)	\$56,123	\$154,651	\$255,247	\$357,957	\$437,991	\$519,706
Total Revenues	\$336,807	\$465,808	\$449,312	\$729,896	\$731,965	\$734,078	\$736,235	\$737,915	\$455,547
Total Expenditures	\$1,502	(\$1,255,272)	(\$389,288)	(\$631,368)	(\$631,368)	(\$631,368)	(\$656,200)	(\$656,200)	(\$410,067)
Transfers To/From O&M/Admin & Land Acq	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$785,563	(\$3,901)	\$56,123	\$154,651	\$255,247	\$357,957	\$437,991	\$519,706	\$565,187
ADMINISTRATION/O&M									
Beginning Balance	\$3,228,996	\$4,905,728	\$5,662,541	\$6,411,067	\$8,376,621	\$10,354,947	\$12,346,105	\$14,353,057	\$16,376,030
Total Revenues	\$1,825,963	\$2,400,721	\$2,442,706	\$3,736,853	\$3,827,017	\$3,917,318	\$4,010,056	\$4,103,267	\$2,923,609
Drawdown on Endowment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenditures	(\$1,628,751)	(\$1,643,908)	(\$1,694,181)	(\$1,771,298)	(\$1,848,692)	(\$1,926,160)	(\$2,003,104)	(\$2,080,294)	(\$2,130,685)
Transfers To/From Land Acq and R&E	\$1,479,520	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
City of Sac Loan For 200 Acre Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$4,905,728	\$5,662,541	\$6,411,067	\$8,376,621	\$10,354,947	\$12,346,105	\$14,353,057	\$16,376,030	\$17,168,954
O&M ENDOWMENT									
Beginning Balance	\$4,514,242	\$5,526,578	\$6,893,962	\$8,302,592	\$10,497,429	\$12,758,354	\$15,087,359	\$17,486,499	\$19,957,886
Total Revenues	\$1,012,335	\$1,367,384	\$1,408,630	\$2,194,837	\$2,260,925	\$2,329,006	\$2,399,139	\$2,471,387	\$1,789,648
Total Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Drawdown on Endowment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$5,526,578	\$6,893,962	\$8,302,592	\$10,497,429	\$12,758,354	\$15,087,359	\$17,486,499	\$19,957,886	\$21,747,534
SUPPLEMENTAL ENDOWMENT									
Beginning Balance	\$400,550	\$490,617	\$612,444	\$737,925	\$933,777	\$1,135,504	\$1,343,283	\$1,557,296	\$1,777,728
Total Revenues	\$177,567	\$241,903	\$245,558	\$390,598	\$396,474	\$402,526	\$408,759	\$415,179	\$278,151
Total Expenditures	\$0	(\$260,494)	(\$87,500)	(\$120,077)	(\$120,077)	(\$194,747)	(\$194,747)	(\$194,747)	(\$194,747)
Ending Balance	\$578,117	\$472,026	\$770,502	\$1,008,447	\$1,210,174	\$1,343,283	\$1,557,296	\$1,777,728	\$1,861,133
Changed Circumstances Fund Balance	\$355,809	\$486,560	\$621,233	\$834,617	\$1,054,402	\$1,280,780	\$1,513,950	\$1,754,115	\$1,925,565

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Figure 3
Natomas Basin HCP
Cash Flow Summary- 2003\$

	18 2013	19 2014	20 2015	21 2016	22 2017	23 2018	24 2019	25 2020
LAND ACQUISITION								
Beginning Balance	\$1,986,889	\$2,131,360	\$2,277,997	\$2,404,757	\$2,512,885	\$2,550,220	\$2,587,555	\$2,624,890
Total Revenues	\$3,768,674	\$3,770,841	\$2,404,194	\$2,385,563	\$2,314,770	\$2,314,770	\$2,314,770	\$2,314,770
Total Expenditures	(\$3,624,204)	(\$3,624,204)	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)
Transfers To/From O&M/Adm, R&E, Sup Endow.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$2,131,360	\$2,277,997	\$2,404,757	\$2,512,885	\$2,550,220	\$2,587,555	\$2,624,890	\$2,662,225
RESTORATION & ENHANCEMENTS								
Beginning Balance	\$565,187	\$611,623	\$659,033	\$685,367	\$737,085	\$774,411	\$811,737	\$849,063
Total Revenues	\$456,502	\$457,478	\$293,246	\$293,799	\$279,406	\$279,406	\$279,406	\$279,406
Total Expenditures	(\$410,067)	(\$410,067)	(\$266,912)	(\$242,080)	(\$242,080)	(\$242,080)	(\$242,080)	(\$242,080)
Transfers To/From O&M/Admin & Land Acq	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$611,623	\$659,033	\$685,367	\$737,085	\$774,411	\$811,737	\$849,063	\$886,389
ADMINISTRATION/O&M								
Beginning Balance	\$17,168,954	\$17,956,008	\$18,736,747	\$18,785,839	\$18,811,796	\$18,813,630	\$18,790,314	\$18,740,781
Total Revenues	\$2,968,391	\$3,012,998	\$2,316,815	\$2,330,098	\$2,342,687	\$2,354,552	\$2,365,663	\$2,375,987
Drawdown on Endowment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenditures	(\$2,181,337)	(\$2,232,259)	(\$2,267,723)	(\$2,304,141)	(\$2,340,853)	(\$2,377,868)	(\$2,415,196)	(\$2,452,845)
Transfers To/From Land Acq and R&E	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
City of Sac Loan For 200 Acre Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$17,956,008	\$18,736,747	\$18,785,839	\$18,811,796	\$18,813,630	\$18,790,314	\$18,740,781	\$18,663,924
O&M ENDOWMENT								
Beginning Balance	\$21,747,534	\$23,591,168	\$25,490,418	\$27,007,169	\$28,569,756	\$30,179,567	\$31,838,032	\$33,546,625
Total Revenues	\$1,843,634	\$1,899,251	\$1,516,751	\$1,562,587	\$1,609,811	\$1,658,465	\$1,708,594	\$1,760,241
Total Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Drawdown on Endowment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$23,591,168	\$25,490,418	\$27,007,169	\$28,569,756	\$30,179,567	\$31,838,032	\$33,546,625	\$35,306,866
SUPPLEMENTAL ENDOWMENT								
Beginning Balance	\$1,937,053	\$2,101,158	\$2,270,186	\$2,404,897	\$2,543,650	\$2,686,565	\$2,833,767	\$2,985,386
Total Revenues	\$282,931	\$287,854	\$209,381	\$213,423	\$217,585	\$221,873	\$226,289	\$230,837
Total Expenditures	(\$194,747)	(\$118,826)	(\$118,826)	(\$118,826)	(\$74,670)	(\$74,670)	(\$74,670)	(\$74,670)
Ending Balance	\$2,025,238	\$2,270,186	\$2,360,741	\$2,499,493	\$2,686,565	\$2,833,767	\$2,985,386	\$3,141,553
Changed Circumstances Fund Balance	\$2,102,159	\$2,284,050	\$2,427,241	\$2,574,728	\$2,726,640	\$2,883,109	\$3,044,273	\$3,210,271

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Figure 3
Natomas Basin HCP
Cash Flow Summary- 2003\$

	26 2021	27 2022	28 2023	29 2024	30 2025	31 2026	32 2027	33 2028	34 2029
LAND ACQUISITION									
Beginning Balance	\$2,662,225	\$2,699,560	\$2,736,895	\$2,774,230	\$2,811,565	\$2,848,900	\$2,886,235	\$2,923,570	\$2,960,905
Total Revenues	\$2,314,770	\$2,314,770	\$2,314,770	\$2,314,770	\$2,314,770	\$2,314,770	\$2,314,770	\$2,314,770	\$2,314,770
Total Expenditures	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)	(\$2,277,435)
Transfers To/From O&M/Adm, R&E, Sup Endow.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$2,699,560	\$2,736,895	\$2,774,230	\$2,811,565	\$2,848,900	\$2,886,235	\$2,923,570	\$2,960,905	\$2,998,240
RESTORATION & ENHANCEMENTS									
Beginning Balance	\$886,389	\$923,714	\$961,040	\$998,366	\$1,035,692	\$1,073,017	\$1,110,343	\$1,147,669	\$1,184,995
Total Revenues	\$279,406	\$279,406	\$279,406	\$279,406	\$279,406	\$279,406	\$279,406	\$279,406	\$279,406
Total Expenditures	(\$242,080)	(\$242,080)	(\$242,080)	(\$242,080)	(\$242,080)	(\$242,080)	(\$242,080)	(\$242,080)	(\$242,080)
Transfers To/From O&M/Admin & Land Acq	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$923,714	\$961,040	\$998,366	\$1,035,692	\$1,073,017	\$1,110,343	\$1,147,669	\$1,184,995	\$1,222,320
ADMINISTRATION/O&M									
Beginning Balance	\$18,663,924	\$18,558,591	\$18,423,587	\$18,257,670	\$18,059,552	\$17,827,892	\$17,561,302	\$17,258,337	\$16,931,485
Total Revenues	\$2,385,492	\$2,394,142	\$2,401,902	\$2,408,735	\$2,414,602	\$2,419,463	\$2,423,275	\$2,425,996	\$2,428,001
Drawdown on Endowment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenditures	(\$2,490,825)	(\$2,529,146)	(\$2,567,819)	(\$2,606,854)	(\$2,646,261)	(\$2,686,053)	(\$2,726,240)	(\$2,752,848)	(\$2,779,456)
Transfers To/From Land Acq and R&E	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
City of Sac Loan For 200 Acre Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$18,558,591	\$18,423,587	\$18,257,670	\$18,059,552	\$17,827,892	\$17,561,302	\$17,258,337	\$16,931,485	\$16,580,030
O&M ENDOWMENT									
Beginning Balance	\$35,306,866	\$37,120,320	\$38,988,598	\$40,913,363	\$42,896,327	\$44,939,254	\$47,043,961	\$49,212,322	\$51,446,267
Total Revenues	\$1,813,453	\$1,868,278	\$1,924,765	\$1,982,964	\$2,042,927	\$2,104,707	\$2,168,361	\$2,233,945	\$2,301,518
Total Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Drawdown on Endowment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$37,120,320	\$38,988,598	\$40,913,363	\$42,896,327	\$44,939,254	\$47,043,961	\$49,212,322	\$51,446,267	\$53,747,785
SUPPLEMENTAL ENDOWMENT									
Beginning Balance	\$3,141,553	\$3,302,405	\$3,468,083	\$3,638,731	\$3,814,499	\$3,995,539	\$4,182,011	\$4,374,077	\$4,571,905
Total Revenues	\$235,522	\$240,348	\$245,318	\$250,438	\$255,711	\$261,142	\$266,736	\$272,498	\$278,433
Total Expenditures	(\$74,670)	(\$74,670)	(\$74,670)	(\$74,670)	(\$74,670)	(\$74,670)	(\$74,670)	(\$74,670)	(\$74,670)
Ending Balance	\$3,302,405	\$3,468,083	\$3,638,731	\$3,814,499	\$3,995,539	\$4,182,011	\$4,374,077	\$4,571,905	\$4,775,668
Changed Circumstances Fund Balance	\$3,381,249	\$3,557,356	\$3,738,747	\$3,925,580	\$4,118,017	\$4,316,227	\$4,520,384	\$4,730,666	\$4,947,256

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Figure 3
Natomas Basin HCP
Cash Flow Summary- 2003\$

	35 2030	36 2031	37 2032	38 2033	39 2034	40 2035	41 2036	42 2037	43 2038
LAND ACQUISITION									
Beginning Balance	\$2,998,240	\$3,035,575	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611
Total Revenues	\$2,314,770	\$2,314,770	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenditures	(\$2,277,435)	(\$131,733)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfers To/From O&M/Adm, R&E, Sup Endow.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$3,035,575	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611
RESTORATION & ENHANCEMENTS									
Beginning Balance	\$1,222,320	\$1,259,646	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049
Total Revenues	\$279,406	\$279,406	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenditures	(\$242,080)	(\$14,003)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfers To/From O&M/Admin & Land Acq	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$1,259,646	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049
ADMINISTRATION/O&M									
Beginning Balance	\$16,580,030	\$16,203,234	\$15,814,278	\$14,173,082	\$12,482,650	\$10,741,506	\$8,948,127	\$7,100,946	\$5,198,350
Total Revenues	\$2,429,268	\$2,418,647	\$1,166,408	\$1,117,172	\$1,066,459	\$1,014,224	\$960,423	\$905,008	\$847,930
Drawdown on Endowment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenditures	(\$2,806,064)	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)
Transfers To/From Land Acq and R&E	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
City of Sac Loan For 200 Acre Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$16,203,234	\$15,814,278	\$14,173,082	\$12,482,650	\$10,741,506	\$8,948,127	\$7,100,946	\$5,198,350	\$3,238,677
O&M ENDOWMENT									
Beginning Balance	\$53,747,785	\$56,118,926	\$58,561,800	\$60,334,871	\$62,161,783	\$64,044,177	\$65,983,744	\$67,982,228	\$70,041,425
Total Revenues	\$2,371,140	\$2,442,874	\$1,773,071	\$1,826,912	\$1,882,394	\$1,939,567	\$1,998,484	\$2,059,197	\$2,121,762
Total Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Drawdown on Endowment Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$56,118,926	\$58,561,800	\$60,334,871	\$62,161,783	\$64,044,177	\$65,983,744	\$67,982,228	\$70,041,425	\$72,163,187
SUPPLEMENTAL ENDOWMENT									
Beginning Balance	\$4,775,668	\$4,985,544	\$5,201,716	\$5,357,767	\$5,518,500	\$5,684,055	\$5,854,577	\$6,030,214	\$6,211,121
Total Revenues	\$284,546	\$290,842	\$156,051	\$160,733	\$165,555	\$170,522	\$175,637	\$180,906	\$186,334
Total Expenditures	(\$74,670)	(\$74,670)	(\$74,670)	(\$74,670)	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$4,985,544	\$5,201,716	\$5,283,097	\$5,443,830	\$5,684,055	\$5,854,577	\$6,030,214	\$6,211,121	\$6,397,454
Changed Circumstances Fund Balance	\$5,170,343	\$5,400,124	\$5,562,127	\$5,728,991	\$5,900,861	\$6,077,887	\$6,260,223	\$6,448,030	\$6,641,471

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Figure 3
Natomas Basin HCP
Cash Flow Summary- 2003\$

	44 2039	45 2040	46 2041	47 2042	48 2043	49 2044	50 2045
LAND ACQUISITION							
Beginning Balance	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611
Total Revenues	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfers To/From O&M/Adm, R&E, Sup Endow.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611	\$5,218,611
RESTORATION & ENHANCEMENTS							
Beginning Balance	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049
Total Revenues	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfers To/From O&M/Admin & Land Acq	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049	\$1,525,049
ADMINISTRATION/O&M							
Beginning Balance	\$3,238,677	\$1,220,213	\$0	\$0	\$0	\$0	\$0
Total Revenues	\$789,139	\$728,586	\$691,979	\$691,979	\$691,979	\$691,979	\$691,979
Drawdown on Endowment Fund	\$0	\$858,805	\$2,115,624	\$2,115,624	\$2,115,624	\$2,115,624	\$2,115,624
Total Expenditures	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)	(\$2,807,603)
Transfers To/From Land Acq and R&E	\$0	\$0	\$0	\$0	\$0	\$0	\$0
City of Sac Loan For 200 Acre Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$1,220,213	\$0	\$0	\$0	\$0	\$0	\$0
O&M ENDOWMENT							
Beginning Balance	\$72,163,187	\$74,349,423	\$75,743,295	\$75,923,052	\$76,109,124	\$76,301,739	\$76,501,131
Total Revenues	\$2,186,236	\$2,252,677	\$2,295,381	\$2,301,697	\$2,308,239	\$2,315,016	\$2,322,036
Total Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Drawdown on Endowment Fund	\$0	(\$858,805)	(\$2,115,624)	(\$2,115,624)	(\$2,115,624)	(\$2,115,624)	(\$2,115,624)
Supplemental Mitigation Balance Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balance Adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$74,349,423	\$75,743,295	\$75,923,052	\$76,109,124	\$76,301,739	\$76,501,131	\$76,707,543
SUPPLEMENTAL ENDOWMENT							
Beginning Balance	\$6,397,454	\$6,589,378	\$6,787,059	\$6,990,671	\$7,200,391	\$7,416,403	\$7,638,895
Total Revenues	\$191,924	\$197,681	\$203,612	\$209,720	\$216,012	\$222,492	\$229,167
Total Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ending Balance	\$6,589,378	\$6,787,059	\$6,990,671	\$7,200,391	\$7,416,403	\$7,638,895	\$7,868,062
Changed Circumstances Fund Balance	\$6,840,715	\$7,045,937	\$7,257,315	\$7,475,034	\$7,699,285	\$7,930,264	\$8,168,172

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Figure 4
Natomas Basin HCP -- May 2003
Land Acquisition Cost and
Acquired Habitat Land Utilization Assumptions

2004 Update
17,500 acres of development
1/2 acre of mitigation land per gross acre of developed land
25% marsh, 50% rice, 25% other

Item	Cost Per Acre	Permitted by Plan	Assumed in Financial Analysis	Notes:
In-Basin Lands	\$15,000	100%	100%	Price based on appraisal by R.E. Stover Appraisers in Fall 2003
Out-of-Basin Lands	NA			
Average Land Value	\$15,000			Assumes all acquisition occurs at the average in-basin land value.
Plus Transaction Costs & Contingency	\$500			Includes Pre-acquisition field reconnaissance, surveys, Phase 1 environmental report, legal fees, closing costs, etc. Transaction costs assumed at 1/2 of total, contingency at 1/2 of total.
Average Land Acquisition Cost Per Acquired Acre	\$15,500			Beginning 2004

"Land_Acq_Assumps"

Source: Natomas Basin Conservancy

Figure 5
Natomas Basin HCP -- May 2003
Restoration & Enhancement Assumptions

2004 Update
17,500 acres of development
1/2 acre of mitigation land per gross acre of developed land
25% marsh, 50% rice, 25% other

Item				Note:
Site Specific Management Plan Costs	Estimated Cost	Estimated Cost per Acre		
NBHCP Biological Site Assessment	\$15,000 per Acquisition	\$81 per Acquired Acre	assumes 30 more acquisitions based on an average of 180 acres per acquisition.	Baseline Biological site assessments for: -Tri-Colored Blackbird -Valley Elderberry Longhorn Beetle -Delta Tule Pea -Sanford Arrowhead Assessment for Species Introduction: -Delta Tule Pea -CTS -ST -Pond Turtle -Sanford Arrowhead -Vernal Pool Plant Species, -Other Covered Plant Species
NBHCP Pre-construction Survey	\$12,000 per Acquisition	\$65 per Acquired Acre	assumes 30 more acquisitions based on an average of 180 acres per acquisition.	Formal pre-construction site survey for restoration and enhancement, including: -Assessment of Swainsons Hawk nest disturbance -Assessment of Other Avian Species nest disturbance -Assessment of Valley Eldeberry Longhorn Beetle
Preparation of Site Specific Management Plan		\$175 per Acquired Acre		Average cost of all SSMPs prepared to date.
Subtotal SSMP Cost Per Acre		\$321 per acre		Note [1]
To be Completed:	Within 1 Year of Reserve Acquisition			
Restoration & Enhancement				
	<u>Use of Land</u>	<u>Initial Costs</u>	<u>Weighted Cost [5]</u>	
Expended At Time Land Is Acquired				
Marsh	0%	\$0	\$0	Note [2], [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	25.00%	\$5,200	\$1,300	Note [4]
Rice Converted to Upland/Other [6]	1.18%	\$500	\$5.90	
Subtotal Restoration & Enhancement			\$1,306	
R&E Cost Per Acre			\$1,627	Weighted average cost per Acquired Acre
R&E Contingency (@ 15%)			\$244	Per Acquired Acre

"RE_Assumps"

Source: The Natomas Basin Conservancy

- [1] The addition of a formal biological site assessment and pre-construction survey are required by the Draft HCP -- July 2002.
- [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] In 2001, the cost of converting of acquired acres to marsh cost approximately \$5,200 per acre.
- [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.
- [6] The percent of rice converted to upland is based on the acres purchased in 2002 and 2003 that are planned to be converted to upland.

Figure 6
Natomas Basin HCP -- May 2003
Operations & Maintenance Assumptions

2004 Update
17,500 acres of development
1/2 acre of mitigation land per gross acre of developed land
25% marsh, 50% rice, 25% other

Item	Amount	Notes:
Operations & Maintenance Costs		
Marsh	\$140.42 per acre	Based on Wildlands, Inc. estimates -- See Figure 7 (water costs based on water company tariffs)
Upland/Fallow	\$16.11 per acre	Based on Wildlands, Inc. estimates -- See Figure 7
Rice Land Leased for Planted Rice Base	\$3.34 per acre	Based on Wildlands, Inc. estimates -- See Figure 7
Rice Land Leased for Other Crops	\$3.34 per acre	Based on Wildlands, Inc. estimates (alfalfa, safflower, etc.) -- See Figure 6
Rice Land Not Leased for Crops	\$16.11 per acre	Based on Wildlands, Inc. estimates -- See Figure 7
Hunting	\$6.40 per acre	Based on Wildlands, Inc. estimates -- See Figure 7
Miscellaneous Maintenance Costs	\$60.14 per acre	Based on Wildlands, Inc. estimates -- See Figure 7
Water Connectivity Charges (after midpoint review)	\$0.00 per year	Assessed on marsh and other/upland acres only
Special Assessment & Property Tax Costs		
Reclamation District #1000	\$12.94 per acre	Based on published tariffs and rates (assumes habitat land split as 75% Sutter County and 25% Sac County)
NCMWC	\$25.58 per acre	Based on published tariffs and rates. Assumptions: 10% increase in 2004, 75% of acres are in the NCWMC area. <i>Estimate = \$31per acre * 110% * 75%</i>
Property Tax (1%)	\$66.01 per acre	Based on the average acquisition cost of all properties acquired -- \$6,601 per acre
Total	\$104.53 per acre	
Mitigation Monitoring & Adaptive Management		
<u>2004</u>		
One-Time/Fixed Costs	\$2,900	
On-Going Monitoring	\$309,100 per year	See Figure 7 for detail
Subtotal	\$312,000	
<u>2005 +</u>		
One-Time/Fixed Costs	\$2,900	
On-Going Monitoring	\$243,312 per year	See Figure 7 for detail
Subtotal	\$246,212	
Administrative Costs		
During Development	\$779,494 per year	See Figure 8 for detail
After All Land Acquired	\$779,494 per year	
Operations & Maintenance Revenues		
Crop Land Leases		
Planted Rice Base Acreage	\$160 per acre/year	estimate of average revenue per rice acre; revenue on revenue on 90% of rice acres
Other Crops (Flex. acreage)	\$30 per acre/year	estimate of average revenue per upland/other acre; revenue on 50% of other/upland acres
Hunting		
Hunting Revenue per Acre	\$10 per acre	Based on Wildlands Estimate for initial Site Plan revenue on a maximum of 1/3 of the acres

"OM_Assumps"

Source: The Natomas Basin Conservancy

Figure 7
Natomas Basin HCP
Estimated Operations & Maintenance Costs by Land Use Activity
Based on Wildlands, Inc Site Specific Management Plans for NBC Mitigation Lands, June 2003 [1]

Operations and Maintenance Cost Assumptions

Task	Category	Expenditure Type	Cost/Item	Items	Total Cost	Recurrence Interval	Total Annual Cost	Marsh	Upland	Rice	Hunting	Monit./ Mngmt./ Misc.
Water Management												
berm maintenance	Marsh	annual			\$4,920	1	\$4,920	\$4,920				
water control structure maintenance/repair	Marsh	annual			\$7,280	1	\$7,280	\$7,280				
water control structure replacement												
flashboard riser	Marsh	accrued	\$2,500	76	\$190,000	15	\$12,667	\$12,667				
overflow weir	Marsh	accrued	\$4,410	2	\$8,820	25	\$353	\$353				
canal gate	Marsh	accrued	\$3,000	11	\$33,000	10	\$3,300	\$3,300				
culvert			\$1,600	3	\$4,800	10	\$480	\$480				
rocked constriction structure	Marsh	accrued	\$1,326	36	\$47,736	15	\$3,182	\$3,182				
pump replacement												
lift pump	Marsh	accrued	\$6,000	7	\$42,000	15	\$2,800	\$2,800				
pump maintenance												
lift pump	Marsh	annual			\$2,680	1	\$2,680	\$2,680				
electricity	Marsh	annual	\$450	12	\$5,400	1	\$5,400	\$5,400				
water management operation												
water cost												
summer water	Marsh	annual	\$69	502	\$34,638	1	\$34,638	\$34,638				
winter water	Marsh	annual	\$13	502	\$6,275	1	\$6,275	\$6,275				
channel and outlet siltation control	Marsh	accrued	\$300	320	\$96,000	10	\$9,600	\$9,600				
reclamation district fee	Marsh	annual			\$12,880	1	\$9,600	\$9,600				
well reserve	Marsh	annual			\$9,600	1	\$9,600	\$9,600				
							<i>Reclamation district fee excluded -- detailed separately in Figure 6</i>					
Subtotal Water Management							\$103,175	\$103,175	\$0	\$0	\$0	\$0
Vegetation Management												
marsh plant management												
labor	Marsh	annual			\$3,280	1	\$3,280	\$3,280				
marsh water level management labor	Marsh	annual			\$19,240	1	\$19,240	\$19,240				
upland plant management												
mowing perimeter	Upland	annual			\$8,120	1	\$8,120		\$8,120			
round-up, remedy	Upland	annual	\$125	16	\$2,000	1	\$2,000		\$2,000			
labor for spraying	Upland	annual			\$3,760	1	\$3,760		\$3,760			
Subtotal Vegetation Management							\$36,400	\$22,520	\$13,880	\$0	\$0	\$0

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Figure 7
Natomas Basin HCP
Estimated Operations & Maintenance Costs by Land Use Activity
Based on Wildlands, Inc Site Specific Management Plans for NBC Mitigation Lands, June 2003 [1]

Operations and Maintenance Cost Assumptions

Task	Category	Expenditure Type	Cost/Item	Items	Total Cost	Recurrence Interval	Total Annual Cost	Marsh	Upland	Rice	Hunting	Monit./ Mngmt./ Misc.
Pest Management												
pest management (beaver/muskrat/mosquito)												
muskrat traps	Marsh	accrued	\$8	80	\$640	10	\$64	\$64				
beaver traps	Marsh	accrued	\$22	20	\$430	10	\$43	\$43				
labor for beaver and muskrat control	Marsh	annual			\$5,680	1	\$5,680	\$5,680				
cottonwood/willow protection	Marsh	annual			\$1,372	1	\$1,372	\$1,372				
field wire fencing	Marsh	accrued	\$50	3	\$150	5	\$30	\$30				
Subtotal Pest Management							\$7,189	\$7,189	\$0	\$0	\$0	\$0
Agriculture Management (rice and alfalfa farming)												
coordination with farmer	Rice	annual			\$3,200	1	\$3,200			\$3,200		
Hunting Management												
prepare hunting plan	Hunting				\$0	1	\$0				\$0	
manage hunting program	Hunting				\$0	1	\$0				\$0	
coordinate with Sacramento Int. Airport	Hunting	annual			\$600	1	\$600				\$600	
winter water	Hunting	annual	\$6	884	\$5,525	1	\$5,525				\$5,525	
Subtotal Hunting Management							\$6,125	\$0	\$0	\$0	\$6,125	\$0
Public Access and Interpretation												
provide guided tours	Marsh, Upland	annual			\$2,080	1	\$2,080	1040	1040			
prepare hanbooks & misc interpretive material	Marsh, Upland				\$2,000	2	\$1,000	500	500			
Subtotal Public Access and Interpret.							\$3,080	\$1,540	\$1,540	\$0	\$0	\$0
Monitoring												
general field monitoring of veg. & wildlife	All	annual			\$6,336	1						
site specific multi-species wildlife survey	All	accrued			\$30,000	5						
conduct site specific ggs field surveys	All	accrued			\$60,000	1						
conduct site specific swainson's hawk survey	Upland	annual			\$12,000	1						
waterfowl activities	Marsh, Rice	annual			\$6,240	1						
prepare reports	All	annual			\$2,272	1						
general agency coordination	All	annual			\$1,136	1						
Subtotal Monitoring							\$0	\$0	\$0	\$0	\$0	\$0
Adaptive Management												
labor to implement changes to various management practices	All	annual			\$3,912	1						
Subtotal Adaptive Management							\$0	\$0	\$0	\$0	\$0	\$0

Monitoring costs excluded -- detailed separately in Figure 8

Adaptive management costs excluded -- detailed separately in Figure 8

Figure 7
Natomas Basin HCP
Estimated Operations & Maintenance Costs by Land Use Activity
Based on Wildlands, Inc Site Specific Management Plans for NBC Mitigation Lands, June 2003 [1]

Operations and Maintenance Cost Assumptions

Task	Category	Expenditure Type	Cost/Item	Items	Total Cost	Recurrence Interval	Total Annual Cost	Marsh	Upland	Rice	Hunting	Monit./ Mngmt./ Misc.
Miscellaneous												
trespass management	All	annual			\$4,488	1	\$4,488					\$4,488
site security					\$12,000	1	\$12,000					\$12,000
trash clean-up	All	annual			\$4,544	1	\$4,544					\$4,544
truck	All	capital	\$ 25,000.0	2	\$50,000	5	\$10,000					\$10,000
atv	All	capital	\$ 6,000.0	2	\$12,000	5	\$2,400					\$2,400
trailer for atv	All	capital	\$ 2,500.0	1	\$2,500	20	\$125					\$125
handtools	All	annual	\$ 200.0	1	\$200	1	\$200					\$200
backpack sprayer	All	capital	\$ 200.0	2	\$400	5	\$80					\$80
weed eater	All	capital	\$ 650.0	2	\$1,300	3	\$433					\$433
fuels and oils	All	annual	\$ 3,000.0	2	\$6,000	1	\$6,000					\$6,000
tractor with implements	All	capital	\$ 55,000.0	1	\$55,000	15	\$3,667					\$3,667
trailer for tractor	All	capital	\$ 4,000.0	1	\$4,000	15	\$267					\$267
misc. equipment maintenance	All	annual	\$ 3,000.0	1	\$3,000	1	\$3,000					\$3,000
fence maintenance	All	annual			\$768	1	\$768					\$768
signage	All	annual			\$448	1	\$448					\$448
insurance	All	annual	\$ 2,100.0	1	\$2,100	1	\$2,100					\$2,100
winter bird management	All	annual			\$7,700	1	\$7,700					\$7,700
project managment/administration/misc project coordination (10% of work year)	All	annual			\$7,052	1	\$7,052					\$7,052
Subtotal Miscellaneous							\$65,272	\$0	\$0	\$0	\$0	\$57,572
Subtotal All Costs							\$224,441	\$134,424	\$15,420	\$3,200	\$6,125	\$57,572
Contingency						10%	\$22,444	\$13,442	\$1,542	\$320	\$613	\$5,757
Total Costs							\$246,885	\$147,866	\$16,962	\$3,520	\$6,738	\$63,329
Acre Allocation							1,053	1,053	1,053	1,053	1,053	1,053
Estimated Cost Per Acre							\$234.46	\$140.42	\$16.11	\$3.34	\$6.40	\$60.14

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[1] Cost estimates for 1,053 acres of managed habitat land.

"O&M_detail"

Figure 8
Natomas Basin HCP -- May 2003
Species & Habitat Monitoring Cost Assumptions

Task	Annual Cost	
	2004	Remaining Years
Project and Database Management		
1 Project Management	\$15,860	\$15,860
2 Database Management and Coordination	\$16,840	\$10,320
3 Integrated Basin-wide GIS database Mapping and Habitat Monitoring	\$20,730	\$9,900
Total	\$53,430	\$36,080
Basin-wide Monitoring		
4 Giant Garter Snake Monitoring	\$93,100	\$84,600
5 Swainson's Hawk Monitoring	\$19,240	\$19,240
6 Covered Species Survey on Non-reserve Control Sites	\$7,772	\$7,968
Total	\$120,112	\$111,808
Site Specific Monitoring		
First Year Baseline Inventory		
7 Baseline Habitat Inventory of Reserve Sites	\$8,848	\$0
8 Baseline Botanical Inventory of Reserve Sites	\$11,888	\$0
9 Baseline Covered Species Inventory of Reserve Sites	\$11,008	\$0
Subtotal	\$31,744	\$0
Annual Survey and Assessment		
10 Habitat Assessment for Covered Species	\$0	\$3,696
11 Invasive Species Assessment	\$0	\$2,464
12 Covered Species Surveys	\$0	\$16,632
Subtotal	\$0	\$22,792
Total	\$31,744	\$22,792
Reporting and Documentation		
13 Site Specific Monitoring Plans	\$14,438	\$5,286
14 Draft Annual Report	\$10,640	\$9,896
15 Final Annual Report	\$3,110	\$2,350
16 Draft Monitoring Program Document	\$13,576	\$0
17 Final Monitoring Program Document	\$3,920	\$0
Total	\$45,684	\$17,532
Direct Expenses	\$41,010	\$37,980
Other Costs		
Midpoint Program Reviews [1]	\$2,900	\$2,900
Connectivity -- Assessment	\$2,400	\$2,400
Connectivity -- O&M	\$5,000	\$5,000
Adaptive Management -- Periodic Review of NBHCP Monitoring Data	\$3,600	\$3,600
Adaptive Management -- Report to Review Adaptive Management.	\$6,120	\$6,120
Total	\$20,020	\$20,020
TOTAL SPECIES AND HABITAT MONITORING COSTS	\$312,000	\$246,212

monitoring_assumps

Source: Jones & Stokes, TNBC

[1] Overall program review (\$125,000) plus support for Sutter County and City of Sacramento midpoint reviews (\$20,000) averaged over 50 years.

Figure 9
Natomas Basin HCP
Estimated Annual Natomas Basin Conservancy (NBC) Administrative Costs

	2004 Annual Cost	2003 Annual Cost	Notes
			(for comparison)
<u>Administrative Expenses</u>			
Staff	\$200,843	\$205,000	
Benefits	\$66,278	\$67,650	
Board Expense	\$10,000	\$6,000	
Subtotal	\$277,121	\$278,650	
<u>Office Expense</u>			
Rent	\$38,000	\$37,000	
Telephone	\$6,200	\$4,000	
Copying & Printing	\$16,000	\$16,000	
Office Supplies	\$5,000	\$5,000	
Postage	\$1,000	\$1,000	
Equipment	\$15,000	\$2,500	
Auto Expense	\$7,000	\$6,500	
Subtotal	\$88,200	\$72,000	
<u>Miscellaneous Expense</u>			
Insurance	\$60,000	\$30,000	Liability and D&O
Accounting	\$27,500	\$17,500	
Legal	\$76,000	\$60,000	
Fees and Taxes	\$24,000	\$2,000	
Subtotal	\$187,500	\$109,500	
<u>Contract Work and Monitoring</u>			
Contract Work, Public Education, and Publications [1]	\$125,000	\$105,000	
Monitoring	\$246,212	\$244,350	
Subtotal	\$371,212	\$349,350	
Less Monitoring	(\$246,212)	(\$244,350)	Included separately in Figure 7
Subtotal Contract Work	\$125,000	\$105,000	
Subtotal Costs	\$677,821	\$565,150	
Contingency	\$101,673	\$84,773	15% Contingency
Total Administration During Habitat Acquisition Phase	\$779,494	\$649,923	
Total Administration After Habitat Acquisition	\$779,494	\$649,923	

"admin_assumps"

[1] Reduction from budget amount reflects estimates and experience since budget adoption.
Source: NBC FY 2004 budget estimate

Figure 10
Natomas Basin HCP -- May 2003
Supplemental Endowment Cost Assumptions

Item	Amount
<u>200 Acre Reserve and/or Purchase of Final 200 Acres</u>	
Total Cost Per Acre	\$15,000
Acres	200
Total Estimated Acquisition Cost	\$3,000,000
Less Supplemental Endowment Fee Revenue	
Collected to Date (excluding Changed Circum. portion)	(\$392,583)
Total Remaining Cost	\$2,607,417
Remaining Development (acres)	11,709
Total Cost Per Developed Acre	\$223
Total Cost Per Habitat Acre	\$445
<u>Changed Circumstance Contingency</u>	
Total Cost Per Habitat Acre	\$500
TOTAL COST PER HABITAT ACRE	\$945

supp_endow_assumps

Source: The Natomas Basin Conservancy and EPS