

Appendix C. Fiscal Analysis Data Sources and Methodology

The following sections provide details concerning the data sources, methodology, and assumptions employed in the assessment of the fiscal impacts of developing a riparian corridor along the Sacramento River.

DATA SOURCES

Data used to characterize the existing fiscal environment of counties affected by the proposed habitat restoration and to assess the potential fiscal impacts of restoration were collected from numerous sources. Much of the data used for the analysis, however, was collected through a written data request made to the county assessor's offices in Butte, Colusa, Glenn, and Tehama Counties. In response, each county provided data from county tax rolls and from other county departments, such as the auditor-controller's office and finance department. Follow-up phone calls were made to personnel in the county offices to clarify data and to gather additional information.

Following is a list of the primary data sources used for the fiscal analysis. The specific county contacts and documents providing data for the study are listed in the references section of this report (Section 8).

Current land use and land ownership data: data concerning the current distributions of private and government lands and land use types within the study area were provided by a California Department of Water Resources (DWR) ownership database (DWR 2001) and by land use mapping data available through DWR (DWR; 1998 and 1999). See "Agricultural Resources Effects" for a more-detailed description of methods used to estimate current land uses within the study area.

With-restoration land use data: estimates of land use within the study area under with-restoration conditions were prepared as part of the agricultural effects analysis conducted for this report. See "Agricultural Resources Effects" for a discussion of the methods used to estimate land use in the study area under with-restoration conditions.

Parcel-number data: Parcel numbers for parcels within or bisected by the study area boundary were provided by DWR's parcel database (DWR 2001).

Current county budget and fiscal data: Data on each county's current property tax base, property tax revenues, sales tax revenues, tax rates, and revenue allocations

(i.e., percentage distributions of specific revenues among agencies and districts) were collected directly from county personnel, or from budget documents provided by these personnel. The personnel were located in the assessor's office, auditor-controller's office, or finance department of each county.

Current assessed value and Williamson Act data: Current assessed value data for parcels within or bisected by the study area boundary were provided by parcel data collected by the assessor's office in each county in response to a written data request listing the parcel numbers of potentially affected parcels. The parcel-level data also provided information on the number of acres currently under Williamson Act contracts.

Current State In Lieu and Federal Revenue Sharing Payments: Data on current levels of state in lieu payments and federal revenue sharing payments made to each of the counties was collected from government Web sites and documents. Similarly, information on federal revenue sharing payment rates was gathered from a USFWS Web site.

Average farmland market values: Information concerning current average market values (per acre) for croplands within the study area was provided by a Butte County Administrative Office report on land acquisition for resource protection purposes in Butte County, and by personnel in the Butte County, Colusa County, and Glenn County assessor's offices. (Tehama County did not provide this requested information.)

Specific assumptions for impact analysis: Assumptions incorporated into the fiscal impact analysis concerning long-term interest rates, farmland market appreciation rates, and property ownership turn-over rates were provided by a 1999 report prepared for the USFWS by R. G. Adams and D. E. Gallo on the impact on Glenn County property tax revenues of public land acquisitions in the Sacramento River Conservation Area.

Sales tax impact data: Sales tax effects of the proposed habitat restoration were estimated using the IMPLAN economic input-output model, which incorporates a data base comprising a variety of government economic and fiscal data. Refer to "Regional Economic Impacts" and Appendix B for a more-detailed description of the IMPLAN model.

KEY ASSUMPTIONS AND METHODS

The fiscal assessment focused on estimating how public revenues generated by land uses within the study area would change over the 2000-2030 period with implementation of the various riparian habitat restoration programs along the Sacramento River. Revenues evaluated as part of the assessment included property tax revenues generated by private properties, in lieu tax payments generated by state-owned lands, revenue-sharing payments generated by federally owned properties, state subvention payments generated by private properties under Williamson Act contracts, and sales tax revenues generated by agricultural, recreational, and habitat restoration activities.

Revenues were estimated for three conditions and two time periods: pre-restoration conditions (i.e., year 2000), future without-restoration conditions (i.e., year 2030), and future with-restoration conditions. Interim effects of the restoration were not quantified but are qualitatively discussed in the Interim Effects portion of Section 6.

The analysis was conducted using constant 2000 dollars and involved the following steps.

Step 1: Estimate Average Pre-Program and Future Property Values (Per Acre) for the Study Area

The value of study area properties owned by private, state, and federal entities is the key variable in determining the level of revenues generated by future uses of lands within the study area. For example, private properties generate tax revenues based on their assessed values, which tend to lag market values over time, whereas state and federal properties generate in-lieu-of-tax revenues based on their assessed and appraised market values at different intervals. Consequently, estimating future property values for different types of property (i.e., privately owned, state owned, federally owned) was a necessary step prior to estimating the revenue effects of habitat restoration. .

TNC cannot identify the specific properties within the study area that will be acquired and restored in the future because properties will be acquired on a willing-seller basis. As a result, the fiscal analysis was required to rely on average per-acre property values to assess future revenue effects. These values were expanded to establish the future valuation base for each revenue type (e.g., property tax, state in lieu payments, federal revenue sharing payments) by multiplying the per-acre values by the amount of property in each county under each type of ownership (i.e., private, state, federal). The assumptions and methods used to establish the per-acre valuations are described below.

Note that one goal of the analysis was to keep all monetary values in constant 2000 dollars; therefore, the effects of inflation over the 30-year study period on assessed and market values were removed by ensuring that factors used to adjust property values reflected real (i.e., net of inflation) trends rather than nominal (i.e., unadjusted for inflation) trends. To accomplish this, a future annual inflation rate of 3% was assumed for the analysis. This rate is based on the average inflation rate over the 1929-1998 period (Adams and Gallo 1999), reflecting long-term inflation trends that could be expected over the 30-year study period.

Step 1a: Estimate Average Per-Acre Assessed Values in the Study Area under Pre-Restoration (Year 2000) Conditions. Average pre-restoration assessed values (per acre) for privately owned study area properties were estimated by collecting and compiling 2001 assessed value data for land and improvements for parcels fully and partially within the study area. Per-acre values were then calculated for each county by dividing the total assessed value of affected parcels by the total acreage of the parcels, resulting in the following per-acre averages of assessed value for the four counties:

- Butte County: \$2,400
- Colusa County: \$2,250
- Glenn County: \$2,900
- Tehama County: \$2,300

Step 1b: Estimate Average Per-Acre Market Values in the Study Area under Pre-Restoration (Year 2000) Conditions.

Average per-acre market values for farmland within the study area under pre-restoration conditions were estimated based on information provided by Butte County and Colusa County. As a starting point, per-acre farmland values developed by the Butte County Administrative Office (2001) for a report to the Butte County Board of Supervisors on land acquisition for resource protection were sent to personnel in the Colusa, Glenn, and Tehama County assessors' offices for review and comment. In response, the Colusa County Assessor's Office provided alternative, generally lower, values (Rene' pers. comm.), and the Glenn County Assessor's Office commented that the Butte County values appeared to be high, especially for tree crops (Wadsworth pers. comm.). As a result of these comments, market value assumptions were developed by taking the midpoint between the Butte County and Colusa County values, resulting in the following per-acre farmland values.

- Vegetable crops, \$3,500
- Irrigated field crops, \$2,400
- Rangeland and other open space lands, \$300
- Almonds, \$6,500
- Walnuts, \$6,750
- Prunes, \$6,000

To account for the value of structural improvements, which are not included in the farmland market values, a value of \$550 per acre, reflecting the average value of structural improvements for private properties within the study area, was added to the per acre farmland values. The resulting values are shown in Table C-1.

Step 1c: Estimate Average Per-Acre Assessed Values in the Study Area under Future (Year 2030) Conditions.

In year 2030, the assessed value of private property remaining in the study area would, in essence, represent the purchase price of property, adjusted for changes in inflation, as limited by Proposition 13, since the purchase date. Under Proposition 13, the annual inflation adjustment is equal to the increase in the California consumer price index up to 2% (hereafter referred to as the Proposition 13 inflation adjustment factor). The inflation adjustment is from the base year appraisal; that is, the value in the year the current owner purchased the property. (Adams and Gallo 1999) Because the Proposition 13 inflation adjustment factor often lags the actual rate of inflation and market appreciation over time, assessed values are often significantly lower than market values. Assuming that inflation averages 3% over the 30-year study period, assessed property values would actually decrease in

Table C-1. Per Acre Property Valuations Developed for the Fiscal Analysis
(2000 Dollars)

Land Use/Land Type Acquired	Private Property		DFG Property Year 2030 ^c	USFWS Property Year 2030 ^d
	Year 2000 ^a	Year 2030 ^b		
Vegetable crops	\$4,050	\$4,260	\$1,710	\$4,300
Irrigated field crops	\$2,950	\$3,100	\$1,170	\$2,950
Rangeland and open space	\$850	\$900	\$150	\$370
Almonds	\$7,050	\$7,420	\$3,180	\$7,980
Walnuts	\$7,300	\$7,680	\$3,300	\$8,290
Prunes	\$6,550	\$6,890	\$2,940	\$7,370

Notes:

- a Represents the average market value of privately owned properties in 2000, including improvements.
- b Represents the average assessed value of privately owned properties in 2030, including improvements, in 2000 dollars.
- c Represents the average value, excluding improvements, for purposes of determining state in lieu payments, in 2030 of properties acquired and transferred to DFG ownership over the study period, in 2000 dollars.
- d Represents the average value, excluding improvements, for purposes of determining federal revenue sharing payments, in 2030 of properties acquired and transferred to USFWS ownership over the study period, in 2000 dollars.

Source: See the "Key Assumptions and Methods" section of this appendix for a description of assumptions and methods used to develop property value estimates.

value by 1% annually in real (i.e., constant) dollar terms. The assessed values of properties catch up to market values when they are re-sold, which triggers a reappraisal for taxation purposes.

For this study, it was assumed that private properties remaining in private ownership would be re-sold once every 20 years (Adams and Gallo 1999), indicating that 50% of the properties remaining in private ownership in 2030 would be sold once and 50% of the properties would be sold twice over the 30-year study period. The properties that would be sold once would be sold, on average, at the midpoint of the first 20 years (i.e., year 10); the properties that would be sold twice would be sold the second time at the mid-point of the year 20-30 period (i.e., year 2025). Consequently, the properties sold once would, on average, experience 10 years of real market appreciation followed by 20 years of Proposition 13-related deflation (i.e., 2% Proposition 13 inflation adjustment minus 3% actual inflation, resulting in 1% annual deflation). The properties sold twice would, on average, experience 25 years of real market appreciation followed by 5 years of Proposition 13-related deflation. Over the 30-year study period, real market appreciation was assumed to annually average 0.95%, reflecting the average annual rate of increase for U.S. farmland and buildings over the 1970-1998 period (Adams and Gallo 1999).

Applying the assumptions and factors discussed above resulted in a 30-year average adjustment factor of 1.052, reflecting a net increase of 5.2% over the 30-year period. This factor was applied to the pre-restoration market values developed in Step 1b to estimate the assessed values of private properties in year 2030. The resulting per acre values, expressed in constant 2000 dollars, are shown in Table C-1.

Step 1d: Estimate Average Per-Acre State In-Lieu Values for DFG Properties under Future (Year 2030) Conditions. For purposes of determining state in-lieu payments to counties, the valuation of properties acquired by the California Department of Fish and Game (DFG) is established by the pre-sales appraised value of properties. The property values are held constant over time, and are therefore eroded in value, in real dollar terms, by inflation. Assuming that TNC and others acquire and transfer study area properties to DFG ownership in equal increments over the first 10 years of the 30-year study period, property valuations for in lieu payment purposes would, on average, reflect market prices at the mid-point of the first 10 years of the study period (i.e., year 2005). Consequently, the values, in 2000 dollars, of properties transferred to DFG ownership over the 30-year period would reflect, on average, 5 years of annual 0.95% real market appreciation and 25 years of annual 3% deflation. Applying these assumptions and factors results in a 30-year average adjustment factor of 0.490, which was applied to the pre-program market values developed in Step 1b to estimate the 2030 in-lieu values of properties transferred to DFG ownership over the 30-year study period. The resulting per acre values, expressed in constant 2000 dollars, are shown in Table C-1. These values do not reflect the value of structural improvements, which would presumably be removed prior to transfer of properties to state ownership.

For properties already under DFG ownership in the study area, their future values would remain frozen at their current levels, with the values continuing to be eroded by inflation over the 30-year study period. To estimate the in lieu revenue (in constant 2000 dollars) generated by existing DFG properties in the year 2030, the estimated pre-program in lieu revenue estimates

for the study area were multiplied by a factor of 0.401, which reflects the erosion in value caused by 3% annual inflation over the 30-year study period.

Step 1e: Estimate Average Per-Acre Federal Revenue-Sharing Values for USFWS Properties under Future (Year 2030) Conditions. For purposes of determining federal revenue sharing payments to counties, the valuation of properties acquired by USFWS is established by the purchase price of properties. Unlike the valuation of state-owned properties, federal properties are reappraised and adjusted in value every five years. Additionally, for most properties acquired by USFWS in the Sacramento Valley, structural improvements are eventually removed from the properties; therefore, future appraisals usually exclude the value of improvements that were in place at the time the properties were acquired (Coster pers.comm.). For this study, it was assumed that the landowner would remove structural improvements, reducing the value of properties, prior to transferring ownership of properties to USFWS. Assuming that TNC or others acquire and transfer study area properties to federal ownership in equal increments over the first 10 years of the 30-year study period, all federal properties would be reappraised and brought up to current market values within five years of 2030. Based on the five-year reappraisal schedule, on average 20% of the federal properties would be reappraised each year. Consequently, at 2030, 20% of the federal properties would, on average, reflect 30 years of real market appreciation, 20% would reflect 29 years of market appreciation and one year of 3% deflation, 20% would reflect 28 years of market depreciation and two years of 3% annual deflation, 20% would reflect 27 years of market appreciation and three years of 3% annual deflation, and 20% would reflect 26 years of market appreciation and four years of 3% annual deflation. Applying these assumptions and factors resulted in a 30-year average adjustment factor of 1.228, which was applied to the pre-restoration farmland market values developed in Step 1b to estimate the 2030 revenue-sharing valuations of properties transferred to federal ownership over the 30-year study period. The resulting per acre values, expressed in constant 2000 dollars, are shown in Table C-1.

For properties already under USFWS ownership in the study area, their future values would also be re-established by new appraisals every five years over the 30-year study period. Consequently, to estimate the federal revenue sharing payments (in constant 2000 dollars) generated by existing USFWS properties in the year 2030, the estimated pre-restoration federal revenue sharing payments generated by study area properties were adjusted by the same factor used to adjust future acquisitions (i.e., 1.228).

Step 2: Estimate Pre-Restoration (Year 2000) Revenues Generated by Study Area Land Uses

Step 2a: Estimate Property Tax Revenues under Pre-Restoration Conditions. To estimate property tax revenues generated by private properties under pre-restoration (year 2000) conditions, the average assessed values for each county developed in Step 1a were multiplied by the amount of private acreage currently within the study area in each county. This calculation resulted in the estimated total assessed value of private properties within the study area in each county. The property tax revenue generated by these properties was

then calculated by applying the average property tax rate for each county. Estimated revenues were then allocated to counties, schools, and special districts based on the revenue allocations shown in Table C-2. The resulting pre-restoration revenues are shown in Table C-3.

Step 2b: Estimate State In-Lieu Payments under Pre-Restoration

Conditions. Current state payments made in lieu of tax payments for state wildlife lands in the study area were estimated by first calculating the current countywide per-acre payments made by the state to each county, then multiplying this average by the number of state-owned acres within the study area. As discussed previously, CDFG made payments in lieu of taxes on properties in designated wildlife areas totaling as follows for the 2000-01 fiscal year: Butte County, \$96,400 for 21,056 acres; Colusa County, \$3,090 for 782 acres; Glenn County, \$57,410 for 6,322 acres; and Tehama County, \$21,210 for 3,715 acres (California Department of Fish and Game 2000). Based on these figures, the following per-acre payment estimates were developed.

- Butte County: \$4.60
- Colusa County: \$3.95
- Glenn County: \$9.10
- Tehama County: \$5.70

Total payments for lands within the study area were then calculated by multiplying the per-acre payment estimates by the number of DFG-owned acres within the study area in each county. The distributions of state revenues among the county, schools, and special districts were estimated using the revenue allocations shown in Table C-2. The resulting pre-restoration revenues are shown in Table C-3.

Step 2c: Estimate Federal Revenue Sharing Payments under Pre-Restoration Conditions.

Federal revenue sharing payments currently generated by federally owned properties in the study area for each county were estimated using the same methodology employed to estimate state in-lieu payments. During 2000, the federal government made the following revenue-sharing payments for qualifying properties under USFWS management: Butte County, \$45,000 on 3,481 acres; Colusa County, \$117,710 on 12,605 acres; Glenn County, \$110,250 on 11,590 acres; and Tehama County, \$52,630 on 4,080 acres (U.S. Fish and Wildlife Service 2001b). These payments result in the following per-acre estimates for current federal revenue sharing payments for properties within the study area:

- Butte County: \$12.90
- Colusa County: \$9.30
- Glenn County: \$9.50
- Tehama County: \$12.90

Total federal payments for lands within the study area were then estimated by multiplying the per-acre payment estimates by the number of USFWS-owned acres within the study area in each county. The distributions of federal revenues among the county, schools, and

special districts were estimated using the revenue allocations shown in Table C-2. The resulting pre-restoration revenues are shown in Table C-3.

Step 2d: Estimate Williamson Act Subvention Payments under Pre-Restoration Conditions. Levels of State Williamson Act subvention payments made annually to counties are based on the amount of acreage under contract in each county, the distribution of contract acreage between the prime and non-prime agricultural land categories, and the state subvention payments rates for prime and non-prime lands.

To estimate current levels of subvention payments generated by properties within the study area in each county, the amount of land under Williamson Act contracts was estimated based on parcel data collected from county assessor's offices identifying Williamson Act properties within or bisected by the study area boundary. Using this data, the percentages of all private land under contract potentially affected by the restoration were determined for each county, as follows: Butte County, 42%; Colusa County, 23%; Glenn County, 29%; Tehama County, 77%. These percentages were then applied to the total amount of private acreage within the study area in each county to estimate the amount of that acreage currently under Williamson Act contracts. For all counties other than Tehama, the Williamson Act acreage estimates were then allocated to the prime and non-prime agricultural land categories using data from the California Department of Conservation (2001) on the countywide distributions of contract lands between the two categories. These percentages (52% prime, 48% nonprime for Butte County; 28% prime, 72% nonprime for Colusa County; 25% prime, 75% nonprime for Glenn County) were applied to the estimates of total Williamson Act acreage within the study area to estimate the amount of acreage in each category. For Tehama County, actual parcel data provided by the Tehama County Assessor's Office showing prime and nonprime acreage for properties within or bisected by the study area boundary was used to determine the percentage of Williamson Act property within the study area in the prime (33%) and nonprime (67%) categories. (These data were not provided by the other three counties due to privacy considerations.)

To estimate the amounts of subvention payments currently generated by the study area, the acreage figures for each county were multiplied by the current Williamson Act subvention payment rate of \$5 per acre for prime agricultural land and \$1 per acre for nonprime agricultural land. The distributions of subvention revenues among the county, schools, and special districts were estimated using the revenue allocations shown in Table C-2. The resulting pre-restoration revenues are shown in Table C-4.

Step 2e: Estimate Sales Tax Revenues under Pre-Restoration Conditions.

The amount of sales tax revenue currently generated for the counties by agricultural production in the study area was estimated using estimates of the study area's agricultural production value prepared for this report's assessment of existing agricultural conditions. The production value estimates for each crop type were entered into the IMPLAN input-output models developed for each county. Estimates of sales tax revenue generated by agricultural production in the study area were then generated by the model's tax estimation component. (Refer to Appendix B for a description of the IMPLAN model.) The tax-payment calculations generated by the IMPLAN model include estimates of direct (i.e., made by farm operators) and secondary (i.e., made by indirectly affected businesses and employees) levels of sales tax payments associated with

Table C-2. Average Distribution of Affected Revenues Among
County Funds, Schools Funds, and Special Districts

County/Revenue Recipient	Property Tax Revenue	Federal Revenue Sharing Payments	State Payments In Lieu of Taxes	Williamson Act Subvention Payments
Butte County:				
County funds	26%	100%	26%	100%
School funds	69%	0%	69%	0%
Special districts	5%	0%	5%	0%
Colusa County:				
County funds	25%	43%	43%	100%
School funds	59%	45%	45%	0%
Special districts	16%	12%	12%	0%
Glenn County:				
County funds	29%	29%	100%	100%
School funds	67%	67%	0%	0%
Special districts	4%	4%	0%	0%
Tehama County:				
County funds	26%	26%	26%	100%
School funds	70%	70%	70%	0%
Special districts	4%	4%	4%	0%

Sources: Bene, Garner, Haynes, and Jones pers. comms.

Table C-3. Estimated Pre-Restoration (Year 2000) Property Tax, State In Lieu, and Federal Revenue-Sharing Revenues Generated by Properties within the Study Area (2000 Dollars)

County	Privately Owned Properties						State Fish & Game Department Properties						U.S. Fish & Wildlife Service Properties						Total (All Properties)			
	Acres	Assessed Value per Acre	Total Property Tax Revenue	County Revenue	School Revenue	Special District Revenue	Acres	In Lieu Revenue per Acre	Total In Lieu Revenue	County Revenue	School Revenue	Special District Revenue	Acres	Federal Revenue per Acre	Total Federal Revenue	County Revenue	School Revenue	Special District Revenue	Total Revenue	County Revenue	School Revenue	Special District Revenue
Butte	8,273	\$2,400	\$208,480	\$54,205	\$143,851	\$10,424	500	\$4.60	\$2,300	\$598	\$1,587	\$115	2,521	\$12.90	\$32,521	\$32,521	\$0	\$0	\$243,301	\$87,324	\$145,438	\$10,539
Colusa	5,003	\$2,250	\$118,196	\$29,549	\$69,736	\$18,911	941	\$3.95	\$3,717	\$1,598	\$1,673	\$446	0	\$9.30	\$0	\$0	\$0	\$0	\$121,913	\$31,147	\$71,408	\$19,357
Glenn	8,704	\$2,900	\$252,416	\$73,201	\$169,119	\$10,096.64	2,240	\$9.10	\$20,384	\$20,384	\$0	\$0	3,045	\$9.50	\$28,928	\$8,389	\$19,381	\$1,157	\$301,728	\$101,974	\$188,500	\$11,254
Tehama	12,431	\$2,300	\$285,913	\$74,337	\$200,139	\$11,437	442	\$5.70	\$2,519	\$655	\$1,764	\$101	2,946	\$12.90	\$38,003	\$9,881	\$26,602	\$1,520	\$326,436	\$84,873	\$228,505	\$13,057
Total	34,411	N/A	\$865,004	\$231,292	\$582,844	\$50,868	4,123	N/A	\$28,920	\$23,235	\$5,023	\$662	8,512	N/A	\$99,452	\$50,791	\$45,984	\$2,677	\$993,377	\$305,318	\$633,851	\$54,208

Source: Refer to description of methodology in text under "Key Assumptions and Methods."

Table C-4. Estimated Pre-Restoration (Year 2000) State Williamson Act Subvention Payments Generated by Properties within the Study Area (2000 Dollars)

County	Total Private Acres	Williamson Act Acres	Prime Acres	Nonprime Acres	Total Williamson Act Payments	County Revenue	School Revenue	Special District Revenue
Butte	8,273	3,475	1,807	1,668	\$10,702	\$10,702	\$0	\$0
Colusa	5,003	1,151	322	828	\$2,439	\$2,439	\$0	\$0
Glenn	8,704	2,524	631	1,893	\$5,048	\$5,048	\$0	\$0
Tehama	12,431	9,572	3,159	6,413	\$22,207	\$22,207	\$0	\$0
Total	34,411	16,721	5,919	10,803	\$40,396	\$40,396	\$0	\$0

Source: Refer to description of methodology in text under "Key Assumptions and Methods."

existing production levels. (Note that IMPLAN may overestimate secondary sales tax effects because some study area landowners reside outside of the affected counties and would therefore re-spend profits and rents received from their study area properties elsewhere. This would result in a leakage of spending by out-of-county landowners and slightly lower sales tax revenues for study area counties.) The amount of total sales tax revenue remaining within each county was estimated assuming that local revenues equal 14% (i.e., 1% of the 7.25% sales tax rate) of total sales tax revenue. The percentage of total local revenue assigned to each county (as opposed to cities within each county) was estimated using Board of Equalization (2001) data showing the existing percentage of taxable transactions occurring within the unincorporated portion of each county. These percentages are as follows: Butte County, 15%; Colusa County, 29%; Glenn County, 35%; Tehama County, 11%. The resulting pre-restoration sales tax revenues received by each county are shown in Table C-5. These pre-restoration revenues, together with property-related revenues, are summarized in Table C-6.

Step 3: Estimate Future (Year 2030) Without-Restoration Revenues

Under future without-restoration conditions, property ownership patterns within the study area are assumed to remain unchanged from current conditions, that is, the percentage distribution of land between private and public owners is assumed to be the same as under pre-program (2000) conditions. Revenues generated by land uses, however, would change over time due to property sales, inflation, and market appreciation, as described in Step 1.

Step 3a: Estimate Property Tax Revenues under Future Without-Restoration Conditions. Under without-restoration conditions, private properties within the study area would continue to generate property tax revenues for the counties. The levels of revenues, however, would be affected by countervailing factors impacting on assessed values. Assessed values would increase over time because of reappraisals triggered by periodic property sales, which would bring assessed values in line with market values; however, assessed values would also decrease, in real dollar terms, because of Proposition 13-related deflation. The net effect, in constant 2000 dollars, would be a small increase in assessed values, estimated at 5.2% over the 30-year study period (see Step 1c). This increase was applied to estimated pre-restoration property market values, resulting in the future assessed value estimates shown in Table C-1.

The values in Table C-1 were multiplied by the existing amounts of private farmlands in each cropland category (see “Agricultural Resources Effects”) to calculate the total assessed value of private lands within the study area in 2030. Current property tax rates and the revenue distribution percentages shown in Table C-2 were applied to determine property tax revenues generated by private properties in 2030 under without-restoration conditions. The resulting future without-restoration property tax revenues are shown in Table C-7.

Step 3b: Estimate State In-Lieu Payments under Future Without-Restoration Conditions. As discussed previously, state in-lieu payments are constant over time. Consequently, state in lieu payments under future without-restoration conditions would

reflect current annual payments adjusted for inflationary effects. Based on the methods described in Step 1d, the value of current in-lieu payments was adjusted by a factor of 0.401, reflecting the corrosive effects of inflation over the 30-year study period, to arrive at the value of future payments (in 2000 dollars) under without-restoration conditions. The distributions of state revenues among the county, schools, and special districts were estimated using the revenue allocations shown in Table C-2. The resulting future without-restoration state in lieu revenues are shown in Table C-7.

Step 3c: Estimate Federal Revenue Sharing Payments under Future Without-Restoration Conditions. Under future without-restoration conditions, qualifying properties currently under USFWS ownership would continue to be reappraised every five years to establish their federal revenue sharing values. Consequently, federal revenue sharing payments under future without-restoration conditions would reflect current annual payments generated by study area properties adjusted by market appreciation and inflationary effects. Based on the methods described in Step 1d, the value of current federal revenue sharing payments were adjusted by a factor of 1.228, reflecting the net effects of real market appreciation and inflation, to arrive at the value of current payments in 2030 (in 2000 dollars). The distributions of federal revenues among the county, schools, and special districts were estimated using the revenue allocations shown in Table C-2. The resulting future without-restoration federal revenue sharing payments are shown in Table C-7.

Step 3d: Estimate Williamson Act Subvention Payments under Future Without-Restoration Conditions. Williamson Act subvention payments generated by study area properties would not change in the future unless the state legislature changes subvention payment rates. Assuming payments rates are not adjusted in the future and the amount of land under Williamson Act contracts within the study area remains at existing levels, state Williamson Act subvention payments made annually to counties under future-without restoration conditions would reflect current payments generated by study area properties adjusted for inflationary effects. To estimate the value of current payments in 2030 (in 2000 dollars), current subvention payments were adjusted by a factor of 0.401, reflecting the corrosive effects of inflation over the 30-year study period. The distributions of Williamson Act subvention payments among the counties, schools, and special districts were estimated using the revenue allocations shown in Table C-2. The resulting future without-restoration subvention payments are shown in Table C-8.

Step 3e: Estimate Sales Tax Revenues under Future Without-Restoration Conditions. Under future without-restoration conditions, agricultural production levels were assumed to remain the same as under pre-restoration conditions, suggesting that sales tax revenues generated by agricultural production in the study area would be the same as under pre-restoration conditions. Taxable purchases generated by agricultural production would presumably rise at the same rate as inflation; therefore, no adjustment to sales tax revenues generated by pre-restoration conditions was required to reflect future revenues in constant 2000 dollars. The sales tax revenue estimates and distributions derived under Step 2e were used to represent future without-restoration conditions. These future without-restoration revenues are shown in Table C-9 and are summarized, together with property-related revenues, in Table C-10.

Table C-5. Estimated Pre-Restoration (Year 2000) County Sales Tax Revenues
Generated by Use of Properties within the Study Area (2000 Dollars)

County	Agriculture		Habitat Monitoring		Onsite Recreation		Total County Sales Tax Revenue
	Total Sales Tax Revenue	County Sales Tax Revenue	Total Sales Tax Revenue	County Sales Tax Revenue	Total Sales Tax Revenue	County Sales Tax Revenue	
Butte	\$187,170	\$3,931	\$0	\$0	\$207,910	\$4,366	\$8,297
Colusa	\$44,590	\$1,810	\$0	\$0	\$417,900	\$16,967	\$18,777
Glenn	\$163,070	\$7,990	\$0	\$0	\$103,060	\$5,050	\$13,040
Tehama	\$232,870	\$3,586	\$0	\$0	\$966,100	\$14,878	\$18,464
Total	\$627,700	\$17,318	\$0	\$0	\$1,694,970	\$41,261	\$58,578

Source: Refer to description of methodology in text under "Key Assumptions and Methods."

Table C-6. Summary of Estimated Total Pre-Restoration (Year 2000) Revenues
Generated by Properties within the Study Area (2000 Dollars)

County	County Revenue	School Revenue	Special District Revenue	Total
Butte	\$106,322	\$145,438	\$10,539	\$262,299
Colusa	\$52,364	\$71,408	\$19,357	\$143,129
Glenn	\$120,062	\$188,500	\$11,254	\$319,816
Tehama	\$125,544	\$228,505	\$13,057	\$367,107
Total	\$404,293	\$633,851	\$54,208	\$1,092,351

Source: Summarized based on estimates of property tax, state in lieu payments, federal revenue sharing payments, Williamson Act subvention payments, and sales tax revenue presented in Tables C-3, C-4 and C-5.

Table C-7. Estimated Future (Year 2030) Property Tax, State In Lieu, and Federal Revenue-Sharing Revenues Generated by Properties within the Study Area under Without-Restoration Conditions (2000 Dollars)

County	Privately Owned Properties						State Fish & Game Department Properties						U.S. Fish & Wildlife Service Properties						Total (All Properties)			
	Acres	Assessed Value per Acre	Total Property Tax Revenue	County Revenue	School Revenue	Special District Revenue	Acres	In Lieu Revenue per Acre	Total In Lieu Revenue	County Revenue	School Revenue	Special District Revenue	Acres	Federal Revenue per Acre	Total Federal Revenue	County Revenue	School Revenue	Special District Revenue	Total Revenue	County Revenue	School Revenue	Special District Revenue
Butte:																						
Almonds	177	\$7,420	\$13,790	\$3,585	\$9,515	\$690	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Prunes	21	\$6,890	\$1,519	\$395	\$1,048	\$76	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Walnuts	1,923	\$7,680	\$155,071	\$40,318	\$106,999	\$7,754	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vegetable crops	235	\$4,260	\$10,512	\$2,733	\$7,253	\$526	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Irrigated field crops	1,952	\$3,100	\$63,538	\$16,520	\$43,841	\$3,177	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rangeland & other	3,965	\$900	\$37,469	\$9,742	\$25,854	\$1,873	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal	8,273	N/A	\$281,898	\$73,294	\$194,510	\$14,095	500	\$1.84	\$922	\$240	\$636	\$46	2,521	\$15.84	\$39,936	\$39,936	\$0	\$0	\$322,756	\$113,469	\$195,146	\$14,141
Colusa:																						
Almonds	5	\$7,420	\$390	\$97	\$230	\$62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Prunes	366	\$6,890	\$26,478	\$6,620	\$15,622	\$4,237	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Walnuts	1,008	\$7,680	\$81,285	\$20,321	\$47,958	\$13,006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vegetable crops	57	\$4,260	\$2,550	\$637	\$1,504	\$408	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Irrigated field crops	194	\$3,100	\$6,315	\$1,579	\$3,726	\$1,010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rangeland & other	3,373	\$900	\$31,875	\$7,969	\$18,806	\$5,100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal	5,003	N/A	\$148,892	\$37,223	\$87,846	\$23,823	941	\$1.58	\$1,490	\$641	\$671	\$179	0	\$11.42	\$0	\$0	\$0	\$0	\$150,383	\$37,864	\$88,517	\$24,002
Glenn:																						
Almonds	355	\$7,420	\$26,341	\$7,639	\$17,648	\$1,054	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Prunes	531	\$6,890	\$36,586	\$10,610	\$24,513	\$1,463	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Walnuts	2,296	\$7,680	\$176,333	\$51,137	\$118,143	\$7,053	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vegetable crops	37	\$4,260	\$1,576	\$457	\$1,056	\$63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Irrigated field crops	646	\$3,100	\$20,026	\$5,808	\$13,417	\$801	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rangeland & other	4,840	\$900	\$43,560	\$12,632	\$29,185	\$1,742	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal	8,705	N/A	\$304,422	\$88,282	\$203,963	\$12,177	2,240	\$3.65	\$8,174	\$8,174	\$0	\$0	3,045	\$11.67	\$35,523	\$10,302	\$23,800	\$1,421	\$348,119	\$106,758	\$227,763	\$13,598
Tehama:																						
Almonds	202	\$7,420	\$14,988	\$3,897	\$10,492	\$600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Prunes	1,022	\$6,890	\$70,416	\$18,308	\$49,291	\$2,817	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Walnuts	1,597	\$7,680	\$122,650	\$31,889	\$85,855	\$4,906	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vegetable crops	351	\$4,260	\$14,953	\$3,888	\$10,467	\$598	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Irrigated field crops	1,692	\$3,100	\$52,452	\$13,638	\$36,716	\$2,098	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rangeland & other	7,567	\$900	\$68,103	\$17,707	\$47,672	\$2,724	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal	12,431	N/A	\$343,561	\$89,326	\$240,493	\$13,742	442	\$2.29	\$1,010	\$263	\$707	\$40	2,946	\$15.84	\$46,668	\$12,134	\$32,668	\$1,867	\$391,240	\$101,722	\$273,868	\$15,650
Total	34,412	N/A	\$1,078,774	\$288,125	\$726,812	\$63,837	4,123	\$3	\$11,597	\$9,317	\$2,014	\$265	8,512	\$14	\$122,127	\$62,371	\$56,468	\$3,288	\$1,212,498	\$359,813	\$785,294	\$67,390

Source: Refer to description of methodology in text under "Key Assumptions and Methods."

Table C-8. Estimated Future (Year 2030) State Williamson Act Subvention Payments
Generated by Properties within the Study Area under Without-Restoration Conditions (2000 Dollars)

County	Total Private Acres	Williamson Act Acres	Prime Acres	Nonprime Acres	Total Williamson Act Payments	County Revenue	School Revenue	Special District Revenue
Butte	8,273	3,475	1,807	1,668	\$4,291	\$4,291	\$0	\$0
Colusa	5,003	1,151	322	828	\$978	\$978	\$0	\$0
Glenn	8,704	2,524	631	1,893	\$2,024	\$2,024	\$0	\$0
Tehama	12,431	9,572	3,159	6,413	\$8,905	\$8,905	\$0	\$0
Total	34,411	16,721	5,919	10,803	\$16,199	\$16,199	\$0	\$0

Source: Refer to description of methodology in text under "Key Assumptions and Methods."

Table C-9. Estimated Future (Year 2030) County Sales Tax Revenues
Generated by Use of Properties within the Study Area under Without-Restoration Conditions (2000 Dollars)

County	Agriculture		Habitat Monitoring		Recreation		Total County Sales Tax Revenue
	Total Sales Tax Revenue	County Sales Tax Revenue	Total Sales Tax Revenue	County Sales Tax Revenue	Total Sales Tax Revenue	County Sales Tax Revenue	
Butte	\$187,170	\$3,931	\$0	\$0	\$307,710	\$6,462	\$10,392
Colusa	\$44,590	\$1,810	\$0	\$0	\$618,490	\$25,111	\$26,921
Glenn	\$163,070	\$7,990	\$0	\$0	\$152,530	\$7,474	\$15,464
Tehama	\$232,870	\$3,586	\$0	\$0	\$1,429,840	\$22,020	\$25,606
Total	\$627,700	\$17,318	\$0	\$0	\$2,508,570	\$61,066	\$78,384

Source: Refer to description of methodology in text under "Key Assumptions and Methods."

Table C-10. Summary of Estimated Total Future (Year 2030)
Revenues Generated by Properties within the Study Area under
Without-Restoration Conditions (2000 Dollars)

County	County Revenue	School Revenue	Special District Revenue	Total
Butte	\$128,153	\$195,146	\$14,141	\$337,440
Colusa	\$65,763	\$88,517	\$24,002	\$178,282
Glenn	\$124,247	\$227,763	\$13,598	\$365,608
Tehama	\$136,233	\$273,868	\$15,650	\$425,750
Total	\$454,396	\$785,294	\$67,390	\$1,307,080

Source: Summarized based on estimates of property tax, state in lieu payments, federal revenue sharing payments, Williamson Act subvention payments, and sales tax revenue presented in Tables C-7, C-8 and C-9.

Step 4: Estimate Future (Year 2030) With-Restoration Revenues

With implementation of the habitat restoration,, approximately 6,900 acres of property currently under private ownership (including property currently under TNC ownership but in agricultural use) are assumed to be restored to meet the goal of establishing 30,000 acres of habitat (including habitat that currently exists) within the study area by 2030. By the end of the first 10 years of the 30-year study period, all land acquired and converted to habitat is assumed to be transferred to government ownership, with 60% in federal ownership and 40% in state ownership.

Step 4a: Estimate Property Tax Revenues under Future With-Restoration Conditions. Private properties not acquired and transferred to government ownership through the various habitat restoration programs would continue to generate property tax revenues for the counties at the end of the 30-year study period. As discussed previously for Steps 1c and 4a, the levels of revenues, on a per acre basis, would be affected by countervailing market appreciation and Proposition 13-related deflation factors, resulting in the future assessed value estimates shown in Table C-1.

The values in Table C-1 were multiplied by the amounts of private farmlands in each cropland category remaining in the study area under with-restoration conditions (see “Agricultural Resources Effects”) to calculate the total assessed value of private lands (including improvements) within the study area in 2030. Current property tax rates and the revenue distribution percentages shown in Table C-2 were applied to determine property tax revenues generated by private properties in 2030 under with-restoration conditions. These with-restoration property tax revenues are shown in Table C-11.

Step 4b: Estimate State In-Lieu Payments under Future With-Restoration Conditions. State in-lieu payments are constant over time and are the product of the tax rate and the pre-sales appraised value. Consequently, state in lieu payments under post-restoration conditions would represent the sum of current annual payments generated by state-owned properties, deflated to account for inflationary effects, and future payments generated by lands transferred to state ownership over the first 10 years of the 30-year study period. The methods used to derive the value of current in-lieu payments in 2030 are described in Step 3b. The methods used to estimate per-acre property values (excluding improvements) for state-owned properties acquired over the study period are described in Step 1d. These values, which reflect market appreciation and inflation effects, are presented in Table C-1.

Under post-restoration conditions, 40% of the properties acquired and restored over the study period are assumed to be under state ownership; therefore, 40% of all property within each cropland category estimated to be converted for restoration was assumed to be acquired and transferred to state ownership by 2010. The total value of state-owned lands, for purposes of determining in lieu payments, was calculated by multiplying these acreages by the property value estimates for state-owned lands shown in Table C-2. State in lieu payments to counties under future with-restoration conditions were then determined by applying current property tax rates. The estimated revenues were distributed among the county, schools, and special districts

according to the revenue allocations shown in Table C-1. The with-restoration in lieu revenues are shown in Table C-11.

Step 4c: Estimate Federal Revenue Sharing Payments under Future With-Restoration Conditions. Under future with-restoration conditions, qualifying properties currently under USFWS management and properties acquired by USFWS over the study period would be reappraised every five years to establish values for determining federal revenue sharing payments. Consequently, federal property values in 2030 would, on average, reflect real market appreciation over much of the 30-year period and a small amount of deflation that would occur between the last reappraisal and the end of the study period. Total federal revenue sharing payments made under post-restoration conditions would represent the sum of current annual payments generated by federally owned properties, adjusted to account for market appreciation and inflationary effects, and future payments generated by lands (exclusive of improvements) transferred to federal ownership over the study period. The methods used to derive the value of current revenue-sharing payments in 2030 are described in Step 3c. The methods used to estimate per-acre property values for federally owned properties in 2030 are described in Step 1e. These values, which reflect market appreciation and inflationary effects, are presented in Table C-1.

Under post-restoration conditions, 60% of the properties acquired and restored over the study period are assumed to be transferred to federal ownership; therefore, 60% of all property within each cropland category estimated to be converted to habitat was assumed to be acquired and transferred to federal ownership by 2010. The total value of federally owned lands, for purposes of determining revenue sharing payments, was calculated by multiplying these acreages by the property value estimates for federal lands shown in Table C-1.

The federal government computes revenue sharing payments to counties at 0.75% of the value of federal lands. In most years, federal payments to counties have been less than the full amount authorized by the federal Revenue Sharing Act because congressional appropriations typically fall short of the maximum authorized amount. Revenue-sharing payments for the 1991-2000 decade ranged from a low of 50.8% in 2000 to a high of 89.6% in 1991. Over this period, revenue-sharing payments averaged 70.2%. For the purposes of this study, the federal revenue-sharing rate was assumed to average 70.2% of the authorized amount. Based on this assumption, federal revenue sharing payments under future with-restoration conditions were calculated by multiplying the total estimated value of newly acquired federal properties in 2030 by a factor of 0.53% (i.e., $0.75\% \times 70.2\%$). The estimated revenues were distributed among the counties, schools, and special districts according to the revenue allocations shown in Table C-2. Consequently, federal revenue-sharing payments under post-restoration conditions would represent the sum of current annual payments generated by USFWS-owned properties, adjusted for market appreciation and inflationary effects, and future payments generated by lands acquired and transferred to federal ownership over the 30-year study period. These future with-restoration federal revenue sharing payments are shown in Table C-11.

Step 4d: Estimate Williamson Act Subvention Payments under Future With-Restoration Conditions. Under future with-restoration conditions, Williamson Act subvention payments generated by study area properties would be reduced from without-

Table C-11. Estimated Future (Year 2030) Property Tax, State In Lieu, and Federal Revenue-Sharing Revenues Generated by Properties within the Study Area under With-Restoration Conditions (2000 Dollars)

County	Privately Owned Properties						State Fish & Game Department Properties						U.S. Fish & Wildlife Service Properties						Total (All Properties)			
	Acres	Assessed Value per Acre	Total Property Tax Revenue	County Revenue	School Revenue	Special District Revenue	Acres Acquired 2000-2030	In Lieu Value per Acre	Total In Lieu Revenue ^a	County Revenue ^a	School Revenue ^a	Special District Revenue ^a	Acres Acquired 2000-2030	Federal Value per Acre	Total Federal Revenue ^a	County Revenue ^a	School Revenue ^a	Special District Revenue ^a	Total Revenue ^a	County Revenue ^a	School Revenue ^a	Special District Revenue ^a
Butte:																						
Almonds	130	\$7,420	\$10,128	\$2,633	\$6,989	\$506	18	\$3,180	\$601	\$156	\$415	\$30	28	\$7,980	\$1,184	\$1,184	\$0	\$0	\$11,914	\$3,974	\$7,403	\$536
Prunes	16	\$6,890	\$1,158	\$301	\$799	\$58	2	\$2,940	\$62	\$16	\$43	\$3	4	\$7,370	\$156	\$156	\$0	\$0	\$1,375	\$473	\$841	\$61
Walnuts	1,420	\$7,680	\$114,509	\$29,772	\$79,011	\$5,725	201	\$3,300	\$6,965	\$1,811	4,806	\$348	302	\$8,290	\$13,269	\$13,269	\$0	\$0	\$134,742	\$44,852	\$83,817	\$6,074
Vegetable crops	162	\$4,260	\$7,246	\$1,884	\$5,000	\$362	29	\$1,710	\$521	\$135	\$359	\$26	44	\$4,300	\$1,003	\$1,003	\$0	\$0	\$8,770	\$3,022	\$5,359	\$388
Irrigated field crops	597	\$3,100	\$19,432	\$5,052	\$13,408	\$972	542	\$1,170	\$6,658	\$1,731	\$4,594	\$333	813	\$2,950	\$12,711	\$12,711	\$0	\$0	\$38,802	\$19,495	\$18,003	\$1,305
Rangeland & other	3,965	\$900	\$37,469	\$9,742	\$25,854	\$1,873	0	\$150	\$0	\$0	\$0	\$0	0	\$370	\$0	\$0	\$0	\$0	\$37,469	\$9,742	\$25,854	\$1,873
Subtotal	6,290	N/A	\$189,942	\$49,385	\$131,060	\$9,497	792	N/A	\$15,729	\$4,090	\$10,853	\$786	1191	N/A	\$68,259	\$68,259	\$0	\$0	\$273,930	\$121,734	\$141,913	\$10,284
Colusa:																						
Almonds	2	\$7,420	\$156	\$39	\$92	\$25	1	\$3,180	\$33	\$14	\$15	\$4	1	\$7,980	\$42	\$18	\$19	\$5	\$232	\$71	\$126	\$34
Prunes	183	\$6,890	\$13,239	\$3,310	\$7,811	\$2,118	73	\$2,940	\$2,254	\$969	\$1,014	\$270	110	\$7,370	\$4,297	\$1,848	\$1,934	\$516	\$19,789	\$6,126	\$10,759	\$2,904
Walnuts	460	\$7,680	\$37,094	\$9,274	\$21,886	\$5,935	219	\$3,300	\$7,588	\$3,263	\$3,415	\$911	330	\$8,290	\$14,499	\$6,235	\$6,525	\$1,740	\$59,182	\$18,771	\$31,825	\$8,586
Vegetable crops	29	\$4,260	\$1,297	\$324	\$765	\$208	11	\$1,710	\$198	\$85	\$89	\$24	17	\$4,300	\$387	\$167	\$174	\$46	\$1,882	\$576	\$1,029	\$278
Irrigated field crops	98	\$3,100	\$3,190	\$797	\$1,882	\$510	38	\$1,170	\$467	\$201	\$210	\$56	58	\$2,950	\$907	\$390	\$408	\$109	\$4,564	1,388	\$2,500	\$675
Rangeland & other	3,373	\$900	\$31,875	\$7,969	\$18,806	\$5,100	0	\$150	\$0	\$0	\$0	\$0	0	\$370	\$0	\$0	\$0	\$0	\$31,875	\$7,969	\$18,806	\$5,100
Subtotal	4,145	N/A	\$86,851	\$21,713	\$51,242	\$13,896	342	N/A	\$12,030	\$5,173	\$5,414	\$1,444	516	N/A	\$20,132	\$8,657	\$9,060	\$2,416	\$119,014	\$35,543	\$65,715	\$17,756
Glenn:																						
Almonds	169	\$7,420	\$12,540	\$3,637	\$8,402	\$502	74	\$3,180	\$2,353	\$2,353	\$0	\$0	112	\$7,980	\$4,737	\$1,374	\$3,174	\$189	\$19,630	\$7,363	\$11,575	\$691
Prunes	348	\$6,890	\$23,977	\$6,953	\$16,065	\$959	73	\$2,940	\$2,146	\$2,146	\$0	\$0	110	\$7,370	\$4,297	\$1,246	\$2,879	\$172	\$30,420	\$10,346	\$18,944	\$1,131
Walnuts	1,459	\$7,680	\$112,051	\$32,495	\$75,074	\$4,482	335	\$3,300	\$11,055	\$11,055	\$0	\$0	502	\$8,290	\$22,056	\$6,396	\$14,778	\$882	\$145,163	\$49,946	\$89,852	\$5,364
Vegetable crops	28	\$4,260	\$1,193	\$346	\$799	\$48	4	\$1,710	\$68	\$68	\$0	\$0	5	\$4,300	\$114	\$33	\$76	\$5	\$1,375	\$447	\$876	\$52
Irrigated field crops	433	\$3,100	\$13,423	\$3,893	\$8,993	\$537	85	\$1,170	\$995	\$995	\$0	\$0	127	\$2,950	\$1,986	\$576	\$1,330	\$79	\$16,403	\$5,463	\$10,324	\$616
Rangeland & other	4,840	\$900	\$43,560	\$12,632	\$29,185	\$1,742	0	\$150	\$0	\$0	\$0	\$0	0	\$370	\$0	\$0	\$0	\$0	\$43,560	\$12,632	\$29,185	\$1,742
Subtotal	7,277	N/A	\$206,744	\$59,956	\$138,518	\$8,270	571	N/A	\$24,791	\$24,791	\$0	\$0	856	N/A	\$68,713	\$19,927	\$46,037	\$2,749	\$300,248	\$104,674	\$184,556	\$11,018
Tehama:																						
Almonds	96	\$7,420	\$7,123	\$1,852	\$4,986	\$285	42	\$3,180	\$1,336	\$347	\$935	\$53	64	\$7,980	\$2,707	\$704	\$1,895	\$108	\$11,166	\$2,903	\$7,816	\$447
Prunes	486	\$6,890	\$33,485	\$8,706	\$23,440	\$1,339	214	\$2,940	\$6,292	\$1,636	\$4,404	\$252	322	\$7,370	\$12,578	\$3,270	\$8,804	\$503	\$52,355	\$13,612	\$36,648	\$2,094
Walnuts	673	\$7,680	\$51,686	\$13,438	\$36,180	\$2,067	369	\$3,300	12,177	\$3,166	\$8,524	\$487	554	\$8,290	\$24,341	\$6,329	\$17,039	\$974	\$88,204	\$22,933	\$61,743	\$3,528
Vegetable crops	167	\$4,260	\$7,114	\$1,850	\$4,980	\$285	74	\$1,710	\$1,265	\$329	\$886	\$51	110	\$4,300	\$2,507	\$652	\$1,755	\$100	\$10,887	\$2,830	\$7,621	\$435
Irrigated field crops	805	\$3,100	\$24,955	\$6,488	\$17,469	\$998	355	\$1,170	\$4,154	\$1,080	\$2,907	\$166	533	\$2,950	\$8,333	\$2,167	\$5,833	\$333	\$37,442	\$9,735	\$26,209	\$1,498
Rangeland & other	7,567	\$900	\$68,103	\$17,707	\$47,672	\$2,724	0	\$150	\$0	\$0	\$0	\$0	0	\$370	\$0	\$0	\$0	\$0	\$68,103	\$17,707	\$47,672	\$2,724
Subtotal	9,794	N/A	\$192,467	\$50,041	\$134,727	\$7,699	1054	N/A	\$26,233	\$6,821	\$18,363	\$1,049	1583	N/A	\$97,134	\$25,255	\$67,994	\$3,885	\$315,835	\$82,117	\$221,084	\$12,633
Total	27,506	N/A	\$676,005	\$181,095	\$455,548	\$39,362	2759	N/A	\$78,784	\$40,874	\$34,630	\$3,279	4,146	N/A	\$254,238	\$122,098	\$123,091	\$9,050	\$1,009,027	\$344,067	\$613,269	\$51,691

Note:
^a Totals for each county include state in lieu revenues and federal revenue sharing payments generated by properties already under CDFG and USFWS ownership under pre-Program conditions, adjusted for inflationary effects over the 30-year study period (see Table A7).

Source: Refer to description of methodology in text under "Key Assumptions and Methods."

restoration levels because private properties generating subvention payments would no longer generate payments once they are acquired by government entities. Consequently, to calculate the value of subvention payments in 2030 under with-restoration conditions, subvention payments estimated for future without-restoration conditions (calculated in Step 3d) were adjusted by the percentage of private land assumed to be transferred to government ownership in each county over the 30-year study period. (This method assumes prime and non-prime agricultural lands would be proportionately affected by ownership transfers.) The distributions of Williamson Act subvention payments among the counties, schools, and special districts were then estimated using the revenue allocations shown in Table C-2. These future with-restoration subvention payments are shown in Table C-12.

Step 4e: Estimate Sales Tax Revenues under Future With-Restoration Conditions. Under future with-restoration conditions, agricultural production levels would decrease because of farmland conversions, resulting in lower levels of taxable expenditures by farm operators, their employees, and their suppliers. This effect would be offset, to some extent, by taxable expenditures generated by annual habitat maintenance activities and by expenditures by persons engaged in recreation on restored lands.

The amount of sales tax revenue generated for the counties by agricultural production in the study area was estimated using estimates of the study area's agricultural production value prepared for this report's assessment of agricultural conditions under future with-restoration conditions. Similarly, sales tax revenues generated by annual habitat maintenance expenditures and recreation spending within the counties were estimated using spending estimates prepared for this report's assessment of regional economic impacts under future with-restoration conditions. The production value estimates for each crop type and the habitat- and recreation-related spending estimates were entered into the IMPLAN input-output models developed for each county. Estimates of sales tax revenue generated by production and spending changes in the study area were then generated by the model's tax estimation component. (Refer to Appendix B for a description of the IMPLAN model.) The tax-payment calculations generated by the IMPLAN model include estimates of direct (i.e., made by farm operators) and secondary (i.e., made by indirectly affected businesses and employees) levels of sales tax payments associated with existing production levels. The amount of total sales tax revenue remaining within each county was estimated using the methods described previously for Step 2e. Estimated future with-restoration sales tax revenues are shown in Table C-13 and are summarized, together with property-related revenues, in Table C-14.

Step 4. Assess Revenue Impacts of Developing the Riparian Corridor

The total fiscal impact of developing the riparian corridor on the four affected counties was evaluated by comparing the revenue levels estimated for future (2030) with-restoration conditions to revenue levels estimated for future (2030) without-restoration conditions. The change in revenues estimated for each county was then compared to revenues under without-restoration conditions to assess the percentage impact on each county. The revenue impacts of the habitat restoration effort are summarized in Table C-15.

Table C-12. Estimated Future (Year 2030) State Williamson Act Subvention Payments
Generated by Properties within the Study Area under With-Restoration Conditions (2000 Dollars)

County	Total Private Acres	Williamson Act Acres	Prime Acres	Nonprime Acres	Total Williamson Act Payments	County Revenue	School Revenue	Special District Revenue
Butte	6,290	2,642	1,374	1,268	\$3,263	\$3,263	\$0	\$0
Colusa	4,145	953	267	686	\$810	\$810	\$0	\$0
Glenn	7,277	2,110	528	1,583	\$1,692	\$1,692	\$0	\$0
Tehama	9,794	7,541	2,489	5,053	\$7,016	\$7,016	\$0	\$0
Total	27,506	13,247	4,657	8,590	\$12,782	\$12,782	\$0	\$0

Source: Refer to description of methodology in text under "Key Assumptions and Methods."

Table C-13. Estimated Future (Year 2030) County Sales Tax Revenues
Generated by Use of Properties within the Study Area under With-Restoration Conditions (2000 Dollars)

County	Agriculture		Habitat Maintenance		Onsite Recreation		Total County Sales Tax Revenue
	Total Sales Tax Revenue	County Sales Tax Revenue	Total Sales Tax Revenue	County Sales Tax Revenue	Total Sales Tax Revenue	County Sales Tax Revenue	
Butte	\$101,300	\$2,127	\$5,240	\$110	\$311,070	\$6,532	\$8,770
Colusa	\$19,800	\$804	\$1,700	\$69	\$643,730	\$26,135	\$27,008
Glenn	\$69,200	\$3,391	\$4,960	\$243	\$155,450	\$7,617	\$11,251
Tehama	\$95,800	\$1,475	\$6,000	\$92	\$1,459,049	\$22,469	\$24,037
Total	\$286,100	\$7,797	\$17,900	\$515	\$2,569,299	\$62,754	\$71,066

Source: Refer to description of methodology in text under "Key Assumptions and Methods."

Table C-14. Summary of Estimated Total Future (Year 2030) Revenues Generated by Properties within the Study Area under With-Restoration Conditions (2000 Dollars)

County	County Revenue	School Revenue	Special District Revenue	Total
Butte	\$133,766	\$141,913	\$10,284	\$285,963
Colusa	\$65,362	\$65,715	\$17,756	\$146,833
Glenn	\$117,617	\$184,556	\$11,018	\$313,191
Tehama	\$113,170	\$221,084	\$12,633	\$346,888
Total	\$427,915	\$613,269	\$51,691	\$1,092,875

Source: Summarized based on estimates of property tax, state in lieu payments, federal revenue sharing payments, Williamson Act subvention payments, and sales tax revenue presented in Tables C-11, C-12 and C-13.

Table C-15. Estimated Revenue Impact of Restoration in 2030 (in 2000 dollars)

County	Future Without-Restoration Revenues				Future With-Restoration Revenues				Change in Future Revenues			
	County Revenue	School Revenue	Special District Revenue	Total	County Revenue	School Revenue	Special District Revenue	Total	County Revenue	School Revenue	Special District Revenue	Total
Butte	\$128,153	\$195,146	\$14,141	\$337,440	\$133,766	\$141,913	\$10,284	\$285,963	\$5,613	-\$53,233	-\$3,857	-\$51,477
Colusa	\$65,763	\$88,517	\$24,002	\$178,282	\$63,362	\$65,715	\$17,756	\$146,833	-\$2,402	-\$22,802	-\$6,246	-\$31,449
Glenn	\$124,247	\$227,763	\$13,598	\$365,608	\$117,617	\$184,556	\$11,018	\$313,191	-\$6,630	-\$43,207	-\$2,580	-\$52,416
Tehama	\$136,233	\$273,868	\$15,650	\$425,750	\$113,170	\$221,084	\$12,633	\$346,888	-\$23,063	-\$52,784	-\$3,016	-\$78,863
Total	\$454,396	\$785,294	\$67,390	\$1,307,080	\$427,915	\$613,269	\$51,691	\$1,092,875	-\$26,481	-\$172,026	-\$15,699	-\$214,206

Source: Summarized based on estimates of property tax, state in lieu payments, federal revenue sharing payments, Williamson Act subvention payments, and sales tax revenue presented in Tables C-7, C-8, C-9, C-11, C-12 and C-13.