

**The Impact on Glenn County Property Tax Revenues
of Public Land Acquisitions in the
Sacramento River Conservation Area**

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Executive Summary

Introduction and Scope

The purpose of this study is to examine the impacts on local property tax revenues of Federal and State land acquisitions along the Sacramento River. Land is being purchased from private owners for various purposes including habitat preservation and restoration. The study is limited to land acquisitions within Glenn County, California, however, the results should be applicable to other counties along the Sacramento River.

Methodology

The target area for the study is land adjacent to the Sacramento River in Glenn County. Land acquisitions included in the study are those properties subject to potential flooding from the River. The values for acquired properties were determined prior to sale to the respective Federal or State agency. The prices paid by the State and Federal governments were determined from two separate sources. For State property acquisitions, the purchase price was provided by the Glenn County Assessor's Office from a list of all property purchases by the Wildlife Conservation Board. For properties purchased by the Federal government, the prices paid were found on the sale documents from the County Recorder's Office.

The purpose of the study is to compare Federal and State in lieu payments to the property taxes that would have been paid had the acquired lands remained in private ownership. In the case of the State, in lieu payments are calculated as the product of the assessed value prior to the sale of the property and the applicable tax rate for the particular tax rate area. The Federal government computes in lieu taxes owed to counties at three-quarters of a percent of the appraised value. Unlike the State, the Federal government sets the initial appraised value equal to the purchase price and re-appraises its holdings every five years. For a privately held parcel, property taxes paid are the product of the assessed value and the tax rate for the particular tax rate area. The assessed value is generally equal to the purchase price adjusted for changes such as improvements and inflation.

A spreadsheet model is used to compute the property taxes paid under Federal, State, and private ownership. The purpose of the model is to compare in lieu payments under government ownership and property tax revenues accruing under continued private ownership. In order to make that comparison for properties acquired by the State or Federal government, property taxes are calculated as if the land had remained in private ownership.

Model Output

The projections of County property tax or in lieu revenues are presented in several forms. Revenues from Federal in lieu payments are compared with property tax revenues from hypothetical continued private ownership of the Federally held properties. Revenues from State in lieu payments, similarly, are compared to the property tax revenues that would accrue to the County under continued private ownership. Comparative payments are presented for ten, twenty, and thirty years into the future. The present value of the future revenues is also calculated for each ownership category to provide a consistent basis for long term comparisons. Where the value of critical variables cannot be reliably determined from available data, a sensitivity analysis is performed by making separate runs for two or more values, covering the range of probable values.

Study Results

The results indicate that Glenn County receives somewhat more in combined State and Federal in lieu taxes than it would have under continued private ownership. In 1999, for the base case projection, the County General Fund receives an additional \$41,704. That surplus gradually declines to \$19,341 in ten years, \$11,594 in twenty years, and becomes a deficit of \$23,077 in thirty years. The net present value to the County General Fund is positive and equal to \$267,393.

Conclusions

Federal and State land acquisitions in the Sacramento River floodplain have no significant impact on Glenn County General Fund Revenues. This result holds over a wide range of assumptions. The County actually experiences a slight increase in revenues in the years immediately following government acquisition, but net revenues eventually turn negative. The net present value is positive for all cases using the lower property valuation and a negative \$13,105 for the base case assumptions using the higher valuation.

It is not possible to conclude that there will be a zero or positive impact on Glenn County General Fund Revenues from future Federal and State land acquisitions. That is because there is a considerable difference in the revenue impacts resulting from land purchases by the State of California and the Federal government. If there is a shift towards Federal and away from State acquisition, then some adverse revenue impacts on the County can be expected.

Introduction

The purpose of this study is to examine the impacts on local property tax revenues of Federal and State land acquisitions along the Sacramento River. Land is being purchased from private owners for various purposes including habitat preservation and restoration. Local government officials have expressed concerns that converting privately held lands to government ownership will erode the tax base.

Between 1990 and 1996, the Federal government purchased 17 parcels along the Sacramento River in Glenn County. The total purchase price for the 1309 acres in the parcels was \$3,788,092. The State of California acquired 54 parcels in the same area of Glenn County between 1986 and 1994. The State paid \$12,476,300 for the 5621 acres in the acquired parcels.

Scope of the Study

Loss of property tax revenues is but one of the economic issues concerning local officials. As land is removed from agricultural production for habitat restoration or other purposes not resulting in marketable output, the consequences may include reduced local income (GDP), employment, and other sources of local government revenue. Although these additional economic impacts are of concern to local decision makers, they are beyond the scope of this study. The study is limited to examining the impacts of government land acquisition on property tax and special district revenues.

While this study does not examine all potential costs to local economies, it includes none of the potential benefits associated with the programs driving the government land acquisition process. Possible benefits include: reduced flood damage to lands remaining in private ownership, increased ground water recharge, reduced runoff of agricultural chemicals into the Sacramento River, and enhanced wildlife habitat. Some of these may provide direct benefits to the local economy. For example, if habitat improvements lead to an increase in fish populations and thus an influx of anglers, the additional local spending could boost local economic activity and sources of local government revenue, particularly sales taxes.

It is not within the scope of this study to estimate the magnitude of benefits. In fact, the results in no way presume that measurable benefits exist. Any costs to the local economy beyond direct impacts on property tax revenues are also outside the purview of this study. Therefore, it is important that the reader not assume that the study results are indicative of the costs and benefits of habitat restoration, environmental preservation, or any other program goal.

The study is limited to land acquisitions within Glenn County, California. The decision to focus on a single county was based on funding limitations, while the particular choice of Glenn County was due to a combination of local interest and a willingness of local officials to assist in data collection and other aspects of the study. However, the results should be applicable to other counties along the Sacramento River.

Methodology

◆ Property valuation

The target area for the study is land adjacent to the Sacramento River in Glenn County. Land acquisitions included in the study are those properties subject to potential flooding from the River. Therefore, parcels include only those from assessor map books 13, 15, 16, 19, 23, 32, and 37. The sample of properties acquired by the State and Federal governments is further limited to those purchased between 1980 and 1998. This additional restriction eliminates very few properties from consideration (less than 10% of the acquired properties) and was necessary due to the difficulty of determining pre-sale values.

The values for acquired properties were determined prior to sale to the respective Federal or State agency. In cases where the Nature Conservancy purchased property from a private owner and then sold it to a government entity within a year, the assessed value prior to the initial sale was used. Each parcel value and the base year for appraisal were found in the Assessor's Master Lists. In the case where a parcel was split prior to sale, but the entire parcel was sold to the State or Federal government, the value of land and improvements was allocated to the portions of the original parcel based on relative acreage. Where a portion of the original parcel remained in private ownership, the appraisal value of the privately held parcel was subtracted from the value of the entire parcel to determine the value of the part purchased by the government agency.

The prices paid by the State and Federal governments were determined from two separate sources. For State property acquisitions, the purchase price was provided by the Glenn County Assessor's Office from a list of all property purchases by the Wildlife Conservation Board. For properties purchased by the Federal government, the prices paid were found on the sale documents from the County Recorder's Office. In the one case where the Nature Conservancy purchased a property and did not resell it to a State or Federal entity, the purchase price was obtained from the Assessor's Master Lists, the source of appraised values for all privately held parcels.

◆ **Property Tax Payments**

The purpose of the study is to compare Federal and State in lieu payments to the property taxes that would have been paid had the acquired lands remained in private ownership. In the case of the State, in lieu payments are calculated as the product of the assessed value prior to the sale of the property and the applicable tax rate for the particular tax rate area. The in lieu taxes paid by the State on any parcel remain constant over time. This is because the State does not re-appraise properties and does not change the tax rate even if the rate changes for the appropriate tax rate area.

The Federal government computes in lieu taxes owed to counties at three-quarters of a percent of the appraised value. Unlike the State, the Federal government sets the initial appraised value equal to the purchase price and re-appraises its holdings every five years. Therefore, in any year, the Federal in lieu owed the County is three-quarters of a percent of the current appraised value. However, the actual amount the County receives depends on the Federal budgetary process and has been as little as sixty-five percent of the amount owed.

For a privately held parcel, property taxes paid are the product of the assessed value and the tax rate for the particular tax rate area. The assessed value is generally equal to the purchase price adjusted for changes such as improvements and inflation. The annual inflation adjustment is equal to the increase in the California CPI up to two percent. The inflation adjustment is from the base year appraisal (1975 is the base year for all properties purchased prior to that year); that is, the value in the year the current owner purchased the property.

◆ **The Model**

A spreadsheet model is used to compute the property taxes paid under Federal, State, and private ownership. The purpose of the model is to compare in lieu payments under government ownership and property tax revenues accruing under continued private ownership. In order to make that comparison for properties acquired by the State or Federal government, property taxes are calculated as if the land had remained in private ownership. The assessed value used to compute hypothetical property taxes paid is the base year value adjusted by two percent per year for inflation. Re-appraisal is assumed to occur at resale and model runs are made for resale frequencies of ten, twenty, and forty years. The real rate of increase in land values is equal to the average annual increase in California farmland values for the 1970-1998 period less the average annual inflation rate (See Appendix B). The rate of increase in land prices, and thus appraised value for properties transferred between private parties, is equal to the sum of the real rate of increase in farmland prices and the assumed future rate of inflation.

For properties acquired by the Federal government, the projected in lieu taxes are computed based on the purchase price, the tax rate, the percentage of in lieu actually paid, and the values determined by periodic re-appraisal. In lieu taxes paid for the five year period following purchase equal the price paid times three-quarters of a percent times the percent of in lieu actually paid. Since the latter has generally varied between sixty and one hundred percent, separate projections are done for assumed values of 60, 80, and 100 percent. Five years following the initial public purchase, the appraised value of the land is increased to reflect its then current market value. The adjustment in market value is accomplished using the adjustment factor described above for privately held lands. The re-appraisal process continues in the same manner at five year intervals and Federal in lieu payments to Glenn County are computed according to the formula described at the beginning of this paragraph.

In lieu taxes paid by the State are constant over time and are the product of the tax rate and the pre-sale appraised value of the property. Therefore, for State land acquisitions, no adjustments for re-appraisal or changes in tax rate areas are necessary and first year and nth year payments are identical.

Some of the public land acquisitions include property with improvements. The improvements, which under private ownership are taxed at the same rate as are land values, may include structures, orchard trees, etc.. Since agricultural production is not the intended purpose of public land acquisitions, it is reasonable to assume that these improvements will be allowed to depreciate over time. This may not be the case for all improvements. However, where habitat enhancement is the goal, orchard trees, irrigation wells, and structures are largely incompatible with restored habitat. The decrease in the value of improvements has no effect on State in lieu paid as the value is frozen at the initial purchase price. But, in the case of Federal holdings, the amount of the periodic re-appraisal will be affected by the depreciation. For purposes of this study, we will separately consider straight-line depreciation over a ten year and a twenty year period for all improvements on Federally held property. The amount of depreciation is deducted from the escalation in the value of unimproved land to determine the increase in the base for in lieu payments at the point of re-appraisal. In the case of land remaining in private ownership (no transfer to Federal ownership), it is assumed that the improvements are maintained and rise in value at the same rate as farmland.

For a few parcels, the County receives additional revenue in the form of possessory interest taxes. These are taxes paid when publicly acquired land is leased back to private individuals for farming. This revenue source is based on the value of output and thus is assumed to decline with depreciation and end when the improvements are fully depreciated.

◆ Allocation of Property Tax Revenues

While the total amount of property tax or in lieu revenues are important to the County, whether they are paid into the County General Fund or the State School Fund, is also an important consideration. In the case of privately held lands, the tax rate in excess of one percent of assessed value is paid to special districts. Of the remaining one percent of assessed value, eighty percent goes to the State School Fund and twenty percent goes to the County General Fund. For State in lieu paid to the County, one hundred percent goes to the general fund. Federal in lieu, by contrast, is allocated in the same manner as property taxes paid on privately held parcels. As is the case with property taxes, twenty percent of possessory interest revenues accrue to the County General Fund.

As a result of the differences in allocating in lieu payments to the various County funds, the model examines the impact on each of the funds separately. Federal, State, and private ownership are examined in terms of the impact on the general fund and special district revenues.

Model Output

The projections of County property tax or in lieu revenues are presented in several forms. Revenues from Federal in lieu payments are compared with property tax revenues from hypothetical continued private ownership of the Federally held properties. Revenues from State in lieu payments, similarly, are compared to the property tax revenues that would accrue to the County under continued private ownership. The comparisons are made separately for the general fund, schools, and special districts. Comparative payments to the three funds are presented for ten, twenty, and thirty years into the future. The present value of the future revenues is also calculated for each ownership category to provide a consistent basis for long term comparisons.

Where the value of critical variables cannot be reliably determined from available data, a sensitivity analysis is performed by making separate runs for two or more values covering the range of probable values, and then comparing the results. Frequency of sale for privately held properties, the rate of depreciation for improvements on Federally held lands, the general rate of inflation, the ratio of Federal in lieu payments made to the amount due, and the discount rate are the key variables for which sensitivity analyses are performed.

Public Participation

Technical Advisory Committee:

- John Benoit - Director of Resource Planning and Development for Glenn County
- Denny Bungarz - Member of the Glenn County Board of Supervisors, District 4 and Chair of the SB 1086 Committee
- Burt Bundy - Coordinator of the SB1086 Committee
- Ramon Vega - U.S. Fish and Wildlife Service
- Vincent Minto - Glenn County Assessor
- Sam Larson - The Nature Conservancy
- John Merz - Sacramento River Preservation Trust
- John Carlon - Sacramento River Partners

The Technical Advisory Committee participated in the design and proposal writing phases of the study. During the time that work was accomplished, we had two meetings with the Committee. At the April, 1998 meeting, the members present offered suggestions as to what elements they would like to see included in the study. A rough draft of the proposal was mailed to the members for comment. A second meeting was held in June, 1998 to discuss the members' response to the rough draft and to consider the appropriate structure of an expanded economic impact analysis. A revised proposal was e-mailed to the Committee members on June 22, 1998. The comments received were incorporated into the final proposal.

During the data collection phase, Vince Minto, the Glenn County Assessor, and his staff provided assistance in determining the values of various privately held parcels, the methods for computing State and Federal in-lieu payments to the County, and invaluable assistance in other key areas. In January and February of 1999, we made eight separate trips to the County offices in Willows for data collection and consultation with County staff members.

A rough draft of the study was completed in March, 1999 and sent to each of the members of the Advisory Committee for comment. That was followed by a meeting to discuss changes and additions suggested by Committee members. Where appropriate, those comments were incorporated into the final version of the report.

Study Results

The results indicate that Glenn County receives somewhat more in combined State and Federal in lieu taxes than it would have under continued private ownership. In 1999, for the base case projection, the County General Fund receives an additional \$41,704. That surplus gradually declines to \$19,341 in ten years, \$11,594 in twenty years, and becomes a deficit of \$23,077 in thirty years. The net present value to the County General Fund is positive and equal to \$267,393.

There are significant differences in the contribution to the County General Fund of State and Federal in lieu taxes. For properties acquired by the State of California, the in lieu taxes for 1999 exceed what would have been paid under private ownership by \$41,449. That net contribution declines to \$25,099 after 10 years, \$18,602 after 20 years, and becomes a deficit of \$8,595 in the thirtieth year. The net present value to the County General Fund is \$333,302.

However, the contribution to the County General Fund of Federal in lieu taxes is somewhat less than what would have accrued under continued private ownership. For 1999, the County gains \$255, but in the tenth year it loses \$5,758. The losses increase to \$7,008 in the twentieth year and \$14,482 in the thirtieth year. The net present value to the County General Fund for the Federally acquired properties is a negative \$65,908. Appendix C contains projected annual revenue impacts through the year 2030 for State and Federal property acquisitions.

◆ **Description of the Base Case**

The projections for the base case are founded on a series of assumptions that we believe are the most reasonable. A discussion of the assumptions and the rationale for the choice of those values is contained in Appendix B. The values for the critical variables used in the base case projections are as follows:

1. A discount rate of eight percent. See Appendix B for a discussion of the reason this value was used.
2. The Federal government pays 80 percent of the in lieu taxes due the County.
3. The improvements on Federally acquired properties are depreciated over a 20 year period.
4. Private property is transferred (in a manner requiring re-appraisal) every 20 years. It is assumed that the initial year for the analysis, 1998, is the midpoint of the twenty year cycle.
5. Farmland prices will increase at an annual real rate (in excess of the rate of inflation) of .95 percent (the average annual rate of increase for U.S. farmland and buildings for the 1970-1998 period). See Appendix B for a more detailed discussion of the data sources and calculations.
6. The value of the properties acquired by the State and Federal governments is determined by escalating the 1975 base value at the actual rate of increase in the value of California farmland. As is discussed in greater detail below, the property values obtained with this method are considerably lower than the actual prices paid by the government agencies.
7. The annual rate of inflation is three percent.

◆ Sensitivity Analysis

We performed a sensitivity analysis for each of the assumptions 1- 6. The purpose was to determine the impact on the results of different values for the key variables. The results of the sensitivity analysis are contained in Appendix C and summarized below.

1. Using a discount rate of 6 percent reduces the net present value of in lieu tax payments to the County General Fund to \$60,970. If a 10 percent discount rate is used, the net present value increases to \$285,386. These results differ from the base case net present value of \$267,393, significantly for the lower discount rate, but only slightly for the higher rate.
2. Assuming the Federal government pays 100 percent of the in lieu taxes due, it increases the new present value of the contribution to the County General Fund to \$286,647. If only 60 percent is paid, the net present value declines to \$248,139.
3. If the improvements on Federally acquired properties are depreciated over a ten year period, the net present value to the County General Fund is reduced to \$259,750.
4. Assuming that property is transferred between private owners every ten years, on average, decreases the net present value to the County General Fund to \$199,431. If the interval is assumed to be 40 years, the net present value is increased to \$352,118.
5. If the real rate of increase in farmland values is equal to zero, the net present value to the County General Fund increases to \$337,608. If the rate of increase is assumed to be 1.57 percent annually (the average annual rate of increase in the value of U.S. farmland for the 1954-95 period) the net present value declines to \$202,150.
6. As noted above, the value for the parcels used in the study was determined using the actual rate of increase in the value of California farmland from a 1975 base value. This method yields a 1998 value for properties acquired by the State of California of \$9,360,804 and for properties acquired by the Federal government of \$3,585,837. However, if we take the actual purchase price for the acquired parcels and escalate from the purchase date to 1998 at the actual rate of increase for California farmland values, we get a much higher value. For properties acquired by the State, the value is \$17,597,278 and for those acquired by the Federal government, the value is \$4,250,290. If these higher values are used in combination with the other base case assumptions, the net present value of the contribution to the County General Fund declines from \$267,393 to a negative \$13,105.

There are two possible explanations of this discrepancy. First, it is possible that the acquired parcels possess some unique characteristics that cause their value to increase at a rate in excess of the average for all California farmland. If this is the case, then the private market would eventually value the parcels in the same manner as the purchasing agencies and the appropriate net present value for the base case is the lower negative \$13,105 figure. Second, it is possible that the State and Federal governments paid more than market value for the properties. If this is the proper explanation for the discrepancy, then we should use \$267,393 as the net present value to the County General Fund. Since we believe that the latter explanation is more reasonable, we chose to use the lower land values for the base case.

Conclusions

Federal and State land acquisitions in the Sacramento River floodplain have no significant impact on Glenn County General Fund Revenues. This result holds over a wide range of assumptions. The County actually experiences a slight increase in revenues in the years immediately following government acquisition, but net revenues eventually turn negative. The net present value is positive for all cases using the lower property valuation and a small negative number for the base case assumptions using the higher valuation. The same conclusions hold for the special district revenues, and since the absolute amount of special district revenues involved is so small, the net impact is trivial.

It is not possible to conclude that there will be a zero or positive impact on Glenn County General Fund Revenues from future Federal and State land acquisitions. That is because there is a considerable difference in the revenue impacts resulting from land purchases by the State of California and the Federal government. What can be said is that, if in the future, acquisitions are made by the State and federal governments in roughly the same proportion as they have been, impacts on the County General Fund are not a concern. However, if there is a shift towards Federal and away from State acquisition, then some adverse revenue impacts on the County can be expected.

References

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Appendix B

Economic Assumptions

◆ Real Rate of Increase in Farmland Values

The real rate of increase in farmland values was determined from the rates of increase in land values and the general price level. For the 1970 to 1998 period, the average value of land and buildings in U.S. agriculture increased at a 6.24 percent annual rate (Economic Research Service, USDA). Over the same time interval, the Consumer Price Index (CPI) rose at 5.24 percent annual rate (Economic Report of the President, 1999). These relative changes imply a real rate of increase in farmland prices of .95 percent annually.

For the 1954 to 1995 time period, the value of U.S. agricultural land increased at a 5.96 percent annual rate (ERS, USDA). Over the same time interval, the CPI rose at a 4.32 percent annual rate, thus yielding a 1.57 percent average annual increase in the real value of farmland (Economic Report of the President, 1999).

◆ Discount Rate

The discount rate of 8 percent used in the base case projections can be justified in one of two ways. First, it equals the sum of the real interest rate, the inflation rate, and the real rate of increase in farmland value. The real interest rate is the rate on 30 year inflation indexed treasury bonds which is currently 3.8 percent (Wall Street Journal). The inflation rate has averaged 3.1 percent over the 1929 through 1998 period (Economic Report of the President). Most forecasts indicate that inflation should remain at or below three percent for the foreseeable future. As explained in the previous section, the real rate of increase in farmland values is in the range of one to 1.5 percent. Summing the three determinants of the discount rate yields a value of approximately 8 percent.

The second method for determining the discount rate is to use the assessor's capitalization rate. That rate is equal to the sum of the interest factor, the property tax rate, a risk component, and an amortization of perennials factor (Assessor Handbook, Sept., 1997, pp. II-23, 24, California State Board of Equalization). For the purposes of this study, the last two factors are zero. The interest rate set by the State Board of Equalization was seven percent for 1993-1997 and the property tax rate is equal to one percent, yielding a discount rate of eight percent.