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# **Real Estate Appendix**

**Shasta Lake Water Resources Investigation, California**

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Bureau of Reclamation  
Mid-Pacific Region**



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**November 2011**



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# Abbreviations and Acronyms

CFR	Code of Federal Regulations
EIS	Environmental Impact Statement
GIS	geographic information system
NAVD	North American Vertical Datum
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
SLWRI	Shasta Lake Water Resources Investigation
Spyglass	Spyglass Valuation Services
State	State of California
USACE	U.S. Army Corp of Engineers
USFS	U.S. Forest Service

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# Real Estate Appendix

## Purpose and Scope

Information in this document is in support of the Feasibility Report and Environmental Impact Statement (EIS) pursuant to the Shasta Lake Water Resources Investigation (SLWRI) and addresses assumptions, methods, and results of real estate analyses and evaluations. The value estimate of real estate costs is not an appraisal and is not to be used for a budget placeholder, but instead is to be used to compare alternative plans at a feasibility level of analysis. The potential impacts to real estate and associated costs of real estate provided herein are recognized as gross estimates of the lands that may be inundated under alternative reservoir enlargement scenarios, and associated real estate values and estimated costs of acquisition are for feasibility-level evaluation only.

If completion and processing of the Feasibility Report and EIS result in approval to continue project planning and refinement, then more detailed engineering, design, and cost estimating would be done to develop more precise information. More in-depth information may be used as a basis for potential future real estate actions. At the current feasibility study stage, no acquisitions have been identified or recommended.

## Background and Approach

U.S. Department of the Interior, Bureau of Reclamation (Reclamation), Mid-Pacific Region Land Resources Branch staff performed a feasibility-level analysis of real estate impacted by three alternative dam raises. Reservoir pool elevations evaluated were 1,082, 1,088, and 1,093 feet North American Vertical Datum (NAVD) to correspond to alternative dam raises of 6.5 feet, 12.5 feet, and 18.5 feet. These pool elevations approximate a 3-foot horizontal/5-foot vertical buffer area above the inundation level. Lands with potential for future acquisition in fee include inundated lands and uneconomic remainder parcels. This analysis includes lands to be acquired in fee for inundated lands; in fee and by permanent easement for reservoir area facility relocations such as roads, recreation facilities, dikes, utilities, and bridges; and by temporary use agreement for staging and construction activities. No borrow sites, mitigation lands, or damages are assumed, identified, or evaluated. Lands owned by the State of California (State) are not included. (Data for the analysis of State-owned land are available and such analysis may be performed, if required.)

## Acquisition Criteria

Reservoir project land acquisition policy for the Department of Interior and U.S. Army Corps of Engineers (USACE) is published in 43 Code of Federal Regulations (CFR) Part 8, Joint Policies of the Departments of the Interior and of the Army Relative to Reservoir Project Lands. This joint policy provides that fee title will be acquired for the following:

- a) Lands necessary for permanent structures.
- b) Lands below the maximum flowage line of the reservoir, including lands below a selected freeboard, where necessary to safeguard against the effects of saturation, wave action, and bank erosion, and the permit-induced surcharge operation.
- c) Lands needed to provide for public access to the maximum flowage line as described in paragraph (b) of this section, or for operation and maintenance of the project.

The policy also provides for acquisition of the following additional lands for correlative purposes:

- a) Such lands as are needed to meet present and future requirements for fish and wildlife as determined pursuant to the Fish and Wildlife Coordination Act.
- b) Such lands as are needed to meet present and future public requirements for outdoor recreation, as may be authorized by Congress.

This real estate analysis is based on the minimum acquisition necessary to meet the policy direction.

Although the following factors are not included in the analysis provided herein, they will be taken into consideration in greater detail as lands are needed for any project that may be identified, refined, approved, and implemented after completion of the final Feasibility Report and EIS and related Record of Decision.

The acquisition line may be adjusted to account for the following:

- Additional lands needed for project purposes and mitigation areas (road relocations and recreation mitigation areas, etc.)
- Lands needed to maintain or improve public access
- Lands needed to reduce potential encroachments

- Lands necessary to manage shoreline erosion or other water quality impacts
- Lands necessary to protect wildlife habitat and/or visual resources

## **Method of Analysis for Potentially Impacted Parcels and Value Estimate**

The following methodology was used to analyze the parcels that would be impacted by the various dam raise alternatives, and to apply a value estimate to those parcels.

### **Impacted Parcels**

Reclamation Land Resources Branch geographic information system (GIS) personnel developed and maintained a detailed database containing all Assessor's Parcel Numbers that would be impacted by each of the three dam raise alternatives. The database enabled Reclamation staff to identify parcels by land use type, and determine the acreage of each inundated parcel. Estimates of the percent of the parcel that would be inundated by each dam raise, and/or required for easements, were developed using the database.

### **Value Estimate**

Spyglass Valuation Services (Spyglass) prepared a valuation report entitled *Real Estate Value Estimates – Lake Shasta Dam, Redding, California*, dated January 31, 2008. For purposes of cost analysis, this report included all lands and improvements within 300 feet of the Shasta Lake existing pool elevation, based on current information on topography. Detailed engineering surveys were not completed to identify potential shoreline locations for the dam raise alternatives.

For properties sold between 2006 and 2008, Spyglass provided a market value estimate based on the recent sale of the parcel. If recent sale information was not available, Spyglass developed high and low market values for each property by land use type.

To update the values because of the recent downturn in real estate prices throughout California and in the Shasta Lake area, fee titles and permanent easements were assumed to be 80 percent of the high market value estimated in January 2008. In the same manner, temporary use agreements were assumed to be 7.5 percent of the 2008 high market value. This value was developed based on the assumption that the average duration of a construction project would be approximately 1.5 years with a 5 percent of fee value for yearly land use rental.

### Value Estimate Applied to Impacted Parcels

Maps annotated with structures were prepared for the evaluation of all parcels to visually determine partial or total acquisitions for each alternative raise. These maps also aided in identifying uneconomic remnants. When a potential total acquisition was identified, the full value of the parcel was accounted for in the value estimate for the property. When a potential partial acquisition was identified, the value estimate for the parcel was adjusted by the percentage of the parcel affected by inundation and/or reservoir area facility relocations. When no value was available from sales data, the high range from the General Market Value Ranges of Land Use Types, provided by Spyglass, was used for valuation. See Table 1 for a list of land use types and associated high market value unit prices.

**Table 1. General Market Value by Land Use Types**

Land Use Type	Market Value Assigned <sup>1</sup>
Vacant Residential, up to 10 acres	\$480,000 per acre
Vacant Residential, above 10 acres	\$240,000 per acre
Improved Single Family Residence, below 10 acres	\$212 per square foot
Improved Multiple Residence	\$96,000 per acre
Improved Commercial	\$160 per square foot
Vacant Commercial, smaller parcels to 10 acres	\$160,000 per acre
Vacant Commercial, larger parcels above 10 acres	\$80,000 per acre
Vacant Industrial	\$24,000 per acre
Vacant Rural, over 1 acre to 40 acres	\$160,000 per acre
Vacant Rural, over 40 acres	\$24,000 per acre
Improved Recreational – Water	\$212 per square foot
Vacant Recreational – Water	\$480,000 per acre

Note:

<sup>1</sup> Spyglass reported high market value with 80 percent adjustment of current market conditions

### Method for Cost Estimate of Real Estate Acquisition Administration

As stated previously, maps annotated with structures were prepared for the evaluation of all parcels to visually determine partial or total acquisitions for each alternative raise. Residential and commercial parcels improved with structures were identified, and partial or total acquisitions were determined. This analysis enabled Reclamation Land Resources Branch staff to roughly estimate potential relocations pursuant to Public Law 91-646, the Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970, as amended.

The administrative cost of one parcel acquisition with no relocation is estimated at \$50,000 for the purpose of this analysis. This administrative cost includes the work of surveyors, GIS staff, legal counsel, title company support, appraisers, and a team of realty specialists/land agents.

The administrative cost of one parcel acquisition with a residential or business relocation is estimated at \$100,000. This includes all of the work discussed above for acquisition plus Relocation Advisory Services and Relocation Benefits.

If a parcel would be affected by both inundation (fee acquisition) and reservoir area facility relocations (fee acquisition, permanent easement, or temporary use agreement), only one administrative cost was applied because both acquisitions were considered as a combined real estate transaction.

## Privately Owned Cabins on U.S. Forest Service Lands

A set of privately owned cabins on lots permitted by the U.S. Forest Service (USFS) may be affected by the pool elevations being evaluated. These cabins are not contained in the database, but were tabulated separately and then added to the final total cost of real estate. The lots identified by Shasta County were examined at the full pool elevations of each alternative. Spyglass provided a low market value of \$161,000 per lot, and a high market value of \$259,000 per lot, based on the square footage of the cabins. To account for market changes from the initial Spyglass valuation, 80 percent of the high market value, or \$200,000, was used for this real estate analysis. The number and valuation of lots impacted by the three pool elevations are listed in Table 2. The estimates are presented as a range of impacted lots with costs based on the midpoint of the range because the elevation data have not been field-verified by surveys.

**Table 2. Range of Impacted Cabins on U.S. Forest Service Lands**

<b>Water Surface Elevation<sup>1</sup></b>	<b>Range of Impacted Lots with Private Cabins</b>	<b>Estimated Value of Cabins by Raise</b>	<b>Estimated Total</b>
1,082 feet	23 to 25 lots	\$250,000	\$6,000,000
1,088 feet	26 to 28 lots	\$250,000	\$6.750,000
1,093 feet	27 to 29 lots	\$250,000	\$7,000,000

Note:

<sup>1</sup> North American Vertical Datum of 1988

USFS Special Use Permits that authorize these privately owned cabins and facilities state the following:

*If during the term of this permit the authorized officer determines that specific and compelling reasons in the public interest require revocation of this permit, this permit shall be*

*revoked after 180 days written notice to the holder, provided that the authorized officer may prescribe a shorter notice period if justified by the public interest. The USFS shall then have the right to relocate the holder's improvements to another lot, to remove them, or to require the holder to relocate or remove them, and the USFS shall be obligated to pay an equitable amount for the improvements or for their relocation and damages resulting from their relocation that are caused by the USFS.*

No dollar amount for relocation or removal of the cabins is included in this analysis of SLWRI real estate costs.

## Summary of Real Estate Impacts and Costs

The number of parcels potentially affected because of full pool inundation and reservoir area facility relocations is summarized in Table 3. As state previously, the estimates are presented as a range of impacted parcels because the elevation data have not been field-verified by surveys.

**Table 3. Summary of Potential Real Estate Impacts**

Potential Action	1,082 feet	1,088 feet	1,093 feet <sup>1</sup>
Parcels to Be Acquired Because of Inundation (partial acquisition, in fee)	64 to 66	65 to 67	85 to 87
Parcels to Be Acquired Because of Inundation (total acquisition, in fee)	4 to 6	27 to 29	54 to 56
Parcels to Be Acquired Because of Facility Relocations (partial acquisition, in fee or permanent easement)	10 to 12	38 to 40	39 to 41
Parcels to Be Acquired Because of Facility Relocations (total acquisition, in fee or permanent easement)	1 to 2	1 to 3	1 to 3
Parcels to Be Acquired Because of Facility Relocations (partial acquisition, temporary use agreement)	0	32 to 34	33 to 35
Parcels to Be Acquired Because of Facility Relocations (total acquisition, temporary use agreement)	0	1 to 2	1 to 2
Cabins on USFS Land Acquired Because of Inundation	23 to 25	26 to 28	27 to 29
<b>Range of Total Affected Parcels<sup>2</sup></b>	<b>102 to 106</b>	<b>156 to 160</b>	<b>205 to 209</b>

Notes:

<sup>1</sup> Up to 21 additional parcels would be affected by Comprehensive Plans 4 and 5 because of temporary use agreements for gravel augmentation along the upper Sacramento River. Two additional parcels would be affected by Comprehensive Plans 4 and 5 because of permanent easements for riparian and floodplain habitat restoration.

<sup>2</sup> Totals do not add up because double counting of parcels affected by both inundation (fee acquisition) and reservoir area facility relocations (fee acquisition, permanent easement, or temporary use agreement) was considered as one combined real estate transaction.

Key:

USFS = U.S. Forest Service

Table 4 summarizes the total land acquisition costs for each alternative dam raise. Costs are based on the midpoint of the range of impacted parcels.

**Table 4. Summary of Estimated Real Estate Costs**

<b>Potential Action</b>	<b>1,082 feet</b>	<b>1,088 feet</b>	<b>1,093 feet<sup>1</sup></b>
Parcels to Be Acquired Because of Inundation (in fee)	\$15,500,000	\$24,700,000	\$40,200,000
Parcels to Be Acquired Because of Facility Relocations (in fee or permanent easement)	\$1,400,000	\$3,000,000	\$3,000,000
Parcels to Be Acquired Because of Facility Relocations (temporary use agreement)	\$0	\$100,000	\$100,000
Acquisition Administration for Fee, Permanent Easements, and Temporary Use Agreements	\$4,300,000	\$7,800,000	\$11,200,000
Cabins on USFS Land Acquired Because of Inundation	\$4,800,000	\$5,400,000	\$5,600,000
<b>Total</b>	<b>\$26,000,000</b>	<b>\$41,000,000</b>	<b>\$60,100,000</b>

Note:

<sup>1</sup> Up to an additional \$764,000 would be needed for Comprehensive Plans 4 and 5 because of temporary use agreements for gravel augmentation and associated administration costs along the upper Sacramento River. An additional \$338,000 would be needed for Comprehensive Plans 4 and 5 because permanent easements for riparian and floodplain habitat restoration and associated administrative costs.

Key:

USFS = U.S. Forest Service

## Next Steps

While this estimate is intended to compare costs for the dam raise alternatives, some costs associated with real estate acquisition are still unknown. These unknown costs will be explored in the future based on public comment and changes to biological opinions, and could include, but are not limited to, the following:

- Cost of conducting hazardous materials surveys for lands to be acquired, and costs for removing underground storage tanks or other hazardous materials that may be found on property proposed for acquisition.
- Cost related to any public domain condemnation that could be required to acquire properties necessary for project implementation.
- Cost for mitigation lands.
- Payment for damages.

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## References

Spyglass Valuation Services. 2008. Real Estate Value Estimates – Lake Shasta Dam, Redding, California. Bandon, Oregon. January 31.

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