

**Final**

# **Real Estate Appendix**

**Shasta Lake Water Resources Investigation, California**

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Bureau of Reclamation  
Mid-Pacific Region**



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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 Corps of Engineers
USFS	U.S. Forest Service

# Chapter 1

## Introduction

### Purpose and Scope

Information in this document is in support of the Environmental Impact Statement (EIS) for 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, but instead is to be used to compare alternative plans at an appraisal 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 or required for reservoir area facilities relocations under alternative reservoir enlargement scenarios, and associated real estate values and estimated costs of acquisition are for appraisal-level evaluation only.

If the SLWRI feasibility study results in Congressional approval for project implementation, 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 specific 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 an appraisal-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 88 (NAVD 88) to correspond to alternative dam raises of 6.5 feet, 12.5 feet, and 18.5 feet. These pool elevations approximate a 3-foot vertical buffer area above the inundation level or a 5-foot horizontal buffer area extending from the inundation level, whichever buffer is greater. This 3-foot vertical/5-foot horizontal buffer area accounts for wave action and related freeboard considerations above any new full pool water surface elevation.

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.

## 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 if lands are needed for any project that may be identified, refined, approved, and implemented after completion of the Final Feasibility Report, Final EIS, and Record of Decision.

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

- Additional lands needed for project purposes and mitigation areas
- 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

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# Chapter 2

## Methodology

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

The following methodology was used to develop estimates of potentially impacted parcels, develop a value estimate for impacted parcels, and apply the value estimate to those parcels.

#### Impacted Parcels

Reclamation Land Resources Branch geographic information system (GIS) personnel developed and maintain a detailed database containing all Assessor's Parcel Numbers for parcels that would be impacted by each of the 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. The valuation of the affected parcels was based upon the assumption that all lands and improvements within 300 horizontal feet of the Shasta Lake existing pool elevation would be of similar value depending upon land use. This report was not intended to identify lands and improvements affected by alternatives; rather it was developed to provide value estimates for various potential alternative real estate needs (e.g., reservoir inundation, road relocations, utility relocations, etc.).

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 between 2006 and 2008, Spyglass developed high and low market values for each property by land use type.

The value information provided by Spyglass in 2008 is now outdated. Any appraisal or valuation of real estate is generally considered valid for six months from the date of the valuation. As the Spyglass information is now nearly seven years old, landowners should expect that a current appraisal of their property may be quite different from the figures provided by Spyglass in 2008. If and when this project is approved by Congress, each landowner will be provided with a current appraisal at no cost to them. The value estimates in this appendix

are for planning purposes only and will not be factored in to any future valuation. The values provided by Spyglass in 2008 will not be used in any future real estate negotiations.

### **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 remainders. 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 in 2008. This information is not current and does not reflect current market values.

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

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.

As stated previously, this analysis included 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. If a parcel would be affected by 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. For this analysis, estimates of

lands affected by inundation were based on reservoir pool elevations of 1,082, 1,088, and 1,093 feet NAVD88 to correspond to alternative dam raises of 6.5 feet, 12.5 feet, and 18.5 feet. These pool elevations approximate a 3-foot vertical buffer area above the inundation level or a 5-foot horizontal buffer area extending from the inundation level, whichever buffer is greater.

## 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 of lots impacted by the three pool elevations are listed in Table 1. The estimates are presented as a range of impacted lots based on the midpoint of the range because the elevation data have not been field-verified by surveys. For this real estate analysis, the high market value of private cabins on USFS land does not include costs associated with relocation or demolition. These relocation and demolition costs are included in the cost estimates for recreation facilities relocations as discussed in the Engineering Summary Appendix.

**Table 2-1. 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>
1,082 feet	23 to 25 lots
1,088 feet	26 to 28 lots
1,093 feet	27 to 29 lots

Note:

<sup>1</sup> NAVD 88 datum

The following is sample language from a USFS Special Use Permit that authorizes these privately owned cabins and facilities:

*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.*

# Chapter 3 Results

## 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 3-1. As stated previously, the estimates are presented as a range of impacted parcels because the elevation data have not been field-verified by surveys.

**Table 3-1. 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. 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 3-2 summarizes the total land acquisition costs for each alternative dam raise. Costs are based on the midpoint of the range of impacted parcels, using data gathered in 2008.

**Table 3-2. Summary of Estimated Real Estate Costs**

Potential Action	1,082 feet <sup>1</sup>	1,088 feet <sup>1</sup>	1,093 feet <sup>1, 2</sup>
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> Fee titles and permanent easements were assumed to be 80 percent of the high market value estimated in January 2008. Temporary use agreements were assumed to be 7.5 percent of the 2008 high market value. In the Engineering Summary Appendix, these values are indexed to January 2014 price levels using Reclamation Construction Cost Indices for California land.

<sup>2</sup> Estimates do not reflect costs related to gravel augmentation for Comprehensive Plans 4 and 5 for temporary use agreements and associated administration costs along the upper Sacramento River. Estimates do not reflect costs related to downstream restoration for Plans 4 and 5 for permanent easements for riparian and floodplain habitat restoration and associated administrative costs.

Key:

USFS = U.S. Forest Service

## Structure Surveys

During 2012, Reclamation performed ground surveys for structures on parcels potentially impacted because of inundation to serve as a sensitivity analysis. Surveys were performed to provide participating property owners a general indication of the location and elevation of their property relative to each dam raise. Surveys were only performed on 170 parcels for willing property owners, and were reevaluated to compare sensitivities of partial and full acquisitions to the estimated real estate impacts discussed previously. Table 3-3 summarizes the differences between the estimated real estate impacts and results of the structure surveys for the 170 parcels. Based on this sample of potentially impacted parcels, anticipated real estate impacts are consistent with the structure surveys results and generally within  $\pm 5$  percent. More detailed information regarding the surveying and acquisition of specific parcels may be provided if and when a project is authorized.

**Table 3-3. Summary of Structure Surveys Sensitivity to Estimated Real Estate Impacts**

Potential Action	1,082 feet		1,088 feet		1093 feet	
	Real Estate Analysis	Structure Surveys Sensitivity	Real Estate Analysis	Structure Surveys Sensitivity	Real Estate Analysis	Structure Surveys Sensitivity
Parcels to be Acquired in Partial	29	28	23	30	28	38
Parcels to be Acquired in Total	2	2	20	15	38	30
<b>Total</b>	<b>31</b>	<b>30</b>	<b>43</b>	<b>45</b>	<b>66</b>	<b>68</b>
<b>Percent Change from Real Estate Analysis</b>	<b>-3%</b>		<b>5%</b>		<b>3%</b>	

Note:

This sensitivity analysis only considers the 170 parcels that were surveyed and does not include all potentially impacted parcels.

## Uncertainties

This estimate is an appraisal level intended only to compare costs for the dam raise alternatives. The costs will be refined and updated further after Congressional authorization during the design and construction phase of the project. Some of the costs that have uncertainty and that will be further refined in the future may 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. Specific mitigation lands will be identified during final design and permitting following Congressional Authorization. However, costs for mitigation are included in non-contract costs in the Engineering Summary Appendix.
- Payment for damages.

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## Chapter 4 References

Reclamation. *See* U.S. Department of the Interior, Bureau of Reclamation.

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