## **Physical Benefits Tab**

#### **Attachment 2: Recreation Benefits**

Attach or provide links to any relevant recreation studies associated with the proposed project.

WSIP Application Instructions, March 2017

#### Response

This attachment contains analyses of benefits associated with Stone Corral Recreation Area and Peninsula Hills Recreation Area.

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	<b>Acronyms and Abbreviations</b>	
MAF	million acre-feet	
msl	mean sea level	
NODOS	North-of-the Delta Offstream Storage	

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# Introduction

The proposed Sites Reservoir would be located in the Antelope Valley in Colusa and Glenn Counties. At maximum capacity, the reservoir would be the seventh largest reservoir in California, with a storage volume of approximately 1.81 million acre-feet (MAF) and surface area of approximately 14,000 acres. Sites Reservoir would provide new opportunities for surface-water recreation, such as boating, fishing, and swimming. In addition, new facilities would be developed to support other recreation activities like camping, hiking, picnicking, and sightseeing.

The suitability of lands to support reservoir-based recreation is determined by several factors, including topography, access, physical/aesthetic setting, projected reservoir operations, anticipated use, and competing uses. The following assumptions were made to characterize the potential recreational opportunities and benefits at Sites Reservoir:

- The maximum design water-surface elevation of Sites Reservoir, 520 feet above mean sea level (msl), is associated with a 1.81 MAF storage capacity and is considered to be the baseline scenario.
- The reservoir's water level would fluctuate considerably during normal operations. The maintained portion of the proposed recreation area would be limited to a designated footprint above the maximum designed reservoir water elevation, and access would be provided to the reservoir.
- General recreational activities include those common to the region, and that are usually of normal
  quality. Normal quality refers to experiences and activities that could be found in a more common
  setting, such as a regular city park, but are not an extraordinary recreational experience. These
  activities include picnicking, camping, day-use visits, hiking, horseback riding, cycling, fishing,
  boating, and passive recreation.
- Likelihood of success at fishing and wildlife viewing enhance the value of a recreation site.
- Overuse may adversely affect the quality of recreational values. Major aesthetic qualities to be considered in assessing recreational opportunities include wildlife, geology and topography, water, and vegetation.
- It is assumed that recreational development and types of recreational opportunities would be comparable to those available at Black Butte Reservoir located north of Sites Reservoir in Glenn and Tehama counties.

The location of the proposed recreation areas are shown on Figure 1 and described as follows:

- Stone Corral Recreation Area The Stone Corral Recreation Area (see Figure 2) would be located on
  the east side of the reservoir, north of the existing Maxwell-Sites Road and the proposed Sites Dam.
  The maximum proposed size of the Stone Corral Recreation Area is 235 acres.
- Peninsula Hills Recreation Area The Peninsula Hills Recreation Area (see Figure 3) would occupy
  approximately 516 acres on the northwest side of Sites Reservoir. The Authority is considering the
  installation of a separate boat launch facility approximately 2 miles south of this recreation area,
  with access to the reservoir south of Sites-Lodoga Road.

The facilities for each recreation area are summarized in Table 1 below.

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Table 1. Summary of Recreation Facilities

Feature	Stone Corral	Peninsula Hills
Size	235 acres	516 acres
Location	East side of Sites Reservoir	West side of Sites Reservoir
Access	New Stone Corral Road	Existing Sites-Lodoga Road and new bridge and new Peninsula Road
Camp sites	50 (car and recreational vehicle)	100 (car and recreational vehicle) and 1 group camp area (group camp area can accommodate up to 24 people)
Picnic sites	10 (with parking at each site)	10 (with parking at each site)
Hiking trails	Yes	Yes
Vault toilets	10	10
Kiosk	1	1
Boat launch	Two lane ramp and parking area	Nearby two lane ramp and parking area approximately two miles from recreation area
Utilities	Electricity and water	Electricity and water
Other	35-acre overlook/interpretive (sightseeing) and additional parking areas	Equestrian trails and horse trailer parking area; vista point/sightseeing; additional parking areas

The design for these recreation areas was developed with input from Colusa County, a Sites Project Authority member. They would most likely be the operator/maintainer for the recreation facilities. These recreation areas could potentially be developed and commissioned in a phased approach to match recreational interest at Sites Reservoir. The Stone Corral Recreation Area and the west-side boat ramp would be constructed initially, followed by the remainder of Peninsula Hills Recreation Area, if warranted.

The Feasibility Report Appendix E Recreation supporting the North-of-the Delta Offstream Storage (NODOS) Investigation prepared for the Bureau of Reclamation provides more detailed discussion of the recreation facilities currently planned and budgeted for development (Found at https://www.sitesproject.org/information/FeasibilityReport).

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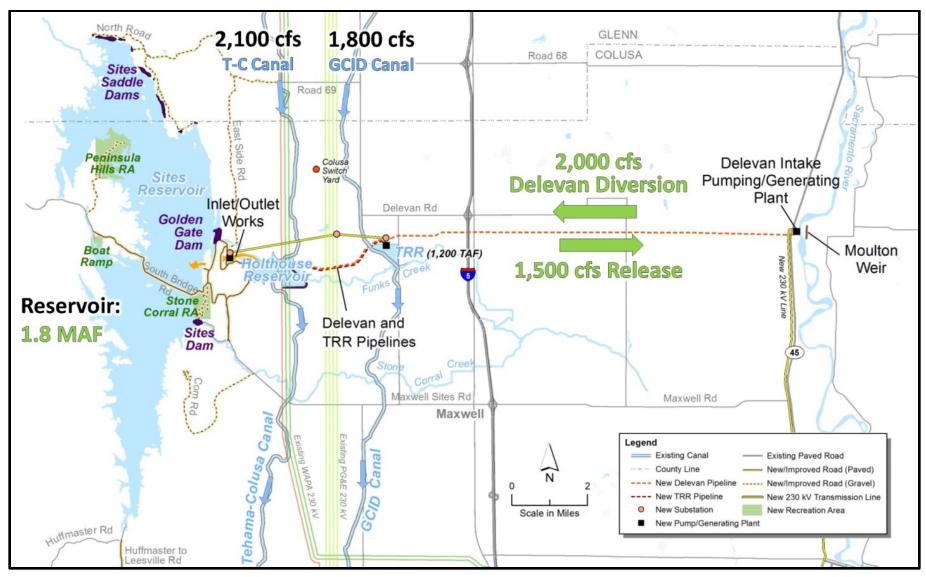


Figure 1. Proposed Sites Reservoir including Recreation Areas

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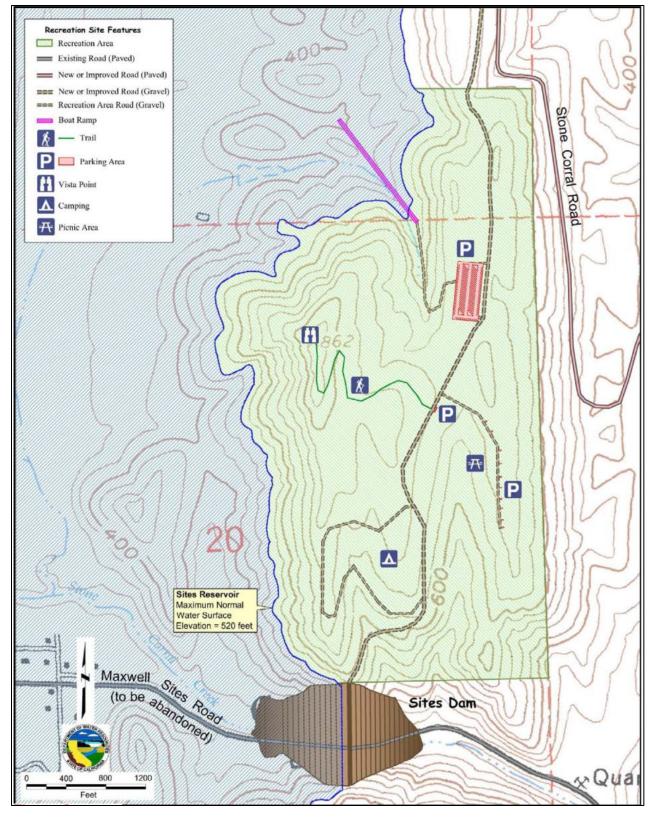


Figure 2. Stone Corral Recreation Area

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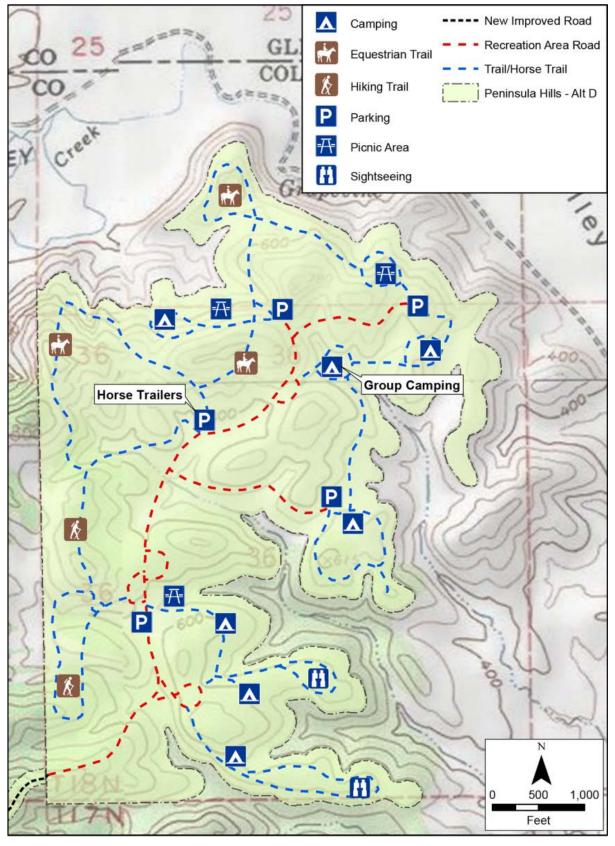


Figure 3. Peninsula Hills Recreation Area

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