STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

August 23, 2004

Dr. Stephanie Toothman
National Park Service
Pacific West Region
909 First Street
Seattle, Washington 98104-4159

Dear Dr. Toothman:

Thank you for the opportunity to comment on the National Register Multiple Property nomination for Yosemite National Park. I concur that the properties identified and evaluated n the nomination do constitute a coherent group of geographically dispersed resources that are eligible for listing in the National Register. The nomination does an excellent job of defining separate, but related contexts that make clear the significance of the individual resources, as well as the reasons that they collectively constitute a multiple property. The inclusion of a number of the park's less elaborate, high altitude resources is particularly noteworthy. The context statements synthesize a large amount of historic documentation in a clear and concise manner and the descriptive material that is provided for the individual resources or resource groupings is excellent.

We concur in all of your findings regarding the resources enumerated in the multiple property nomination. We agree that the following properties are eligible for the National Register as a part of a multiple property.

Lake Vernon Cabin Building #2450
May Lake High Sierra Camp Historic District
Hetch Hetchy Comfort Station Building #2104
Henness Ridge Fire Lookout Building #5300
The Golden Crown Mine
Glen Aulin Sierra Camp Historic District
Chinquapin Historic District
Buck Creek Cabin Building #4800
Snow Flat Cabin #Building #3501
Snow Creek Cabin Building #3450
Sachse Springs Cabin Building #2452
Ostrander Ski Hut Building #5110
Old Big Oak Flat Road
New Big Oak Flat Road
Merced Lake Ranger Station Building #3400
Merced Lake High Sierra Camp Historic District

Wawona Tunnel
Vogelsang High Sierra Camp Historic District
Tuolumne Meadows High Sierra Camp Historic District

I have signed the application as commenting authority. If you have any questions, please call Gene Itogowa of my staff (916) 653-8936.

Sincerely,

Milford Wayne Donaldson
State Historic Preservation Officer

Cc: Kimball Koch

OMB No. 1024-0018
(Expires Jan. 2005)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

---

1. Name of Property

historic name _Sachse Springs Cabin_
other names/site number _Sachse Springs Snow Survey Shelter_Bldg. #2452_

---

2. Location

street & number _N/A_ not for publication ___
city or town _Yosemite National Park (YOSE)_ vicinity ___
state _California_ code _CA_ county _Tuolumne_ code 109 zip code _95389_

---

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this___ nomination___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria. I recommend that this property be considered significant ___ nationally ___ statewide ___ locally. (___ See continuation sheet for additional comments.)

_____ _____
Signature of certifying official Date

_____
State or Federal agency and bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria. (___ See continuation sheet for additional comments.)

_____ _____
Signature of commenting or other official Date

_____
State or Federal agency and bureau

---

4. National Park Service Certification

I, hereby certify that this property is: Signature of Keeper Date of Action

____ entered in the National Register _____
___ See continuation sheet.
____ determined eligible for the National Register _____
___ See continuation sheet.
____ determined not eligible for the National Register _____

Sachse Springs Cabin
Name of Property

Tuolumne, CA
County and State

____ removed from the National Register

____ other (explain): _____

5. Classification

Ownership of Property
(Check as many as apply)

___ private
___ public-local
___ public-State
_X_ public-Federal

Category of Property
(Check only one)

_X_ building(s)
___ district
___ site
___ structure
___ object

Number of Resources within Property
(Do not include previously listed resources in the count)

Contributing	Noncontributing	
1		buildings
		sites
		structures
		objects
1	0	Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)
Historic Resources of Yosemite National Park, California

Number of contributing resources previously listed in the National Register
0

6.Function or Use

Historic Functions
(Enter categories from instructions)
_GOVERNMENT/public works

Current Functions
(Enter categories from instructions)
_GOVERNMENT/government office

7. Description

Architectural Classification
(Enter categories from instructions)
Other: NPS Rustic

Materials
(Enter categories from instructions)
foundation _stone
walls__wood
roof ___wood: shake shingle
other

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

_X__ **A** Property is associated with events that have made a significant contribution to the broad patterns of our history.

_____ **B** Property is associated with the lives of persons significant in our past.

_X__ **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

_____ **D** Property has yielded, or is likely to yield, information important in prehistory or history.

Areas of Significance
(Enter categories from instructions)

Architecture
Conservation
Science

Period of Significance
1947

Criteria Considerations
(Mark "X" in all the boxes that apply.)

____ A owned by a religious institution or used for religious purposes.
____ B removed from its original location.
____ C a birthplace or a grave.
____ D a cemetery.
____ E a reconstructed building, object, or structure.
____ F a commemorative property.
____ G less than 50 years of age or achieved significance within the past 50 years.

Significant Dates
N/A

Significant Person
(Complete if Criterion B is marked above)
N/A

Cultural Affiliation
N/A

Architect/Builder
City of San Francisco; State of California

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography
(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)
___ preliminary determination of individual listing (36 CFR 67) has been requested.
___ previously listed in the National Register
___ previously determined eligible by the National Register

Primary location of additional data
____State Historic Preservation Office
____Other State agency
____Federal agency
____Local government
____University

Sachse Springs Cabin
Name of Property

Tuolumne, CA
County and State

___ designated a National Historic Landmark
___ recorded by Historic American Buildings Survey
_____
___ recorded by Historic American Engineering
Record # _____

_X_ Other
Name of repository:
Yosemite National Park, California

10. Geographical Data

Acreage of Property Less than one acre

UTM References
(Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing		Zone	Easting	Northing
1	11	250650	4218600	**3**	__	_____	_____
2	__	_____	_____	**4**	__	_____	_____

___ See continuation sheet.

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)
The National Registry boundary includes only the historically and architecturally significant Sachse Springs cabin and its immediate environment.

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)
The boundary is drawn to include only the Sachse Springs Snow cabin and its immediate setting.

11. Form Prepared By

name/title Andy Kirk, Richard Coop, Charles Palmer

organization UNLV Public History date 3/8/04

street & number 4505 Maryland Parkway Box 455020 telephone (702)895-3544

city or town Las Vegas state NV zip code 89135-5020

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets
Maps
A **USGS map** (7.5 or 15 minute series) indicating the property's location.
A **sketch map** for historic districts and properties having large acreage or numerous resources.
Photographs
Representative **black and white photographs** of the property.
Additional items
(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)
name _____
street & number_____ telephone_____
city or town_____ state_____ zip code _____

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is

required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.0. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

Summary

The Sachse Springs cabin is located about 1½ miles northwest of Kibble Lake. Constructed in 1947 by the state with the city of San Francisco contributing part of the cost, it is located in the watershed of the Tuolumne River. It is of a different rustic style than the earlier Merced Lake cabin, resembling to a greater degree those at Lake Vernon, Wilmer Lake, and Snow Flat. The small, gable-roofed, log pole structure with shingle roof, measuring about twelve by twenty feet, is simple in design and construction. Its one room contains bunk beds and a metal cookstove.

General Description

The Sachse Springs cabin on Kibble Ridge can be reached by trail from Cherry Lake. The cabin is west of Many Island Lake, southwest of the 8000-foot contour, on the trail toward Mercury Peak.

The twelve-by-twenty-foot Sachse Springs cabin has a foundation of stone blocks with mortar beneath the cabin corners and the porch column. Dry-laid stonework is placed between the corners. Floor framing is of eight-inch log joists running east-west approximately sixteen inches on center. Two-by-eight plank decking and a one-by-three tongue and groove finish floor run north-south. The wall framing is of fourteen-inch to eight-inch horizontal logs. The bevel at the log ends appears unique to this cabin.

Exterior walls are typical log construction. Those on the east are covered by wood shingles. The eighteen-inch total shingle length has twelve inches exposed to the weather. The roof is of eighteen-inch shingles with twelve inches exposed. It is laid on an earlier shingle roof.

Interior walls are exposed logs, the floor one-by-three tongue and groove, and the ceiling shows the exposed roof frame and shingles. A five-by-twelve-foot porch contains stone steps to the front door.

On the north end of the cabin is a thirty-inch-square, four-light window with a one-eighth-inch-thick steel plate door. The south vertical plank entrance door contains a smaller winter access.

Significance

Property Type: Resources Associated with Settlement and Industry (1851-1951)
Subtype: Exploration, Settlement, and Resource Exploitation
Period of Significance: 1947

The Sachse Springs snow survey/patrol cabin is considered significant in conservation. Originally constructed for winter service in connection with the acquisition of hydrologic data along the Tuolumne and Merced River watersheds within Yosemite National Park, these snow survey cabins, located in isolated areas, served as shelters for personnel and as bases of operation for employees patrolling snow courses and for equipment maintenance as needed. Built under various agreements with the state of California and city of San Francisco, the cabins served as supply bases and shelters for National Park Service rangers patrolling the backcountry during the summer seasons. They became increasingly important in that role, giving added flexibility to rangers in the wilderness who no longer had to carry provisions and bedding with them. The cabins continue to serve an important function today as centers of backcountry maintenance and patrol activities.

Historical Context

Snow is the principal source of the water in the Western United States. Increasingly conflicting demands for water in the West have heightened public awareness for solid management decisions concerning water. Although the West's high mountain ranges hold a vast snowpack that provides 50-80 percent of the year's water supply, nature cannot reliably provide an uninterrupted, dependable supply of melt water to meet all of the downstream requirements. To manage the variable availability, reservoirs and canals have been constructed to ensure competing needs for agriculture, industry, and communities are coordinated. Successful water management, however, begins with a detailed knowledge of the primary source of water in the West: snow.

Snow survey studies and the scientific determination of water runoff were developed by Dr. James E. Church, a University of Nevada professor whose interest in weather led to the development of the methods and technology that, for the most part, are still used today. Dr. Church made his first ascent of Mount Rose in 1895, where, overlooking the Lake Tahoe basin, he contemplated the effect of orographic precipitation and snowmelt runoff as it relates to water supply. His subsequent journeys up the mountain between Reno and Lake Tahoe resulted in his establishment of the Summit Observatory for the purpose of collecting weather data and studying the effects of mountains and forests on snow conservation.

In 1909 Professor Church developed the Mount Rose Snow Sampler and Scale to determine the density and water content of snow. One year later, he laid out the first formal snow courses in the Lake Tahoe and Truckee River basins for the purpose of predicting water runoff for Nevada ranchers and farmers. His research also led to control of the water level at Lake Tahoe, where springtime runoff flooded occupants of the lake's shoreline. With proper and

accurate predictions, the excess water could be released from the lake prior to snowmelt runoff, and the lake could be maintained at a constant level.

The State of California recognized this important source of information and, in cooperation with Dr. Church's staff, began to lay out snow courses in selected river basins in the central Sierra Nevada in 1917. This work was undertaken by the state's Department of Engineering, which conducted the surveys through 1923, when funding was discontinued.

High country snow surveys were also being conducted on a limited basis, in connection with patrol trips by park rangers, in Yosemite National Park, beginning in the mid-1920s. According to NPS Naturalist Carl Russell, a primary motivation for the snow surveys at that time were to estimate the opening date of high country roads and trails and predict the conditions of the waterfalls during the late summer and early fall. Surveys also helped park administrators predict the severity of fire conditions in the late summer and early fall. The need for scientific surveys became acute in the 1920s, when California's explosive growth made reliable and predictable water supplies essential. In 1926 the Park Service entered into an agreement with the Merced Irrigation District, which was interested in predicting runoff from its watersheds heading in the park. Because the MID had finished construction of its Exchequer Dam in 1926, the Merced River fed directly into the MID's reservoir on the eastern edge of the San Joaquin Valley. In 1926 a snow course was installed at Dana Meadow. The Merced Irrigation District donated money in 1927 to build a patrol cabin at Merced Lake, fourteen miles above Yosemite Valley, to aid in snow survey activities. That cabin still stands, slightly modified, and is still in use as a ranger patrol cabin.

The state legislature appropriated funds in 1929 enabling the Division of Water Resources, the successor to the Department of Engineering, to organize a California Cooperative Snow Surveys program with the local agencies that had previously been involved in snow survey, and which, in some cases, had continued the survey program after the state ran out of funding for the project in 1923. The DWR established 150 snow courses in 1929 throughout the Sierra for the anticipated cooperative program to begin in January 1930. The DWR supplied funding for equipment, for construction of shelter cabins, and in some cases, for personnel to conduct the surveys. The agencies included local municipalities, irrigation districts, public utility companies, and state and federal agencies, including the National Park Service.

Most of the Sierra Nevada Mountains' snow measurements are conducted by the California Department of Water Resources (CDWR) Cooperative Snow Survey Department, which has been formally monitoring winter snow conditions since 1930, longer than any other such program in the Western United States. In 1931 the state appropriated $600 for the construction of a snow survey cabin at Buck Camp, in the southwest portion of Yosemite National Park. The plans were prepared by John Wosky, Landscape Architect and Field Architect for Yosemite, and the cabin was completed and ready for occupation by January 1, 1932. An old logging cabin, built in 1916 at Deer Camp, was also renovated for use in snow surveys. The Buck Camp cabin is still used during the summer for patrol,

and is in very good condition. The cabin at Deer Camp is no longer standing.

Due to the Great Depression of the 1930s, funding for snow surveys was unavailable for the years 1934-35. However, the cooperating agencies continued to make surveys using state-owned equipment that remained in the field, and the disruption was not as great as anticipated. In 1934, a particularly severe drought throughout the West increased demands by farmers for better streamflow predictions for crop irrigation. Other users that counted on water for industry, power generation and municipal/domestic use also urged for reliable water predictions. In 1935, Congress passed legislation creating a federal snow survey and water supply forecasting program for the West under the direction of the Bureau of Agricultural Engineering in the Department of Agriculture. The California snow survey program remained independent of the federal program, however, with the growing importance of water prediction, the California legislature was again able to appropriate funds for snow survey in 1936. There has been no subsequent interruption in survey activities.

In 1939, the federal snow survey program was transferred to the Soil Conservation Service (SCS); this bureau, now known as the Natural Resources Conservation Service (NRCS) continues to direct a cooperative federal, state, and private snow survey program. The construction of snow survey cabins in Yosemite resumed in the 1940s, with the erection of cabins at Lake Vernon and Wilmer Lake in 1945 and Sachse Springs in 1947, all constructed by the city of San Francisco. These cabins are all located in the watershed of the Tuolumne River, which feeds the Hetch Hetchy Water and Power Project for the city of San Francisco. A cabin at Snow Flat, in the Merced River drainage, was built by the DWR in 1947. These cabins became the property of the U.S. Government, which used and maintained them, allowing city workers to use them in connection with the acquisition of hydrologic data.

After World War II, the ease and expediency of observation of snow markers from aircraft led to the placement of aerial snow depth markers in remote areas of the Sierra. All such markers in Yosemite are in the Tuolumne watershed and include Dana Meadow, Wilmer and Vernon lakes, Sachse Springs, and Beehive Meadow. The use of automatic snow sensors began in 1965. They have been located in Yosemite and throughout the Sierra in remote locations where access is a problem. These sophisticated pieces of equipment enable forecasters to update their information on snow accumulation and depletion at a much more rapid pace, especially during periods of high flood potential.

The Sierra Nevada Mountain range's snowpack provides two-thirds of California's water for cities, farms, and recreation in addition to hydroelectric plants, which produce about a quarter of California's power. How "wet" or "dry" a year is predicted to be has many impacts. Public utilities use these estimated to determine hydropower generation rates. Good water years allow utilities to use more hydropower and, consequently, save oil. In a dry year, however, utilities are more dependent on steam generation using more oil, coal, and atomic fuel. Agricultural interests determine crop-planting patterns with water predictions as well as ground water pumping needs, and irrigation schedules. Operators of flood control projects determine how much water can safely be stored in a reservoir while

reserving space for predicted inflows. Municipalities use the information to evaluate their water supply and determine whether (in a dry year) water rationing may be needed.

While the development and deployment of automated snow survey sensors has greatly reduced the need for remote cabins, these buildings provide a truly historic perspective of the earliest stages of snow surveying in California leading to the efficient management of water throughout most of the West today. These backcountry cabins still have a useful function during the course of snow surveys conducted on foot, serving as shelters and as bases of operation for the maintenance and repair of snow survey equipment. Many of the structures also function as ranger cabins in summer and winter, aiding in backcountry patrol, visitor assistance, law enforcement, and search and rescue activities. The number of backcountry patrol cabins is held to a minimum. They are maintained in excellent condition with as little intrusion on backcountry natural resources as possible. Their simple rustic architectural style enables them to blend in with their surroundings and remain unobtrusive. The cabins are utilized primarily as staging areas and collection points in park backcountry patrol and maintenance projects. Generally they are not utilized as fixed-station duty assignments. Park backcountry patrol assignments are scheduled with maximum mobility, resource protection,

Bibliography

Building Files, Completion Reports, Maintenance Office, Yosemite National Park.

Department of Water Resources Bulletin No. 129-70. *Snow Survey Measurements Through 1970*. Sacramento: State of California, September 1971.

California Department of Water Resources Department of Flood Management. "History of Snow Surveying." http://cdec.water.ca.gov/snow/info/HistorySnowSurvey.html. 1994.

Finley, Michael V., Superintendent, Yosemite National Park to Regional Director, Western Region "Review of National Register forms for factual data," September 7, 1989.

Jacobs, Duane D. "Snow Surveying." *Yosemite Nature Notes* 32, No. 1 (January 1953).

Lundquist, Jessica. "Monitoring Snow from the Beach in San Diego: Automatic Snow Sensors in the Sierra." http://www.yosemite.org/naturenotes/snowsurvey.html.

Monthly Reports of the Superintendent, Yosemite National Park, 1931.

Pavlik, Robert C. "A History of Snow Survey in Yosemite National Park." 1984. Typescript, 3pp.

Peterson, Ned R. "California Cooperative Snow Surveys Program." Portion of MS dated October 1980. Included in letter from Jack G. Pardee to Robert C. Pavlik dated November 20, 1984.

Russell, Carl P. "Why Are Snow Surveys Made?" *Yosemite Nature Notes* 6, No. 3 (March 1927).

Thomas, Don. "Sierra Snowpack Slipping Below Normal, Snow Survey Shows." *The Fresno Bee*. February, 27, 2002. http://www.yosemite.org/newsroom/clips2000/february/022702.html.

United States Department of Agriculture Soil Conservation Service Agriculture Information Bulletin 536. *Snow Surveys and Water Supply Forecasting* (Washington DC: June 1988, Revised September 1996).