

**DIVISION OF WATER RIGHTS
REPORT OF COMPLIANCE INSPECTION**

APPLICATION: 26224

PERMIT: 20035

LICENSE: 12831

Date of Inspection: May 4 & 11, 2005

Accompanied by: Peter Sagues

Inspected by: Larry Lindsay

Telephone: (707) 857-4175

OWNERSHIP:

Change agent to
Peter Sagues.

The Vineyard Club, Inc.
c/o Peter Sagues
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Cellular (707) 332-3223
Home (707) 857-4175

SOURCE(S):

No change.

- (1) Unnamed Stream AKA Oak Flat Creek
- (2) Unnamed Stream.

(1)(2) Tributary to Gill Creek thence Russian River.

Flow at time of inspection: (1) about 0.6 cfs based on flume measurement, diversion measurement, and estimate of unmeasured flow. Source (2) not observed since there were no channels observed flowing into the reservoir. The reservoir is near the top of its watershed.

AMOUNT:

No change.

I. Authorized Amounts:

Storage: 245 acre-feet per annum.

Maximum rate of diversion to offstream storage: 0.25 cfs.

II. Estimated Maximum Amounts:

Collection: 92 ac-ft

Withdrawal: 92 ac-ft

Total Taken: 158 ac-ft

Diversion rate to offstream storage: 0.13 cfs

Total diverted from POD 1: 16 ac-ft

All of the withdrawal is due to evaporation and seepage. The dam height was not measured but the spillway was inspected for any evidence that the reservoir capacity had changed. This dam is under jurisdiction of the Division of Safety of Dams (DSOD) (dam #3422) and was last inspected by them on Nov 16, 2004. Review of the file at DSOD indicated that the

VC-6

OK
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spillway includes a concrete sill, which was observed on site. DSOD capacity and the authorized storage are the same amount. See the calculations section for additional information.

**SEASON(S) OF
DIVERSION:**

Authorized:
October 1 to May 31

No change.

Utilized: Apparently within authorized dates.

USE(S) OF WATER:

Authorized Uses: Recreational and Fire Protection Uses.
Current Uses: Recreational.

No change.

Sprinklers on the grounds near the lake are supplied with ground water from the local mutual water company.

**POINT(S) OF
DIVERSION:**

Corrections required.

(1) Licensed POD to Offstream Storage (Oak Flat Creek):
By California Coordinate System of 1927, Zone 2,
North 396,950 feet and East 1,739,900 feet, being within
SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of projected Section 31, T10N, R9W,
MDB&M.

POD to Offstream Storage as surveyed by GPS:
By California Coordinate System of 1927, Zone 2,
North 397,190 feet and East 1,740,070 feet, being within
SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of projected Section 31, T11N, R9W,
MDB&M.

County: Sonoma
Parcel #: 141-180-031

(2) Licensed POD (Vineyard Lake):
By California Coordinate System of 1927, Zone 2,
North 393,700 feet and East 1,736,900 feet, being within
SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of projected Section 1, T10N, R10W,
MDB&M.

POD as surveyed by GPS:
By California Coordinate System of 1927, Zone 2,
North 393,550 feet and East 1,736,920 feet, being within

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SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of projected Section 1, T10N, R10W,
MDB&M.

County: Sonoma
Parcel #: 141-190-042

The licensed coordinates and coordinates obtained by GPS are sufficiently close and indicate no changes. There is an error in the Township number for POD 1. It appears the description should be T11N instead of T10N, but this depends on how the sections are projected. However, if T10N is correct, the correct section would be 6 and not 31 as licensed. A licensed Land Surveyor prepared the project map and it indicates that POD 1 is in T11N. Another error is that POD 2 at the reservoir is listed as only a point of diversion. It should also be a point of rediversion for water diverted from Oak Flat Creek at POD 1.

Recommend these changes be incorporated in any amended license issued in the future.

PLACE OF USE:

No change.

Recreational use at:

Vineyard Lake within SE $\frac{1}{4}$ of NW $\frac{1}{4}$, SW $\frac{1}{4}$ of NE $\frac{1}{4}$, and NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of projected Section 1, T10N, R10W, MDB&M.

County: Sonoma
Parcels: 141-190-042.

The lake is depicted on the USGS Geyserville quad map. There are no changes or corrections required.

**METHOD(S) OF
DIVERSION:**

No change.

Water is diverted to offstream storage at Vineyard Lake by a 4-inch PVC pipeline that conveys the water about 1 mile from a small concrete and rock diversion dam at POD 1. The reservoir also fills with runoff from the surrounding hillsides. No channel flowing into the reservoir was observed.

Other Rights: None.

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**COMPLIANCE TO
TERMS AND
CONDITIONS:**

Violation of measuring
device term.

The license is subject to 4 special terms.

(1) The licensee is required to maintain an outlet pipe. The DSOD report of inspection in 2004 indicated the outlet was tested and found to be functional.

(2) The license is conditioned upon full compliance with Sections 1601, 1603, and/or Section 6100 of Fish and Game Code. The diversion dam on Oak Flat Creek would block fish during the diversion season if fish were present. During the application process the DF&G protested the application and resolved its protest by requiring a bypass flow and limiting the diversion season. The diversion pipe had a loose debris screen but no screen designed to prevent fish from entering the pipe.

(3) The licensee must bypass a minimum flow of 0.4 cfs or the natural flow in Oak Flat Creek. During the inspection, flow immediately below the diversion dam was measured with a Montana flume. About half of the total flow could be diverted through the 3-inch flume resulting in 0.31 ft. depth of flow. This equals about 0.16 cfs. Although an exact measurement could not be obtained, it appeared that flow below the diversion dam was very close to the minimum of 0.4 cfs.

(4) The licensee is required to maintain a measuring device in Oak Flat Creek, capable of measuring the bypass requirement. No device was installed or evident nearby the diversion. A piece of the wooden device that was apparently installed for licensing appeared to be among the scraps of wood used to plug the slot in the diversion dam. The manager was not aware of the bypass requirement prior to the inspection. He has been the manager for about 2 years.

The licensee should be required to have a new device designed and its installation certified by a registered engineer. The device needs to function without supervision due to the remote location of the diversion. The licensee should be advised that further diversions from Oak Flat Creek are subject to ACL and be given a time limit to comply.

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**FINDINGS AND
RECOMMENDATIONS:**

Corrections required to
description of POD

Violation of measuring
device term.

The description of POD 1 (Oak Flat Creek) lists the wrong township. POD 2 (at the reservoir) should also be designated as a point of rediversion. These corrections should be made if an amended license is issued for some other reason.

A measuring device is required to monitor the bypass at the Oak Flat Creek diversion. The measuring device found at licensing has been removed as of an unknown date. The licensee should be advised to cease diversions from Oak Flat Creek until an approved device is installed. A registered engineer should design the new device.

CALCULATION OF AMOUNTS:

The diversion pipe was filling the lake at about 60 gallons per minute (about 0.13 cfs) based on measurements with a bucket and watch at the diversion pipe's outfall into the lake. This appears to be the maximum diversion rate since the pipe elevation cannot change and the head over the pipe inlet was at the maximum possible given the height of the diversion structure.

At the time of the inspection the lake was at the level of the spillway and spilling at a rate visually estimated to be under 0.1 cfs. The manager indicated that the lake level normally dropped about 4 feet maximum between the diversion seasons. He said that the lake was full by the end of January and normally filled without the use of diversions from Oak Flat Creek. Oak Flat Creek diversions usually begin at the end of March and continue to the end of the diversion season on May 31. According to the manager, the Oak Flat Creek diversion is used only to keep the lake full by replacing evaporation and seepage. If the diversion pipe flows at 60 gallons per minute for the typical time of two months, the amount taken from Oak Flat Creek would be about 16 acre-feet, some of which replaces evaporation and seepage and some may spill as observed during the inspection. This is less than average evaporation during April and May (about 22 ac-ft).

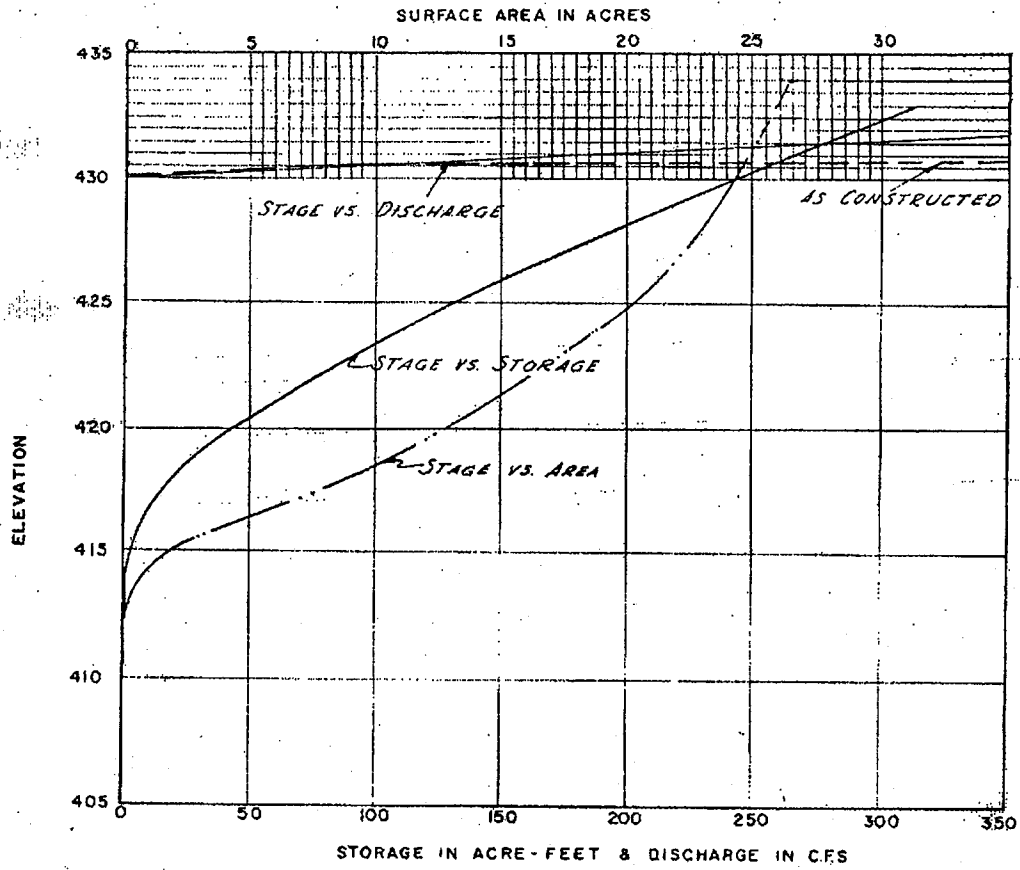
Based on the area capacity curve of the reservoir, a drawdown of 4 feet equals a withdrawal of 92 acre-feet. Average class A pan evaporation data is available for Geyserville from Bulletin 113-3. From October 1 to January 31 the total average evaporation is 7.61 inches and from February 1 to May 31 the amount is 25.68 inches. Assuming an average surface area during refill of 20 acres, evaporation of 7.61 inches is 12.7 ac-ft. When the reservoir is full (25 acre surface area) the evaporation from February 1 to May 31 would be about 53.5 ac-ft. **Therefore the total amount of water taken would be the refill of 92 acre-feet plus the evaporation of about 66 acre-feet for a total of 158 acre-feet.**

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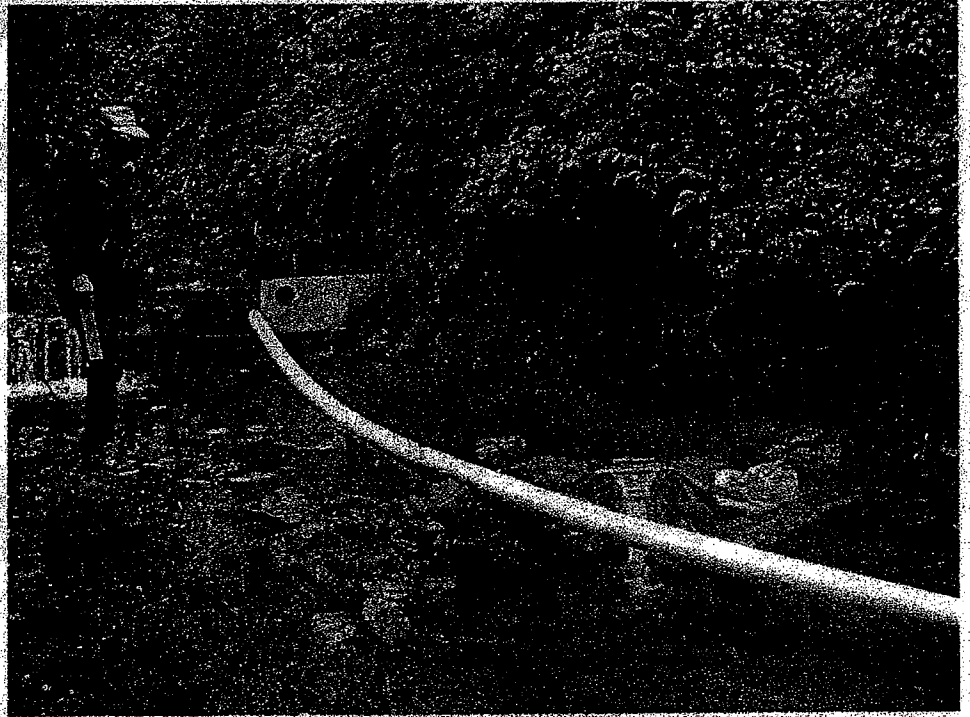
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Capacity curve from "as-built" plan on file at the Division of Safety of Dams.



A fume was placed in the stream immediately below the POD to confirm compliance with the bypass. Due to the width of the stream, only a portion of the flow could be directed through the fume.



The depth of flow in the 3-inch Montana fume was 0.31 ft. This corresponds to about 0.16 cfs. ft.



Diversion dam and 4-inch PVC pipe at the point of diversion to offstream storage.



There was no measuring device at the point of diversion to verify the bypass. The gap in the structure was filled with wood pieces that appear to include the original measuring device.