working copy

TYPE OR PRINT IN BLACK INK
(For instructions, see booklet: "How to File an Application to Appropriate Water in California")

California Environmental Protection Agency

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000, Sacramento, CA 95812-2000
Tel: (916) 341-5300 Fax: (916) 341-5400
www.waterrights.ca.gov

APPLICATION NO. 031738

APPLICATION TO APPROPRIATE WATER

1. APPLICANT/AGENT

	APPLICANT	ASSIGNED AGENT (if any)
Name	Cooley Ranch Company	Wagner & Bonsignore, CCE
	"Buckeye Pond"	
Mailing Address	P.O. Box 1146	444 North Third Street ste 325
City, State & Zip	Novato, CA 94948	Sacramento, CA 95811
Telephone		(916) 441-6850
Fax		(916) 448-3866
E-mail		rstolfus@wagner-engrs.com

2. OWNERSHIP INFORMATION (Please check type of ownership.)

☐ Sole Owner
☒ Limited Partnership*
☐ Corporation
☐ Limited Liability Company (LLC)
☐ Business Trust
☐ Joint Venture
☐ General Partnership*
☐ Husband/Wife Co-Ownership
☐ Other _____

*Please identify the names, addresses and phone numbers of all partners.

3. PROJECT DESCRIPTION (Provide a detailed description of your project, including, but not limited to, type of construction activity, area to be graded or excavated, and how the water will be used.) Add additional pages if needed and check box below and label as an attachment.

2008 DEC 19 AM 11:03
DIV OF WATER RIGHTS
SACRAMENTO

STATE WATER RESOURCES CONTROL BOARD

☒ *For continuation, see Attachment No.* 1

12/19/2008
$ 1375.00 App fees
$ 850.00 Pay

APP 09/2008

4. PURPOSE OF USE, DIVERSION/STORAGE AMOUNT AND SEASON

a. PURPOSE OF USE (irrigation, domestic, etc.)	DIRECT DIVERSION				STORAGE		
	AMOUNT		SEASON OF DIVERSION		AMOUNT	SEASON OF COLLECTION	
	Rate (cfs or gpd)*	Acre-feet per annum	Beginning date (month & day)	Ending date (month & day)	Acre-feet per annum	Beginning date (month & day)	Ending date (month & day)
Stockwater					35	10-1	5-31
Total afa			Total afa		35		

☐ *See Attachment No. ___* * If rate is less than 0.025 cubic feet per second (cfs), use gallons per day (gpd).

b. Total combined amount taken by direct diversion and storage during any one year will be 35 acre-feet.

c. Reservoir storage is: ☒ onstream ☐ offstream ☐ underground (If underground storage, attach Underground Storage Form.)

d. County in which diversion is located: Sonoma County in which water will be used: Sonoma & Mendocino *

*Reservoir is located in both counties (See Attachment 3)

5. SOURCES AND POINTS OF DIVERSION/REDIVERSION

a. Sources and Points of Diversion (POD)/Points of Rediversion (PORD):

☒ POD / ☐ PORD # Buckeye Creek trbutary to Galloway Creek thence ~~tributary~~ to Dry Creek thence Russian River

☐ POD / ☐ PORD # _____ tributary to _____ thence _____

☐ POD / ☐ PORD # _____ tributary to _____ thence _____

☐ POD / ☐ PORD # _____ tributary to _____ thence _____

If needed, attach additional pages, check box below and label attachment

☐ *See Attachment No. ___*

b. State Planar and Public Land Survey Coordinate Description:

POD/ PORD #	CALIFORNIA COORDINATES (NAD 83)	ZONE	POINT IS WITHIN (40-acre subdivision)	SECTION	TOWN-SHIP	RANGE	BASE AND MERIDIAN
1	~~N2,058,400~~ ~~E6,219,200~~	2	NE ¼ of NW ¼	16	11N	12W	MD
	N 2,058,598 E 6,219,031		¼ of ¼				
			¼ of ¼				
			¼ of ¼				

Per ewirms DTT 12-23-08

If needed, attach additional pages, check box below and label attachment

☐ *See Attachment No. ___*

c. Name of the post office most often used by those living near the proposed point(s) of diversion:

Healdsburg

6. WATER AVAILABILITY

a. Have you attached a water availability analysis for this project? ☒ YES ☐ NO
If NO, provide sufficient information to demonstrate that there is reasonable likelihood that unappropriated water is available for the proposed appropriation: If needed, attach additional pages, check box below and label attachment.

☒ *See Attachment No.* 2

b. Is your project located on a stream system declared to be fully appropriated by the State Water Resources Control Board (State Water Board) during your proposed season of diversion?
☐ YES ☒ NO

c. In an average year, does the stream dry up at any point downstream of your project? ☒ YES ☐ NO
If YES, during which months? ☐ Jan ☐ Feb ☐ Mar ☐ Apr ☒ May ☒ Jun ☒ Jul ☒ Aug ☒ Sep ☐ Oct ☐ Nov ☐ Dec

d. What alternate sources of water are available if a portion of your requested diversion season must be excluded because water is not available for appropriation? (e.g., percolating groundwater, purchased water, etc.) If needed, attach additional pages, check box below and label attachment
N/A

☐ *See Attachment No.* ___

7. PLACE OF USE

a. At Reservoir

USE IS WITHIN (40-acre subdivision)	SECTION*	TOWNSHIP	RANGE	BASE & MERIDIAN	IF IRRIGATED	
					Acres	Presently cultivated?
SE ¼ of SW ¼	9	11N	12W	MD		☐ YES ☐ NO
NE ¼ of NW ¼	16	11N	12W	MD		☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
Total Acres:						

*Please indicate if section is projected with a "(P)" following the section number.

☐ *See Attachment No.* X Please provide the Assessor's Parcel Number(s) for the place of use:
Sonoma County 114-080-003 Mendocino County 049-45-035

8. PROJECT SCHEDULE

a. Project is: ☐ proposed. Year construction will begin: _____
☐ partially complete. Extent of completion: _____

☒ complete. Year completed: 1950's

b. Year of first use: 1950's Year water will be used to the full extent intended: 1950's

9. JUSTIFICATION OF AMOUNTS REQUESTED

a. ☐ IRRIGATION: Maximum area to be irrigated in any one year: _____ acres.

CROP	ACRES	METHOD OF IRRIGATION (sprinklers, flooding, etc.)	WATER USE (Acre-feet/Yr.)	SEASON OF WATER USE	
				Beginning date (month & day)	Ending date (month & day)

☐ *See Attachment No.* ___

b. ☐ DOMESTIC: Number of residences to be served: _____ Separately owned? ☐ YES ☐ NO Number of people to be served: _____ Estimated daily use per person is: _____ gallons per day Area of domestic lawns and gardens: _____ square feet
Incidental domestic uses:
_____
(dust control area, number and kind of domestic animals, etc.)

c. ☒ STOCKWATERING: Kind of stock: Cattle _____ Maximum number: 900
Describe type of operation: Range _____
(feedlot, dairy, range, etc.)

d. ☐ RECREATIONAL: Type of recreation: ☐ Fishing ☐ Swimming ☐ Boating ☐ Other _____

e. ☐ MUNICIPAL:

POPULATION List for 5-year periods until use is completed		MAXIMUM MONTH		ANNUAL USE		
Period	Population	Average daily use (gallons per capita)	Rate of diversion (cfs)	Average daily use (gallons per capita)	Acre-foot (per capita)	Total (acre-feet)
Present						

☐ *See Attachment No.* ___

Month of maximum use during year: _____
Month of minimum use during year: _____

f. ☐ HEAT CONTROL: Area to be heat controlled: _____ net acres
Type of crops protected: _____
Rate at which water is applied to use: _____ gpm per acre
Heat protection season will begin _____ (month and day) and end _____ (month and day).

g. ☐ FROST PROTECTION: Area to be frost protected: _____ net acres
Type of crops protected: _____
Rate at which water is applied to use: _____ gpm per acre
The frost protection season will begin _____ (month & day) and end _____ (month & day).

h. ☐ INDUSTRIAL: Type of industry: _____
Basis for determination of amount of water needed: _____

i. ☐ MINING: Name of the claim: _____ ☐ Patented ☐ Unpatented

Nature of the mine: _____ Mineral(s) to be mined: _____
Type of milling or processing: _____
After use, the water will be discharged into _____ (watercourse)
in _____ ¼ of _____ ¼ of Section _____, T _____, R _____, _____B. & M.

j. ☐ POWER: Total head to be utilized: _____ feet
Maximum flow through the penstock: _____ cfs Maximum theoretical horsepower capable of being generated by the works (cfs x fall ÷ 8.8): _____
Electrical capacity (hp x 0.746 x efficiency): _____ kilowatts at: _____% efficiency
After use, the water will be discharged into _____ (watercourse)
in _____ ¼ of _____ ¼ of Section _____, T _____, R _____, _____B&M. FERC No.: _____

k. ☐ FISH AND WILDLIFE PRESERVATION AND/OR ENHANCEMENT: List specific species and habitat type that will be preserved or enhanced: _____

l. ☐ OTHER: Describe use: _____
Basis for determination of amount of water needed: _____

10. DIVERSION AND DISTRIBUTION METHOD

a. Diversion will be by gravity by means of: Dam
(dam, pipe in unobstructed channel, pipe through dam, siphon, weir, gate, etc.)

b. Diversion will be by pumping from: _____
(sump, offset well, channel, reservoir, etc)
Pump discharge rate: _____ ☐ cfs or ☐ gpd Horsepower: _____
Pump Efficiency: _____

c. Conduit from diversion point to first lateral or to offstream storage reservoir:

CONDUIT (pipe or channel)	MATERIAL (type of pipe or channel lining; indicate if pipe is buried or not)	CROSS-SECTION (pipe diameter, or ditch depth and top and bottom width) (inches or feet)	LENGTH (feet)	TOTAL LIFT OR FALL		CAPACITY (cfs, gpd or gpm)
				feet	+ or -	

☐ *See Attachment No. ___*

d. Storage reservoirs: (For underground storage, complete and attach underground storage form)

RESERVOIR NAME OR NUMBER	DAM				RESERVOIR		
	Vertical height from downstream toe of slope to spillway level (feet)	Construction material	Length (feet)	Freeboard: dam height above spillway crest (feet)	Surface area when full (acres)	Capacity (acre-feet)	Maximum water depth (feet)
Buckeye	10	Earth	380	5'	3 ac	35	23

☐ *See Attachment No. ___*

e. Outlet pipe: Complete for storage reservoirs having a capacity of 10 acre-feet or more.

RESERVOIR NAME OR NUMBER	OUTLET PIPE				
	Diameter in inches	Length in feet	Fall: Vertical distance between entrance and exit of outlet pipe in feet	Head: Vertical distance from spillway to entrance of outlet pipe in feet	Dead Storage: Storage below entrance of outlet pipe in acre-feet
1	Reservoir is existing. Dewatering will be accomplished by pumping.				

☐ *See Attachment No. ___*

e. If water will be stored and the reservoir is not at the point of diversion, the maximum rate of diversion to off-stream storage will be _____ cfs. Diversion to offstream storage will be made by:
☐ Pumping ☐ Gravity

11. CONSERVATION AND MONITORING

a. What methods will you use to conserve water? Explain.

b. How will you monitor your diversion to be sure you are within the limits of your water right and you are not wasting water? ☐ Weir ☐ Meter ☐ Periodic sampling ☒ Other (describe)
Visual observation

12. RIGHT OF ACCESS

a. Does the applicant own all the land where the water will be diverted, transported and used?
☒ YES ☐ NO
If NO, I ☐ do ☐ do not have a recorded easement or written authorization allowing me access.

b. List the names and mailing addresses of all affected landowners and state what steps are being taken to obtain access:

☐ *See Attachment No. ___*

13. EXISTING WATER RIGHTS AND RELATED FILINGS

a. Do you claim an existing right for the use of all or part of the water sought by this application?
☐ YES ☒ NO
If YES, please specify: ☐ Riparian ☐ Pre-1914 ☐ Registration ☐ Permit ☐ License
☐ Percolating groundwater ☐ Adjudicated ☐ Other (specify) _____

b. For each existing right claimed, state the source, year of first use, purpose, season and location of the point of diversion (to within quarter-quarter section). Include number of registration, permit, license, or statement of water diversion and use, if applicable.

☐ *See Attachment No. ___*

c. List any related applications, registrations, permits, or licenses located in the proposed place of use or that utilize the same point(s) of diversion.

☐ *See Attachment No. ___*

14. OTHER SOURCES OF WATER

Are you presently using, or do you intend to use, purchased water or water supplied by contract in connection with this project? ☐ Yes ☒ No If yes, please explain:

15. MAP REQUIREMENTS

The Division cannot process your application without accurate information showing the source of water and location of water use. You must include a map with this application form that clearly indicates the quarter/quarter, section, township, range, and meridian of (1) the proposed points of diversion and (2) the place of use. A copy of a U.S.G.S. quadrangle/topographic map of your project area is preferred, and can be obtained from sporting goods stores or through the Internet at http://topomaps.usgs.gov. A certified engineering map is required when (1) appropriating more than three cubic feet per second by direct diversion, (2) constructing a dam which will be under the jurisdiction of the Division of Safety of Dams, (3) creating a reservoir with a surface area in excess of ten acres or (4) appropriating more than 1,000 acre-feet per annum by underground storage. See the instruction booklet for more information.

☒ *See Attachment No.* 3

ENVIRONMENTAL INFORMATION

Note: Before a water right permit may be issued for your project, the State Water Board must consider the information contained in an environmental document prepared in compliance with the California Environmental Quality Act (CEQA). This form is not a CEQA document. If a CEQA document has not yet been prepared for your project, a determination must be made of who is responsible for its preparation. If the State Water Board is determined to be responsible for preparing the CEQA document, the applicant will be required to pay all costs associated with the environmental evaluation and preparation of the required documents. Please answer the following questions to the best of your ability and submit with this application any studies that have been conducted regarding the environmental evaluation of your project.

16. COUNTY PERMITS

a. Contact your county planning or public works department and provide the following information:

Person contacted: www.sonoma-county.org/PRMD Date of contact: 12-4-08
Department: Permit & Resource Management Dept Telephone: ( )
County Zoning Designation:
Sonoma 114-080-003 LEA B6 320 Z / Mendocino 049-450-35
Are any county permits required for your project? ☐ YES ☒ NO If YES, check appropriate box below:
☐ Grading permit ☐ Use permit ☐ Watercourse ☐ Obstruction permit ☐ Change of zoning
☐ General plan change ☐ Other (explain):

b. Have you obtained any of the required permits described above? ☐ YES ☐ NO
If YES, provide a complete copy of each permit obtained.
☐ *See Attachment No. ___*

17. STATE/FEDERAL PERMITS AND REQUIREMENTS

a. Check any additional state or federal permits required for your project:
☐ Federal Energy Regulatory Commission ☐ U.S. Forest Service ☐ U.S. Bureau of Land Management ☐ U.S. Corps of Engineers ☐ U.S. Natural Res. Conservation Service ☐ Calif. Dept. of Fish and Game ☐ State Lands Commission ☐ Calif. Dept. of Water Resources (Div. of Safety of Dams) ☐ Calif. Coastal Commission ☐ State Reclamation Board ☐ Other (specify)

_____

b. For each agency from which a permit is required, provide the following information:

AGENCY	PERMIT TYPE	PERSON(S) CONTACTED	CONTACT DATE	TELEPHONE NO.

☐ *See Attachment No. ___*

c. Does your proposed project involve any construction or grading-related activity that has significantly altered or would significantly alter the bed, bank, or riparian habitat of any stream or lake? ☐ YES ☒ NO
If YES, explain:

_____
_____
_____
_____
_____
_____

☐ *See Attachment No. ___*

d. Have you contacted the California Department of Fish and Game concerning your project?
☐ YES ☒ NO If YES, name, telephone number and date of contact:

_____

18. ENVIRONMENTAL DOCUMENT

a. Has any California public agency prepared an environmental document for your project?
☐ YES ☒ NO

b. If YES, submit a copy of the latest environmental document(s) prepared, including a copy of the notice of determination adopted by the California public agency. Public agency:

_____

c. If NO, check the appropriate box and explain below, if necessary:
☐ The applicant is a California public agency and will be preparing the environmental document.*
☒ I expect that the State Water Board will be preparing the environmental document.**
☐ I expect that a California public agency other than the State Water Board will be preparing the environmental document.* Public agency: _____
☐ *See Attachment No. ___*

* Note: When completed, submit a copy of the final environmental document (including notice of determination) or notice of exemption to the State Water Board, Division of Water Rights and proof of payment of the State Clearinghouse filing fee. Processing of your application cannot be completed until these documents are submitted.

** Note: CEQA requires that the State Water Board, as Lead Agency, prepare the environmental document. The information contained in the environmental document must be developed by the applicant and at the applicant's expense under the direction of the State Water Board, Division of Water Rights.

19. WASTE/WASTEWATER

a. Will your project, during construction or operation, (1) generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or (2) cause erosion, turbidity or sedimentation? ☐ YES ☒ NO
If YES, or you are unsure of your answer, explain below and contact your local Regional Water Quality Control Board for the following information (See instruction booklet for address and telephone no.):

_____
_____
_____

☐ *See Attachment No.* ___

b. Will a waste discharge permit be required for your project? ☐ YES ☒ NO
Person contacted: _____ Date of contact: _____

c. What method of treatment and disposal will be used? _____
_____
_____

☐ *See Attachment No.* ___

20. ARCHEOLOGY

a. Have any archeological reports been prepared on this project? ☐ YES ☒ NO
b. Will you be preparing an archeological report to satisfy another public agency? ☐ YES ☒ NO
c. Do you know of any archeological or historic sites located within the general project area?
☐ YES ☒ NO If YES, explain:

_____
_____
_____

☐ *See Attachment No.* ___

21. ENVIRONMENTAL SETTING

Attach **two complete sets of color photographs**, clearly dated and labeled, showing the vegetation that exists at the following three locations:

☐ Along the stream channel immediately downstream from the proposed point(s) of diversion.
☐ Along the stream channel immediately upstream from the proposed point(s) of diversion.
☐ At the place(s) where the water is to be used.
☒ *See Attachment No.* 4

SUBMITTAL FEES

Calculate your application filing fee using the "Water Right Fee Schedule Summary" that was enclosed in the application packet. The "Water Right Fee Schedule Summary" can also be viewed at the Division of Water Rights' website (www.waterrights.ca.gov).

A check for the application filing fee, payable to the "Division of Water Rights" and an $850 check for the Streamflow Protection Standards review fee [Pub. Resources Code § 10005(a)], payable to the "California Department of Fish and Game," must accompany this application. All applicable fees are required at the time of filing. If the application fees are not received, your application will not be accepted and will be returned to you. Please check the fee schedule for any fee changes prior to submitting the application.

DECLARATION AND SIGNATURE

I declare under penalty of perjury that all information provided is true and correct to the best of my knowledge and belief. I authorize my agent, if I have designated one above, to act on my behalf regarding this water right application.

Cooley Ranch Company — General Partner — 12-16-08

by: A. Crawford Cooley

Signature of Applicant | Title or Relationship | Date

Signature of Co-Applicant (if any) | Title or Relationship | Date

Applications that are not completely filled out and/or do not have the appropriate fees will not be accepted. In the event that the Division has to return the application because it is incomplete, a portion of the application submittal fee will be charged for the initial review.

"APPLICATION TO APPROPRIATE WATER" CHECKLIST

Before you submit your application, be sure to:

- ☐ Answer each question completely.
- ☐ Number, label and include all necessary attachments.
- ☐ Include a legible map that meets the requirements discussed in the instruction booklet.
- ☐ Include the Water Availability Analysis or sufficient information to demonstrate that there is reasonable likelihood that unappropriated water is available for the proposed appropriation.
- ☐ Include two complete sets of color photographs of the project site.
- ☐ Enclose a check for the required fee, payable to the Division of Water Rights.
- ☐ Enclose an $850 check for the Streamflow Protection Standards review fee, payable to the Department of Fish and Game.
- ☐ Sign and date the application.

Send the original and one copy of the entire application to:

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000
Sacramento, CA 95812-2000

Attachments to Accompany
Water Right Application
Cooley Ranch Company
Buckeye Pond

2. Ownership Information

General Partner

A. Crawford Cooley
P.O. Box 1146
Novato, CA 94948
415-883-9240

Limited Partners

Jess P. Cooley
P.O. Box 1146
Novato, CA 94948
415-883-9240

Janet F. Cooley 2001 Irrevocable Trust
P.O. Box 1146
Novato, CA 94948
415-883-9240

Michael P. Cooley 2001 Irrevocable Trust
P.O. Box 1146
Novato, CA 94948
415-883-9240

Nancy E. Cooley
39 East 79th Street, Apt. 7B
New York, NY 10021
212-744-9545

Robert A. Cooley Separate Property
Cooley Ranch Trust
2489 Incline Drive
Santa Rosa, CA 95404
707-528-2981

Jessica Sterling
41 Mariners Circle
San Rafael, CA
415-491-4870

Nancy E. Cooley as Cust. for James Benasuil under NY UTMA
39 East 79th Street, Apt. 7B
New York, NY 10021
212-744-9545

Robert A. Cooley as Cust. for Crawford E. Cooley under CA UTMA
2489 Incline Drive
Santa Rosa, CA 95404
707-528-2981

Robert A. Cooley as Cust. for Alexandra E. Cooley under CA UTMA
2489 Incline Drive
Santa Rosa, CA 95404
707-528-2981

Attachments to Accompany
Water Right Application
Cooley Ranch Company
Buckeye Pond

Attachment #1

3. Project Description

This project consists of storage of water in an existing onstream reservoir, having a capacity of approximately 35 acre-feet located on the Applicant's property (see location on Attachment 3). Water will be used for stockwatering purposes at the reservoir. The reservoir was built in 1950's and stores water from its naturally tributary area.

The project described in this Application involves no changes to the existing reservoir, no changes in water use or water diversions relative to historical conditions for this project. Accordingly, this Application qualifies for a Categorical Exemption under Title 14, California Code of Regulations, Section 15301, Existing Facilities, which states the following:

"Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination."

Based on the foregoing, we are requesting that the State Water Board grant a Categorical Exemption to this Application and proceed with further processing as necessary for permit issuance.

Attachment #2

6. Water Availability
See separate attachment.

Attachment #3

15. Map
See separate attachment.

Attachment #4

21. Environmental Setting (Photographs)
See State Water Board inspection report.

ATTACHMENT 2
Water Right Application by Cooley Ranch Company
Estimate of Water Availability

Point of Diversion #1 - Buckeye Creek

Monthly Precipitation[1]

CLOVERDALE 3 S, CALIFORNIA

Month	Mean Precipitation (in)
October	2.36
November	5.81
December	8.38
January	9.29
February	7.73
March	5.53
April	2.84
May	1.07
June	0.21
July	0.04
August	0.13
September	0.55
Annual	**43.94**

Mean Precipitation for requested diversion season (11/1 - 5/31):	40.64 in
Precipitation during requested diversion season as a percentage of total precipitation:	92.49%
Mean Annual Runoff:[2]	30.0 in
Estimated Mean Seasonal Runoff:[3]	27.7 in
Watershed Area for Point of Diversion #1:	569.0 ac

Total Estimated Mean Seasonal Runoff at Point of Diversion #1:	1,313.4 ac-ft
Senior Diverters of Record within subject watershed (face value):	0.0 ac-ft
Subtotal water available:	1,313.4 ac-ft
Requested diversion amount:	35.0 ac-ft
Total seasonal amount remaining in stream after diversion:	1,278.4 ac-ft

Notes:

[1] Source: California Climate Data Archive website (http://www.calclim.dri.edu/ccda/data.html) accessed December 2, 2008.

[2] *Mean Annual Runoff in the San Francisco Bay Region, California, 1931-70 (Miscellaneous Field Studies Map MF-613),* by S.E. Rantz, 1974.

[3] Estimated mean seasonal runoff is computed by multiplying mean annual runoff by percent seasonal precipitation.

ATTACHMENT 2

Water Right Application by Cooley Ranch Company

Calculation of Weighted Mean Annual Runoff in POD Watershed

Watershed	Area (ac)	Mean Annual Runoff (in)	Volume (ac-in)
POD 1 - Buckeye Creek			
	569	30.0	17,070
Total	**569**		**17,070**
Weighted Average		**30.0**	

CLOVERDALE 3 S, CALIFORNIA
Monthly Total Precipitation (inches)
-41838

File last updated on Oct 18, 2007
*** Note *** Provisional Data *** After Year/Month 200707
a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,
z = 26 or more days missing, A = Accumulations present
Long-term means based on columns; thus, the monthly row may not
sum (or average) to the long-term annual value.
MAXIMUM ALLOWABLE NUMBER OF MISSING DAYS : 5
Individual Months not used for annual or monthly statistics if more than 5 days are missing.
Individual Years not used for annual statistics if any month in that year has more than 5 days missing.

WY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANN
1950				0 z	0 z	0 z	0 z	0 z	0 z	0 u	0 z	0 z	-
1951	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	-
1952	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	-
1953	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	-
1954	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	-
1955	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	-
1956	0 z	4.17	25.39	15.31	8.97	0.35	3.15	0.85	0.08	0.12	0	0.26	-
1957	3.38	0.17	0.67	8.05	10.25	3.81	3.14	5.49	0	0	0	4.3	39.26
1958	8.26	1.2	5.47	8.61	23.23	8.81	6.79	0.47	0.95	0	0	0.02	63.81
1959	0.17	0.48	2.01	17.19	11.01	1.48	1.26	0.02	0	0	0	3.42	37.04
1960	0	0.02	2.22	7.77	9.14	6.24	1.69	1.05	0	0	0	0	28.13
1961	1.1	7.12	9.04	6.39	4.19	6.04	1.08	0.55	0	0	0	0.15	35.66
1962	0.34	7.22	3.88	2.09	14.31	6.24	0.57	0.23	0	0	0.26	0.41	35.55
1963	12.24	1.42	5.81	0.08 g	6.58 c	7.8	7.28	1.51	0	0	0	0.15	-
1964	4.71	11.52	1.68	6.66	0.51	3.24	0.66	1.17	1.05	0.05	0	0	31.25
1965	4.57	10.21	17.98	11.15	1.77	1.95	7.91	0	0	0.03	0.5	0	56.07
1966	0.13	15.96	7.57	11.88	7.26	2.66	1.5	0.29	0.09	0	0.09	0.12	47.55
1967	0	12.72	11.07	15.86	0.65	10.79	6.24	0.25	2.12	0	0.01	0.04	59.75
1968	1.48	3.64	6.3	12.12	6.42	5.33	1.75	0.37	0	0	1.18	0	38.59
1969	2.75	4.19	14.04	18.93	15.02	2.3	3.54	0	0.02	0	0	0	60.79
1970	2.23	1.97	18.22	25.72	4.8	3.57	0.3	0.07	0.44	0	0	0	57.32
1971	2.82	9.59	13.13	6.29	0.33	5.94	1.63	0 z	0	0	0.07	0.46	-
1972	0.39	3.08	7.95	2.4	2.97	1.51	3.04	0.33	0.11	0	0.06	1.1	22.94
1973	5.53	7.82	6.11	18.73	11.93	4.57	0.21	0.07	0	0	0.25	0.98	56.20
1974	3.99	19.67	7.63	10.56	4.57	13.29	2.5	0.11	0	1.35	0.15	0	63.82
1975	1.6	1.87	6.63	1.73	14.31	12.07	2.06	0.04	0.02	0.25	0.07	0	40.65
1976	4.93	1.69	1.87	0.53	2.64	1.62	3.9	0	0	0.03	1.12	0.41	18.74
1977	0.29	2.7	1.27	2.62	2.82	2.99	0.15	2.19	0	0	0.04	3.31	18.38
1978	1.15	6.8	10.41	20.33	10.08	7.16	5.96	0.17	0.02	0	0	2.21	64.29
1979	0	1.45	0.37	11.74	9.13	5.66	2.84	0.88	0	0	0	0.27	32.34
1980	6.43	8.21	9.48	9.32	16.91	2.14	2.87	0.34	0.19	0	0	0.03	55.92
1981	0.82	0.7	8.54	10.85 a	4.08	4.26	0.47	1.06	0	0.06	0	0.6	31.44
1982	5.71	13.58	12.02	7.94	5.97	8.01	6.55	0.06	0.08	0	0	0.8	60.72
1983	4.84	9.54	8.22	14.57	13.05	20.76	5.7	0.62	0 z	0 z	1.49	0.84	-
1984	1.33	17.61	17.8	0.68	3.26	3.27	1.27	0.2	0.25	0	0.15	0.1	45.92
1985	2.64	14.6	2.34	0.56	2.81	6.73	0.17	0.01	0	0.07	0	1.34	31.27
1986	2.13	5.55	4.48	9.37	22.13	8.58	1.15	0.6	0.02	0	0	1.75	55.76
1987	0.89	0.19	2.9	6.2	5.97	8.52	0.17	0.25	0	0	0 z	0	-
1988	1.8	4.37	13.28	8.74	0.58	0.16	2.68	0.83	0.48	0	0	0	32.92
1989	0.36	5.51	3.99	1.53	1.11	12.6	1.73	0.23	0 z	0	0	2.75	-
1990	4.14	2	0	7.37	3.87	1.99	0.37 g	5.24	0 z	0 z	0 z	0 z	-
1991	0 z	0.46	1.3	1.02	4.78	0 z	0 z	0 z	0 z	0 z	0 z	0 z	-

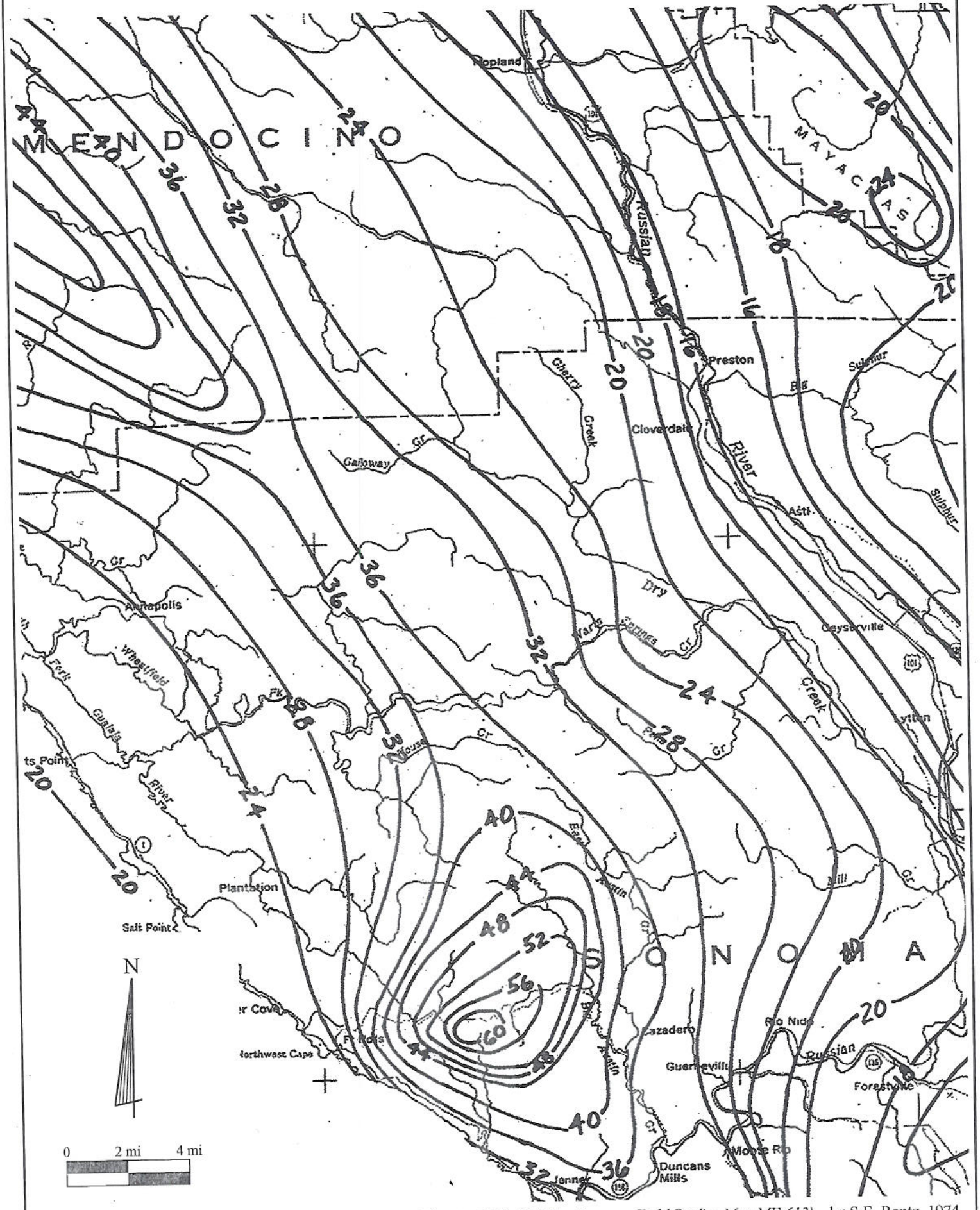
ATTACHMENT 2
12/10/2008

WY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANN
1992	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0	0.01	-
1993	3.46	0.69	13.77	13.78	10.11	4.07	2.59	4.5	0.55	0	0	0	53.52
1994	0.41	2.9	5.87 a	5.83	7.42	0.46 a	2.73	1	0	0.03	0	0.08	26.73
1995	0.49	8.42	5.04	31.25	0.34	20.14	3.89	2.53	0.38	0	0	0	72.48
1996	0	0.2	13.79	9.72	13.12	3.01	4.04	2.84	0	0	0	0.19	46.91
1997	1.61	5.17	20.31	14.3	0.49	2.17	0.83	0.84	0.59	0	1.03	0.46	47.80
1998	1.63	10.78	3.94	0 z	24.04	6.15	0 z	6.05	0.02	0	0	0.06	-
1999	1.03	9.2	1.51 a	4.66	11.84	6.26	2.1	0.31	0	0	0	0 z	-
2000	1.13	5.28 a	1.14	8.1	14.45	2.5	3.36	1.45	0.32	0	0 z	0.15	-
2001	4.22	0 z	0.89	7.45	10.94	3.51	1.22	0	0.72	0	0	0.17	-
2002	1.58	10.94	12.8	5.44	1.97	3.08 b	0.45	1.15	0	0	0	0	37.41
2003	0	5.87	22.66	5.43	2.41 a	3.6	8.39 a	0.73	0	0	0	0	49.09
2004	0	5.37	16.24	5.38	12.81 a	1.39	0.63 m	0	0.02	0	0	0	-
2005	5.12	3.44	11.58	7.75	4.67	6.63	2.49	5.56	1.47 a	0	0	0	48.71
2006	1.21 a	4.65 a	20.59 a	7.51 a	5.63	15.43 a	9.38	0.54	0	0	0	0	64.94
2007	0.34	3.66 a	7.45 a	0.49 c	11.1 a	0.72	2.4	0.45	0	0.1	0	0.13	26.84
2008	2.76	0.5	6.95 a	16.68	3.24 a	0.47	0.4	0	0 z	0	0	0 z	-

Period of Record Statistics

MEAN	2.36	5.81	8.38	9.29	7.73	5.53	2.84	1.07	0.21	0.04	0.13	0.55	44.65
MAX	12.24	19.67	25.39	31.25	24.04	20.76	9.38	6.05	2.12	1.35	1.49	4.30	72.48
MIN	0.00	0.02	0.00	0.49	0.33	0.16	0.15	0.00	0.00	0.00	0.00	0.00	18.38
NO YRS	50	51	52	50	52	51	48	50	47	49	49	49	38

ATTACHMENT 2



Mean Annual Runoff in the San Francisco Bay Region, California, 1931-70 (Miscellaneous Field Studies Map MF-613), by S.E. Rantz, 1974.