

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Application 26242)
to Appropriate Water From)
Lagunitas Creek, and)
)
Petitions For Extensions of)
Time For Permitted Applications)
9892, 14278 and 17317) DECISION: 1582
)
) Source: Lagunitas Creek
MARIN MUNICIPAL WATER DISTRICT)
Applicant) County: Marin
TOMALES BAY ASSOCIATION,)
INVERNESS ASSOCIATION, et al)
Environmental Protestants)
)

DECISION APPROVING APPLICATION 26242 IN PART
AND APPROVING PETITIONS
FOR EXTENSIONS OF TIME FOR PERMITTED
APPLICATIONS 9892, 14278 AND 17317

BY CHAIRWOMAN BARD,
AND MEMBER DUNLAP:

The Marin Municipal Water District (MMWD) having filed Application 26242 for a permit to appropriate unappropriated water and petitions for extensions of time for permitted Applications 9892, 14278 and 17317; protests against Application 26242 having been received, a public hearing having been held by the State Water Resources Control Board (Board) on November 14 and December 8, 1980, and January 8, 1981; MMWD, protestants and interested parties having appeared and presented evidence; closing briefs having been submitted; the evidence and closing briefs having been received and duly considered, the Board finds as follows:

2-1-1



Substance of Application

1. Application 26242 is for a permit to appropriate 8,300 acre-feet per annum (afa) from September 1 to June 30 from Lagunitas Creek in Marin County. Appropriated water will be diverted and stored at Peters Dam located within the NE $\frac{1}{4}$ of NW $\frac{1}{4}$, Section 25, T2N, R8W, MDB&M. The water is to be used for domestic, municipal, recreational and fish protection purposes.

Substance of Petitions for Extension of Time

2. Permitted Application 9892 authorizes the appropriation of water from Lagunitas Creek by the direct diversion of 50 cubic feet per second (cfs) from January 1 to December 31 and the storage of 16,050 afa at Peters Dam, 9,400 afa at Alpine Lake and 4,500 afa at Bon Tempe Lake. MMWD has filed a petition for an extension of time to apply water to full beneficial use. The petition requests that the time to place water to beneficial use be extended to December 1, 2000.

3. Permitted Application 14278 authorizes the appropriation of water from Lagunitas Creek by diversion of 8,550 afa to storage from January 1 to December 31. Appropriated water will be diverted and stored at Peters Dam for municipal purposes. MMWD has filed a petition for an extension of time to complete construction of an enlarged Peters Dam to appropriate the water authorized by the permitted applications. The petition requests that the times to complete construction and to place water to beneficial use be extended to December 1, 1983 and to December 1, 2000, respectively.

4. Permitted Application 17317 authorizes the appropriation of water from Nicasio Creek by the direct diversion of 31 cfs from January 1 to December 31 and the storage of 29,000 afa at Nicasio Dam from October 1 to June 30. MMWD has filed a petition for an extension of time to complete construction of Nicasio Dam to appropriate the full amount of the water

authorized by this permitted application. The petition requests that the time to complete construction and to place water to full beneficial use be extended to December 1, 1985 and to December 1, 2000, respectively.

Applicant's Project

5. Existing permits authorize MMWD to store up to 24,600 afa at Peters Dam (Applications 9892 and 14278). Until construction was commenced recently, the capacity of the reservoir was 16,700 afa. Following the 1976-77 drought, MMWD decided to increase the reservoir capacity to 32,900 af. The increase will enable MMWD to store the remaining 7,900 af authorized by existing permits and to store the additional 8,300 af sought by Application 26242. (See Figure 1 for the relative location of the facilities described in paragraphs 1 through 5.) MMWD, as lead agency, prepared and approved a final environmental impact report in accordance with the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) and the State Guidelines. Implementation of the Board's permit terms and conditions will mitigate or avoid the adverse environmental impacts of the Kent Lake Project during the study period. Final mitigation measures will be decided following completion of various studies approved by the Board. The Board has reviewed and considered the information contained in the EIR and the Staff Analysis of Record prior to the approval of the project.

Applicant's Existing Water Supply

6. The present MMWD water supply comes from runoff into four reservoirs on upper Lagunitas Creek, Nicasio Reservoir on Nicasio Creek, SoulaJule Reservoir on Arroyo Sausal and the North Marin (Russian River) Intertie. In addition, the pipeline on the Richmond-San Rafael Bridge was installed in 1977 to provide a temporary supply of water from the State Water Project during the drought. The pipeline is still in place, although it is not being used (See MMWD Exhibit 1A, p. ix).



MARIN CO.
T. 2 N. R. 8 W.
M. D. B. & M.

(37)

PROTESTANT

Waldo Giacomini A-13965(L-4329)

SOULAJULE DAM & RESERVOIR

PROTESTANT

North Marin County Water District
A-25062 & A-25079
S-8763

U.S.G.S.
Gage

NICASIO RES.

NICASIO CR.
A-17317 (P-12800)

NOVATO

San Pablo Bay

PROPOSED GAGE AT
GIACOMINI DAM
(RECOMMENDED BY STAFF)

POINT
REYES STATION

PROPOSED TOCALOMA GAGE
(OCTOBER 1979 AGREEMENT)

(1)

PARK
Gage
(RECOMMENDED
BY STAFF)

HAMILTON
FIELD

(101)

SAN
RAFAEL

M.M.W.D. BDY.

SHAFTER BRIDGE

SAN GERONIMO CR.

KENT LAKE
(PETERS DAM)

ALPINE
LK.

BON
TEMPE
LK.

PHOENIX
LK.

LK.
LAGUNITAS

MILL VALLEY

A-26242
A-14278 (P-9390)

A-9892 (P-5633)

3 POINTS OF DIVERSION

Pacific Ocean

SAUSALITO

PROTESTANTS (ON ENVIRONMENTAL BASIS)

Calif. Dept. of Fish & Game
13 Other Individuals and Groups

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

APPLICATIONS

9892-14278-17317-26242

MARIN MUNICIPAL WATER DISTRICT
VICINITY MAP

SCALE



DATE: 10-2-80 DRAWN: D.O. CHECKED: D.C. DWG. 3241

Protests

7. Sixteen protests were received. Eleven protests were accepted and not resolved. They include: the Tomales Bay Association, the Inverness Association, Francine Jacobs Allen, Leo T. Cronin, the National Marine Fisheries Service, California Trout, Inc., the National Park Service Western Region, Lawrence and Adeline Arndt, James S. and Leonore U. Russell, the Audubon Canyon Ranch and the California Department of Fish and Game (Fish and Game). Two of the protests involved prior vested rights. Three of the protests received were not accepted on technical grounds. Two of the three parties, Willis Evans and Alfred F. Giddings were, however, recognized as interested parties and expert witnesses. They submitted evidence, appeared and gave testimony, and were cross-examined during the hearings. Table 1 lists all 16 protestants and summarizes the basis of each protest.

8. Waldo Giacomini and the North Marin County Water District filed protests claiming prior rights to the water of Lagunitas Creek. Prior to the hearing, their protests were dismissed on the basis of separate agreements reached with MMWD and received by the Board on October 17, 1980 and November 11, 1980 (Staff Exhibit 1, folders B and C, respectively). The Department of Fish and Game filed a protest based on the environmental effects of the proposed project. An agreement for mitigating environmental effects was entered between Fish and Game and MMWD on October 1, 1979 (Agreement) (See MMWD Exhibit 2A). Two supplements to the Agreement were filed with the Board. (See MMWD Exhibit 2B and 2C). The Board did not recognize the Agreement and supplements because several other protestants alleged that the terms in the Agreement and supplements did not adequately mitigate the project's adverse impacts.

APPLICATION 26242
LIST OF PROTESTANTS AND BASIS FOR EACH PROTEST

<u>NAME</u>	<u>BASIS OF PROTEST/CLAIM OF RIGHT</u>	<u>ISSUES AND/OR EXTENT OF USE</u>
1. North Marin County Water District	Prior Rights: Pre-1914 (S8763) and Applications 25062 and 25079	Municipal Demand - about 190 acre-feet per annum. Protest was withdraw based on stipulation.
2. Francine Jacobs Allen	Adverse environmental impact	Effects on the Tomales Bay ecological system.
3. Willis Evans	Adverse environmental impact and not in the public interest	Effects on maintenance of public resources.
4. Alfred F. Giddings	Adverse environmental impact and not in the public interest	Effects on maintenance of public resources.
5. Leo T. Cronin	Adverse environmental impact and not in the public interest	Effects on biological resources in Lagunitas Creek.
6. California Department of Fish and Game	Sections 1245 and 1257 of Water Code and Sections 1601, 5937 and 6100 of the Fish and Game Code. Adverse environmental impact and not in the public interest.	Effects on streamflow and habitat for biological resources in Lagunitas Creek.
7. Waldo Giacomini	Prior Rights: Riparian and Licensed Application 13965	Protest was withdrawn based on stipulation.
8. National Marine Fisheries Service	Adverse environmental impact and not in the public interest	Effects on streamflow for anadromou resources in Lagunitas Creek.
9. Inverness Association c/o Anne West	Adverse environmental impact and not in the public interest. Contrary to law.	Lack of operational plan and studies to insure streamflow maintenance and sediment management for protection of biological resources of Lagunitas Creek and Tomales Bay.

<u>NAME</u>	<u>BASIS OF PROTEST/CLAIM OF RIGHT</u>	<u>ISSUES AND/OR EXTENT OF USE</u>
10. California Trout Inc.	Adverse environmental impact, not in the public interest and contrary to law	Lack of agreement providing for streamflow maintenance for biological resources and recreation in Lagunitas Creek.
11. The Tomales Bay Association	Adverse environmental impact, not in the public interest and contrary to law	Lack of operational plan and studies to insure streamflow maintenance and sediment management for protection of biological resources of Lagunitas Creek and Tomales Bay.
12. National Park Service, Western Region	Adverse environmental impact, not in the public interest and contrary to law	<ol style="list-style-type: none"> 1) Lack of studies to assess alteration of streamflow to ecosystems of Lagunitas Creek and 2) General mandate to protect and preserve natural resources and processes in areas of National Park Service System.
13. Lawrence & Adeline A. Arndt	Adverse environmental impact, not in the public interest and contrary to law	Effects on biological resources of Lagunitas Creek and Tomales Bay.
14. James S. Russell Leonore U. Russell	Adverse environmental impact and not in the public interest	<ol style="list-style-type: none"> 1) Effects on stream flow in Lagunitas Creek 2) Effects on Tomales Bay
15. Audubon Canyon Ranch	Adverse environmental impact	Effects on biological resources in Tomales Bay.
16. Robert L. Evans	Adverse environmental impact and not in the public interest	Effects of freshwater flow reduction into Tomales Bay.

9. Other persons participated in the proceedings before the Board as interested parties. The interested parties included: Joel W. Hedgpeth, Richard Plant, the U. S. Fish and Wildlife Service, the Friends of Papermill Creek, the California Department of Parks and Recreation, the California State Lands Commission, George Brown, Walter Filler (Irate Taxpayers of Marin County), Seth Benson, John Conkle (Marin United Taxpayers Association), Francis Rodgers, Mona Verzi (Marin Coalition), Edmund Smith PhD., and Peter Aarigone (Marin Builders Exchange). Their testimony concerned the proposed project's environmental effects and public interest issues.

Need for Proposed Project

10. By the early 1970's MMWD was barely able to provide enough water for its existing service area. A moratorium on new water connections was declared in 1973. During the 1976-77 drought the pipeline on the Richmond-San Rafael Bridge was installed to import an emergency supply of water from the State Water Project. "Net safe yield" (NSY) can be defined as the amount of water that can be safely drawn from available resources each year, under the most severe recorded precipitation conditions, without exhausting the resource. MMWD's pre-drought net safe yield is estimated as 30,000 afa. Consumption in 1970 was 32,250 af. The drought demonstrated that MMWD was using more water than the net safe yield. The NSY figure was reduced to 23,700 afa, excluding 2,900 afa from the North Marin Intertie and allowing 400 afa for Waldo Giacomini. Additional storage capacity, provided since the drought by the SoulaJule Dam, will allow only limited expansion of water service.

11. MMWD's current net safe yield is about 26,200 afa (See MMWD Exhibit 6c p.4). Assuming the 1980 population projection (179,712) for the MMWD service area is reasonably accurate (See MMWD Exhibit 14 p. 2), it is using about 135 gallons per capita per day (gpcd). It is the standard engineering practice to use the 135 gpcd figure for estimating future water

needs for planning purposes. Looking to the year 2000, MMWD estimates it will need 30,450 afa to serve a population of about 194,100 or about 140 gallons for each person per day. Clearly, if MMWD is going to be able to supply future water needs on a "net safe yield" basis, it must obtain an additional supply of water.

12. MMWD's evidentiary presentation indicated that it was relying on improved conservation and reclamation practices to enable it to serve the year 2000 population at a 140 gpcd level (MMWD Exhibit 6c p. 4). It is estimated that MMWD must reduce the historic level of consumption by 6,500 afa in order to provide water service at 140 gpcd in the year 2000. From 1956 until the 1976-77 drought, MMWD's per capita consumption of water exceeded 140 gpcd and in 1970 consumption peaked at 170 gpcd (See MMWD Water Resources Management Study, p. 7) It is equally clear, therefore, that MMWD's ability to supply its future water needs will require a strong and effective conservation and reclamation program.

Availability of Water

13. Section 1375(d) of the Water Code provides that:

"As a prerequisite to the issuance of a permit to appropriate water... there must be unappropriated water available to supply the applicant."

Pursuant to this Code Section, the Board may issue a permit for unappropriated water only. Table 2 demonstrates that water surplus to MMWD's current reservoir operation on upper Lagunitas is available during average runoff years during the months of November, December, January, February, March and April. However, no unappropriated water is available in the entire Lagunitas Creek watershed from May 1 through November 30 annually after approval of Application 26242, et al. The total average annual surplus is about 13,081 af. MMWD is already authorized to appropriate 7,900 af of this amount under permitted Application 14278 (See paragraph 2, supra). Accordingly, the water remaining

TABLE 2

WATER SURPLUS TO MMWD'SCURRENT DIVERSION ON UPPER LAGUNITAS CREEK¹

<u>Month</u>	26 yr Average inflow above <u>Kent Lake</u> ²	Current Average Monthly use (years 79 & 80)	Current Average Monthly Surplus or (deficit)
July	141	2914	(2773)
Aug.	86	2905	(2819)
Sept.	156	2606	(2450)
Oct.	690	2208	(1518)
Nov.	2093	1368	725
Dec.	5234	304	4930
Jan.	10379	815	9564
Feb.	7227	979	6248
Mar.	4874	1334	3540
April	2841	1351	1490
May	812	2222	(1410)
June	299	2745	(2446)
Total	34,832	21,751	13,081

1. Upper Lagunitas Creek includes that portion of the stream above the Peters Dam Source: MMWD Exhibits 31,2(a)-1a and 31, 2a-3a through 31 2a-3w.

2. The twenty-six year period is the years immediately preceding and including 1980.

for appropriation in the upper Lagunitas Creek is about 5,181 af (13,081 - 7,900), assuming no additional water must be bypassed to satisfy prior rights or to protect recreation and aquatic habitat uses. This computation is based on average runoff years. There will be years in which runoff will be lower and greater than 5,181 af. For example, in 1972-73 the inflow above Kent Lake was 72,700 af. Above average runoff occurred during 11 of the 26 years of record or over 43% of that period of time.

14. Application 26242 seeks to appropriate an additional 8,300 afa (See paragraph 5, supra). While it is clear that 8,300 afa will not be available in all years, it will be available in some years. Only by authorizing the appropriation of the full amount can MMWD increase its diversion to storage to 5,181 af on an average annual basis. If Application 26242 is approved, there will be no further unappropriated water above Kent Lake in Lagunitas Creek.

15. During 1979 and 1980 MMWD's average annual diversion from Lagunitas Creek above Peters Dam was 21,750 af (See Table 2). The "Statement of Facts" submitted by MMWD indicated that MMWD will use the enlarged Kent Lake to increase annual average diversion by only 3,776 af (MMWD Exhibit 6c, p. 1). Notwithstanding that, the dam is being enlarged to store the remaining 7,900 af under permitted Application 14278 and 8,300 af under Application 26242. The disparity between these figures is explained by the definition of net safe yield (See paragraph 10, supra). For example, MMWD should only consume, annually, that amount of water that can be withdrawn from storage on a long term basis without exhausting the water in storage. Permitted Application 9892 already provides that MMWD shall not divert water from Lagunitas Creek in excess of 50 cubic feet per second and not collect water to storage in excess of 30,000 afa. Since MMWD does not propose to increase its total diversion above the amount authorized in permitted Applications 9892 and 14278, the effect of Application 26242 is to increase or make more firm MMWD's net safe

yield. It is also clear that the project will make water available for recreation and aquatic wildlife uses below Peters Dam, a subject that will receive more discussion in subsequent paragraphs.

Post Project Flows in Lagunitas Creek

Below Peters Dam to Protect Aquatic and Recreation Uses

16. About 2,500 feet downstream from Peters Dam, Lagunitas Creek enters the Golden Gate National Recreation Area. The Recreation Area includes the Samuel P. Taylor State Park, Federal lands and private lands and adjoins the Point Reyes National Seashore. The remainder of the Creek meanders to Tomales Bay and is within the recreation area (See National Park Service, Exhibit 1).

17. Downstream from Peters Dam, Lagunitas Creek is considered important for its rich aquatic life, which includes an endangered fresh water shrimp, Syncaris pacifica. Salmon and steelhead spawn in the stream (See MMWD Exhibit I-A, p. iii and 39). With an enlarged Kent Lake, MMWD will have constructed so much reservoir capacity on Lagunitas Creek that no significant aquatic life can be expected to survive below Peters Dam unless MMWD operates the project to protect aquatic life (TBA - IA, Exhibit 3, p. 2 and MMWD Exhibit 1A, pp i and 20).

18. The concerns of the protestants and interested parties are founded on the project's potential effects on Lagunitas Creek, below Peters Dam, Tomales Marsh and Tomales Bay. Fundamentally, they are concerned that post project flows will not be sufficient to preserve aquatic life in Lagunitas Creek, Tomales Marsh and Tomales Bay.

19. MMWD's draft and final EIR recognized that the project will affect the Creek, Marsh and Bay. When MMWD approved the project, however, Fish and Game did not believe that MMWD provided adequate measures to mitigate the project's effect on post-project flows and downstream aquatic life. At Fish and Game's request, the Attorney General filed an action (Marin County

Superior Court, State of California v. Marin Municipal Water District, No. 04479) alleging that MMWD had failed to comply with the California Environmental Quality Act (Public Resources Code, Section 21000 et seq or CEQA). Fundamental to the Department's complaint are the following propositions:

(a) The project was approved before studies were completed that would identify how the project should be operated to mitigate the effects of the project on Lagunitas Creek below Peters Dam; and (b) MMWD did not adopt specific mitigation measures setting forth how the project would be operated to protect aquatic life below Peters Dam.

20. Subsequently, Fish and Game and MMWD entered into the Agreement on October 1, 1979 (See MMWD Exhibit 2-A). Among other matters the Agreement provided that: (a) MMWD will conduct certain studies to determine how the project should be operated to protect aquatic life below Peters Dam; (b) after the reservoir is filled, MMWD will operate Peters Dam to insure specified minimum flows in Lagunitas Creek; and (c) upon completion of the studies, the Department may continue with its CEQA action if an agreement can not be reached as to how the project will be operated to protect the aquatic life below Peters Dam.

21. In an undisturbed, natural condition, the flows in Lagunitas Creek were seasonal and highly variable. The aquatic life in the stream evolved a life cycle to fit the seasonal variations. On most occasions, post-project flows will be regulated flows. It is critical, therefore, that such flows be regulated in a manner that will be compatible with the aquatic life cycles including, most importantly, the life cycle of the steelhead trout and salmon. Both the magnitude and the timing of regulated flows are critical for the steelhead and salmon. In general terms, the fish migrate upstream for spawning from mid-October to April. A sizeable flow is required to encourage

the fish to commence upstream migration and to enable them to move upstream. A somewhat reduced flow is sufficient for spawning. Incubation and the emergence of fry occur from November through June. Flows suitable for incubation may be less than the flows needed for spawning. Also, sometime from mid-April to mid-June, the smolts, juvenile fish, will migrate to the sea. Lower flows normally occur after June until the start of the next rainy season. Ideally, regulated flows should mirror this type of natural cycle.

22. In the Agreement, MMWD promises to operate the project to maintain and improve salmon and steelhead resources (See MMWD Exhibit 2B, Paragraph 3) The Agreement provides for specific flows for the life cycle of the steelhead and salmon during the study period (See paragraph 3, A., B., C., and D.). The flows provided by the Agreement during the study period were an issue with numerous protestants.

23. From June through October of the years 1974 through 1980, the flows in Lagunitas Creek below Peters Dam approximated the flows required by the Agreement. This flow regime was very low and is responsible, in part, for the reduction in salmon and steelhead populations, even when supplemented by planting (TBA-IA, Exhibit 3; Testimony by Keith Anderson, RT II, p. 37; Testimony by Al Giddings, RT II p. 174, et seq.) The Agreement requires MMWD to engage a consulting aquatic biologist to study the relationship between various levels of post project flows and the spawning success of salmon and steelhead (See MMWD Exhibit 2-A, p. 4, paragraph 5. B. and C.) MMWD has contracted with aquatic biologist, D. W. Kelley, to conduct such studies. At the request of the hearing officer, Mr. Kelley was asked to provide his estimate of the flows that would be required to induce the upstream spawning migration, spawning, egg incubation and downstream migration. Mr. Kelley's estimate of the flows necessary for upstream and downstream migration are greater than those found in the Agreement (See MMWD Exhibit 32). It is

concluded that the interim flows provided in the Agreement are probably too low to assure the survival of the remnant salmon and steelhead population below Peters Dam.

24. Among the protestants seeking larger post-project flows than provided by the Agreement is Willis A. Evans. Mr. Evans is a professional Fisheries biologist with nearly 40 years of experience (Evans Exhibit 1). At the hearing, he submitted several items including a flow schedule for mitigation of the Kent Lake project.

Post Project Flows During Study Period

25. The Board finds that the minimum interim flows set forth in Mr. Evans proposal (Evans, Exhibit 4) are higher than necessary during the study period. Evans' proposed schedule below Peters Dam could demand a bypass or release of up to 8,100 afa of the 8,300 afa applied for pursuant to Application 26242 during a median year. His schedule below Nicasio Dam, 6,200 afa, far exceeds the total release volume of the Nicasio agreement of 1960 (4,000 afa). Furthermore, Evans' proposed schedule recommends additional flows at the mouth of Lagunitas Creek that may require the release of large amounts of water from storage in MMWD's reservoirs during the summer and early fall season with no apparent justification. Evans' flow schedule with its higher base flow levels would result in the Kent Lake Project no longer being feasible.

26. The Board concludes that the following interim flow schedule will adequately protect and maintain biological resources during the study period.

BOARD'S INTERIM STUDY FLOW SCHEDULE

<u>Time Period</u>	<u>Shafter Bridge</u>		<u>Park Gage</u>
Oct. 16 - March 31	15 cfs	or	20 cfs
April 1 - May 15	10	or	13
May 16 - July 15	5	or	8
July 16 - Oct 15	4	or	6

The Board's interim flow schedule reflects the life history stages for salmonids in Lagunitas Creek, as identified by Fish and Game (See Staff Exhibit 1, 1/5/81). In addition, the schedule approximates streamflow estimates made by Mr. Kelley for upstream migration and spawning of anadromous fish (See Staff Exhibit 1 and MMWD Exhibit 32). In comparison, the interim flow levels proposed by MMWD and Fish and Game in their Agreement made in 1979 could prove inadequate for migration and spawning (RT Vol. I, p. 131, Don Kelley's testimony). The Board's schedule should provide adequate protection for all of the biological resources of Lagunitas Creek during the study period. The flow schedule is to be supplemented by expected spills, fish attraction flows and requested releases from Nicasio Dam as identified in the Nicasio agreement of 1960 and MMWD Exhibit 35. There is little precise data on the most beneficial and mitigatory flow levels. The purpose of the study is to obtain such information. The interim flow schedule set forth in Evans' proposal on the other hand requires higher flows and is much more complex than is needed during the study period. (For a comparison of various flow regimes, see Figure II.)

Sediment Management Studies

27. Don Kelley testified that "a very large problem on Lagunitas Creek and many other streams is that sand deposited on the bottom fills up spaces around boulder and cobble" eliminating the rearing habitat of the fish (See MMWD Exhibit 6a). Pursuant to the Agreement with Fish and Game, MMWD retained consultants, Esmaili and Associates, to plan and conduct sediment management studies. Barry Hecht, a hydrologist and geomorphologist, was primarily responsible for conducting initial sedimentation studies.

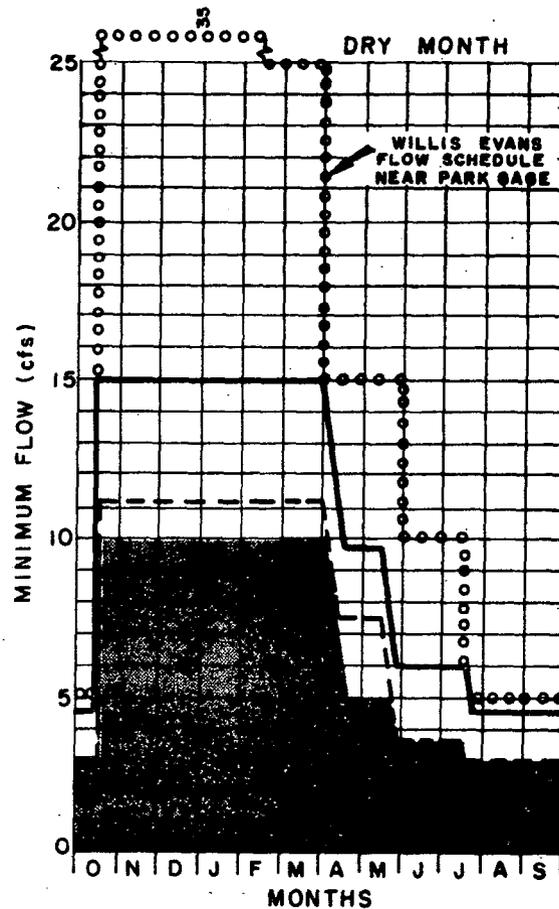
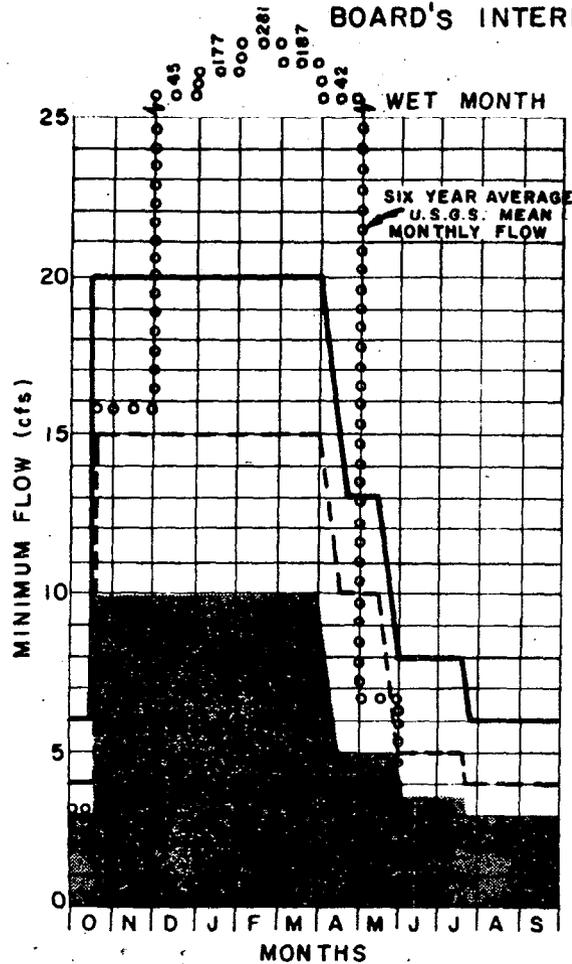
Phase I and II of the three phase study were completed and published. As a result of the Phase I studies, the following conclusions were reached:

LAGUNITAS CREEK STREAM FLOW PERIODICITY CHARTS

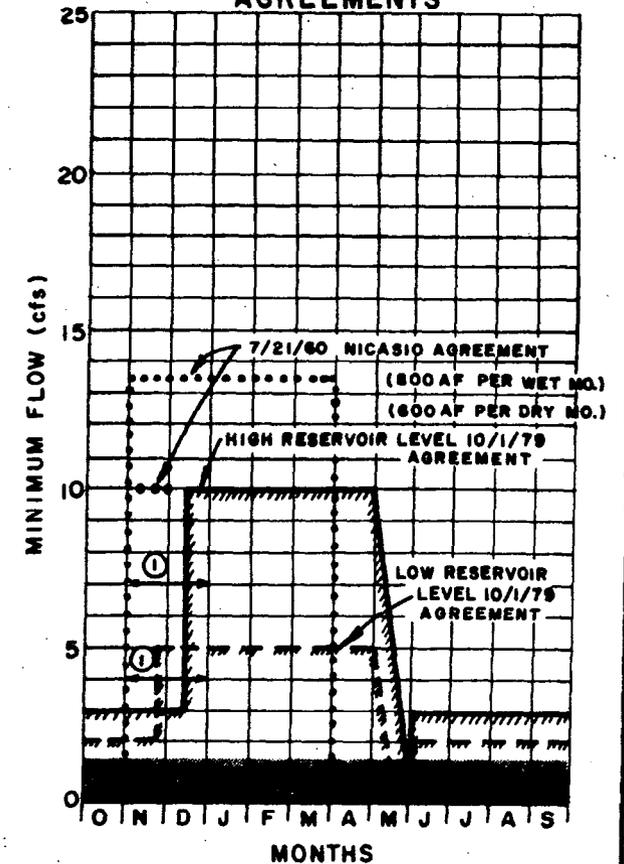
APPLICATIONS 9892 · 14278 · 17317 · 26242

MARIN MUNICIPAL WATER DISTRICT

BOARD'S INTERIM STUDY FLOW SCHEDULE



MARIN MUNICIPAL WATER DISTRICT DEPT. of FISH & GAME AGREEMENTS



- PARK GAGE FLOW
- - - KENT LAKE RELEASE
- MINIMUM SHORT TERM STUDY PARK GAGE FLOW

- ① FLOW RAISES TO THE LARGER VALUES FOR EACH RESPECTIVE CURVE AFTER THE FIRST STORM IN NOVEMBER OR DECEMBER.

- (1) Most of the sediment in the bed of Lagunitas Creek above Olema Creek originates in the San Geronimo Valley; and
- (2) The habitat impairing sediment is primarily coarse sand and fine gravels, with less than one or two percent suspendible material in the bed. MMWD's consultant, Barry Hecht, concluded that detention ponds appeared to be the preferred means of sediment control. As conceived such ponds would be formed by low seasonally removable structures from which sediment could be removed. Also, this effort should be supplemented by flushing releases from Kent Lake (See MMWD Exhibit 3).

28. Phase II studies were directed at the compilation of data on streamflow, bedload and suspended sediment transport rates throughout the Lagunitas Creek watershed. Detention ponds with removal of coarse debris and the use of flushing releases from Kent Lake were considered mitigation measures for sedimentation in Lagunitas Creek (See MMWD Exhibit 4).

29. Phase III studies had not yet been conducted as of the last day of hearing. However, the objectives to be attained as a result of these studies have been identified as the following:

- a. identify existing conditions;
- b. estimate the likely loss of habitat under the two proposed operation plans for the enlarged Kent Lake;
- c. explore the feasibility of flushing releases as a mitigation measure;
- d. explore the feasibility of sediment retention as a means of habitat protection; and
- e. describe the geomorphic processes affecting the watershed and channel environment of Lagunitas Creek in a manner enabling effective habitat management for an extended period following lake enlargement (See MMWD Exhibit 39, pp. 2-3).

30. Five specific Phase III goals were planned for the 1980-1981 season to meet the technical objectives of the Sediment Management Studies:

- a. extend streamflow gaging records to usable lengths;
- b. develop consistent bedload and suspended sediment budgets as a basis for delineating mitigation measures;
- c. collect additional bedload data to enable development of a viable empirical bedload model; and
- d. quantify the variations in substrate conditions to sediment transport (See MMWD Exhibit 39, p. 3).

31. MMWD's consultants proposed that a streamflow and sediment transport monitoring program similar to that implemented during 1979-1980 be conducted as a part of Phase III studies. Such studies would also include a more intensive monitoring program at a fewer number of stations and more extensive monitoring of substrate conditions, using techniques tried at a limited number of sites during the 1979-1980 season.

Studies of Tomales Bay

32. The Board concludes that additional studies need to be conducted by MMWD to evaluate effects of the Board's interim flow schedule. As a Federal Marine Sanctuary and proposed estuarine sanctuary, Tomales Bay has national significance. Preservation of estuarine circulation and salinity is essential to Tomales Bay. In addition, studies should be conducted to determine if a "nutrient trap" exists at or near the Tomales Bay headwater and establish what kinds of flows are needed and when they are needed to maintain it (See RT Vol I, p. 126, and Don Kelley's Study Proposal, 1/2/81).

Releases from Nicasio Dam

33. The Board concludes that the July 21, 1960 agreement between MMWD and Fish and Game for mitigation of the impact of the Nicasio Project should continue. Condition 7 of Permitted Application 17317 requires MMWD to

release water from Nicasio Reservoir for salmon and steelhead spawning in accordance with the aforementioned agreement. The diversion and use of water by a permittee is subject to compliance with permit conditions. Fish and Game and MMWD entered into subsequent agreements to suspend operation of the trapping facilities and substitute hatchery planting with appropriate releases (See MMWD Exhibit 36c). None of these agreements were presented to the Board for approval. Until such agreements are presented to and approved by the Board, MMWD is required to operate Nicasio Reservoir as specified in the 1960 agreement.

34. The 1979 agreement between MMWD and Fish and Game proposed to extinguish all fishery mitigation releases from the Nicasio Reservoir. The agreement was presented to the Board in this proceeding for approval. As discussed previously, the Board does not believe that the minimum flows proposed in the agreement will assure the survival of the remnant salmon and steelhead populations below Peters Dam (paragraph 23, supra). Releases from Nicasio Reservoir may be used to augment flows in Lagunitas Creek at numerous locations (See MMWD Exhibit 35). As discussed subsequently, the Board will require that studies be conducted to determine the appropriate release of water below Peters Dam for aquatic life and will reserve jurisdiction to require such flows at the conclusion of the study period (paragraphs 35 and 36, infra). From an operational point of view, it should be noted that MMWD may be able to supply flows in Lagunitas Creek from Nicasio Reservoir or in combination with Kent Lake releases more economically than from Kent Lake alone. The Board concludes that the water required for release from Nicasio Reservoir under the 1960 agreement should remain available to augment flows in Lagunitas Creek at the conclusion of the required studies.

Reserved Jurisdiction

35. The Board should retain jurisdiction over the flows required for the protection of aquatic life. Water Code Section 1394 provides that:

"The Board may reserve jurisdiction in whole or in part to amend, revise, supplement, or delete terms and conditions in a permit under either of the following circumstance: (a) if the Board finds that sufficient information is not available to finally determine the terms and condition which will reasonably protect vested rights without resulting in waste of water or which will best develop, conserve, and utilize in the public interest the water sought to be appropriated, and that a period of actual operation will be necessary in order to secure the required information...."

36. At the present time studies are still being conducted to establish the necessary mitigatory flows to enhance fish and aquatic life in Lagunitas Creek. Studies of sediment management are still being conducted to determine what is needed to enhance the salmonid rearing habitat. In addition, further studies of Tomales Bay are necessary to determine if Kent Lake project operation under the Board's interim release schedule will result in significant adverse impacts to the Bay and whether a "nutrient trap" exists. Therefore, until all this information is received, and Fish and Game, pursuant to Water Code Section 1243, makes recommendations to the Board regarding "the amounts of water required for the preservation and enhancement of fish and wildlife resources and reports its findings to the Board", we shall reserve jurisdiction in this matter.

Findings Concerning Section 729, Title 23, California Administrative Code

37. At the hearing Harvey Freed, attorney for several of the protestants, requested findings pursuant to Section 729, Title 23, California Administrative Code. Section 729 states:

"In exercising its discretionary authority in the public interest respecting applications to appropriate water, including prescribing or modifying terms and conditions of permits, the Board shall at the request of any party to the proceeding or by its own motion, to the extent practicable, identify and evaluate the benefits and detriments, including but not limited to economic and environmental factors, of the various present and prospective beneficial uses of the waters involved and alternative means of satisfying or protecting such uses, and make findings with respect thereto. The applicant may be required, and other parties may be requested, to provide such information as is determined necessary by the Board to accomplish the foregoing."

38. With respect to Section 729, Title 23 of the California Administrative Code, the Board makes the following findings:

(A) The benefits of the enlarged Kent Lake project are the following:

- (1) increasing the MMWD gross water supply net safe yield by an estimated 5,000 afa;
- (2) shifting the diversion of up to 6,000 afa from Nicasio Reservoir to Kent Lake could reduce average water treatment and pumping costs by \$80,000 a year (DEIR p. 23);
- (3) releasing relatively small amounts of water during dry seasons would more than double salmon and steelhead production and significantly enhance the environment of Lagunitas Creek for all purposes. It would also assure survival of endangered an freshwater shrimp (DEIR p. 63 and Biology Appendix p. 12);

- (4) significant flood control benefits could be realized as a result of the Kent Lake project;
- (5) releases could be made during low runoff periods to significantly enhance the riparian and aquatic conditions of Lagunitas Creek (DEIR p. 6.); and
- (6) minimum flow could be maintained year-round in Lagunitas Creek during wet, dry and critically dry years, further enhancing the riparian and aquatic conditions of Lagunitas Creek (DEIR p. 6).

(B) The possible detrimental effects of the enlarged Kent Lake Project consist of the following:

- (1) the flows will be reduced particularly during the fall and early winter, adversely effecting the salmon and steelhead population;
- (2) without operational constraints, the project would make feasible a shift of diversions from Nicasio Reservoir to Kent Lake. A forty percent shift could have a significant adverse impact on the upper reaches of Lagunitas Creek (DEIR p. 23.); and
- (3) if natural inflow to Tomales Bay from all tributaries is reduced, greater than twenty-five percent salinity may be increased and estuarine circulation decreased sufficiently in the South and Central Bay to cause undesirable changes in the biota (T.B.A./I.A. Exhibit 10).

(C) The present and prospective uses of waters include:

- (1) instream beneficial uses (i.e., recreational, fish and wildlife protection, and enhancement);

- (2) municipal water supply;
- (3) irrigation, and;
- (4) freshwater inflow to Tomales Bay.

39. In view of the above facts, the Board concludes the Kent Lake project is the most beneficial to the community served by MMWD and the environment. Nine alternative projects were considered by MMWD. However, the Kent Lake project was considered to be the most economical and reliable (See MMWD Exhibits 19 and 30). This project would not add new watershed lands to MMWD's system. It would, however, add sufficient storage capacity to increase the gross safe yield of MMWD's system by 5,000 acre-feet annually. (See MMWD Exhibit 6c, p. 8) Furthermore, the Kent Lake project accomplishes two goals simultaneously: It supplies additional water at a reasonable cost, and enhances the fish and wildlife resources of Lagunitas Creek. More importantly, the project will not become uneconomical if MMWD is required to make expected releases at its sole expense (See MMWD Exhibit 30). By reserving jurisdiction, the Board insures that the project can be altered or changed to mitigate the significant adverse environmental effects specifically mentioned above as being possibly detrimental.

Findings Concerning the California Environmental Quality Act

40. Public Resources Code Section 21167.3 (b) states the following:
"In the event that an action or proceeding is commenced as described in subdivision (a) but no injunction or similar relief is sought and granted, responsible agencies shall assume that the environmental impact report or negative declaration for the project does comply with the provisions of this division and shall approve or disapprove the project according to the timetable for agency action in Article 5 (commencing with Section 65950) of Chapter 4.5 of Division 1 of Title 7 of Government Code,

Such approval shall constitute permission to proceed with the project at the applicants's risk pending final determination of such action or proceeding."

41. During the hearing several of the protestants raised the issue that the Environmental Impact Report filed by MMWD does not comply with the provisions in CEQA. Protestants sought but were not granted injunctive relief (R.T. Vol I pp. 12-13). MMWD entered into an agreement with Fish and Game to mitigate against adverse environmental impacts (See Paragraph, 19-20, supra). Therefore, pursuant to Section 21167.3 (b) of the Public Resources Code, the Board must assume that the Environmental Impact Report is in compliance with CEQA and either approve or disapprove the proposed project. The Board is granting approval of the Kent Lake project subject to reserved jurisdiction to modify the terms and conditions. However, MMWD proceeds with the project at its own risk pending a final determination of such action or proceeding.

42. Mr. Freed also raised the issue that a supplemental EIR must be filed because the Kent Lake project and the Nicasio project are not separate projects. Section 21166 of the Public Resources Code provides that:

"When an environmental impact report has been prepared for a project pursuant to this diversion, no subsequent or supplemental environmental impact report shall be required by the lead agency or by any responsible agency, unless one or more of the following events occurs:

- (a) Substantial changes are proposed in the project which will require major revisions in the environmental impact report.
- (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report.
- (c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available."

43. Pursuant to Section 21166(a), no substantial changes are proposed in the Nicasio project requiring major revisions of the environmental impact report. All possible environmental impacts were presented and considered for the Kent Lake project as noted in a previous section of the decision. With respect to the Nicasio project, only a time extension is being granted for completion of construction and use of water. MMWD requested the time extension because (1) the outcome of the Kent Lake project is uncertain, and (2) the July 1975 offpeak Water Supply Agreement with Sonoma County Water County Agency is only for surplus water. Furthermore, MMWD believes it is likely that expansion of the Nicasio project will be abandoned (See MMWD Exhibit 29). Preparing an EIR for a project that is likely to be abandoned is a waste of the taxpayers' money.

44. Pursuant to Section 21166(b), no substantial changes have occurred with respect to the circumstances under which the project was undertaken thus requiring major revisions in the EIR. The action of the Board requiring that releases continue to be made pursuant to the 1960 Nicasio agreement mitigate against the possibility of a substantial change in the fish and aquatic environment. (The 1979 agreement between MMWD and Fish and Game extinguished the fishery mitigation releases required pursuant to the 1960 agreement. The Board, however, decided that the provisions requiring such releases should remain in effect.) Nicasio and Kent Lake remain physically distinct and operationally independent facilities. In fact, Nicasio was approved and constructed to its existing capacity years ago. Finally, MMWD by approving the Kent Lake project, indicated that there would be sufficient flows to protect aquatic life (See MMWD Exhibit 30).

45. Pursuant to Section 21166(c), no new information of substantial importance to the project has become available.

Time Extensions for Permitted Applications 9892, 14278, 17317

46. Water Code Section 1398 provides that:

"The period specified in the permit for beginning construction work, for completion of construction, for application of the water to beneficial use, or any or all of these periods may, for good cause shown, be extended by the Board."

In permitted Application 9892 full use of the authorized amount of water was not completed because MMWD developed alternate sources and implemented a water conservation program that is expected to delay demand for water by about 6,700 afa in the year 2000.

47. The project in permitted Application 14278 was delayed for two reasons: First, MMWD's electorate and management chose to proceed with construction of the SoulaJule Project on Arroyo Sausal prior to raising Peters Dam. Second, MMWD's implementation of a water conservation program delayed the need to complete the project. However, the reliability of MMWD's water supply has taken on renewed significance. MMWD believes that the Kent Lake project is the best alternative for increasing that supply. Pursuant to the projects in permitted Applications 9892 and 14278, MMWD has spent about \$4,000,000 on system improvements since the last extension of time.

The Nicasio project was not completed because MMWD's management chose to proceed with construction of the SoulaJule and Kent Lake projects. In addition, MMWD has been negotiating with Sonoma County Water Agency to increase and firm up its Russian River entitlement. These factors have postponed and may eliminate the need to raise Nicasio Dam. MMWD has spent \$2,000,000 on the Nicasio system improvements since 1975.

48. The Board finds that good cause has been shown for the requested time extensions for permitted Applications 9892, 14278, and 17317.

CONCLUSIONS

Permitted Applications 9892, 14278, and 17317

49. The Board finds that MMWD has shown due diligence in pursuing the projects in permitted Applications 9892, 14278, and 17317. In addition, the order granting the extensions of time should subject the permitted applications to the Board's new permit terms, as appropriate, and to some special terms necessitated by current conditions.

Application 26242

50. The Board finds that a need exists to increase the water supply of MMWD and that enlarging the capacity of Kent Lake is an appropriate method of supplying the necessary increase. The Board also finds that the intended use is beneficial. The Board finds that unappropriated water exists. However, the environmental needs of Lagunitas Creek watershed must be evaluated during a period of operation and study before final determination can be made as to the quantity that may be stored and the quantity that must be released or bypassed to protect the environment.

51. From the foregoing findings, the Board concludes that Application 26242 should be approved and a permit issued to the applicant and the petitions for extensions of time should be granted for permitted Applications 9892, 14278, and 17317.

ORDER

IT IS HEREBY ORDERED that Application 26242 be approved and that a permit be issued to the applicant subject to vested rights and the following terms and conditions:

1. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 8,300 acre-feet per annum to be collected from November 1 of each year to April 30 of the succeeding year.

2. This permit does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose.

3. The amount authorized for appropriation may be reduced in the license if investigation warrants.

4. Construction work shall be completed by December 1, 1983.

5. Complete application of the water to the proposed use shall be made by December 1, 2000.

6. Progress reports shall be submitted promptly by permittee when requested by the State Water Resources Control Board until license is issued.

7. Permittee shall allow representatives of the State Water Resources Control Board and other parties as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this permit.

8. Pursuant to California Water Code Sections 100 and 275, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable methods of use, or unreasonable method of diversion of said water.

The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to minimizing waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement such programs as: (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

9. The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Resources Control Board if, after notice to the permittee and an opportunity for hearing, the Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code.

10. Construction of the Kent Lake project shall be in conformance with plans and specifications approved by the Department of Water Resources, Division of Safety of Dams.

11. In accordance with the requirements of Water Code Section 1393, permittee shall clear the area covered by the proposed reservoir enlargement of all structures, trees and other vegetation which would interfere with the use of the reservoir for water storage and recreational purposes.

12. No water shall be diverted under this permit until permittee has installed measuring devices, satisfactory to the State Water Resources Control Board, which are capable of measuring and recording the flows required and storage amounts defined by the conditions of this permit. Said measuring devices shall be properly maintained.

13. In compliance with Fish and Game Code Section 5943, permittee shall accord to the public, for the purpose of fishing, reasonable right of access to the waters impounded by Peters Dam during the open season for the taking of fish, subject to the regulations of the Fish and Game Commission and for domestic water supply reservoirs, subject to Public Health Requirements of Sections 7623 to 7630, Title 17, California Administrative Code.

14. In order to prevent degradation of the quality of water during and after construction of the project, prior to commencement of construction permittee shall file a report pursuant to Water Code Section 13260 and shall comply with any waste discharge requirements imposed by the California Regional Water Quality Control Board, San Francisco Bay Region, or by the State Water Resources Control Board.

Failure of permittee to comply with this term will subject the permit to revocation, after opportunity for hearing.

15. No water shall be used under this permit until the permittee has filed a report of waste discharge with the California Regional Water Quality Control Board, San Francisco Bay Region, pursuant to Water Code Section 13260, and the Regional Board or State Water Resources Control Board has prescribed waste discharge requirements or has indicated that waste discharge requirements are not required. Thereafter, water may be diverted only during such times as all requirements prescribed by the Regional Board or State Board are being met. No discharges of waste to surface water shall be made unless waste discharge requirements are issued by a Regional Board or the State Board. A discharge to ground water without issuance of a waste discharge requirement may be allowed if after filing the report pursuant to Section 13260:

- (1) the Regional Board issued a waiver pursuant to Section 13269,
or
- (2) the Regional Board fails to act within 120 days of the filing
of the report.

Permittee shall not be required to file a report of waste discharge pursuant to Section 13260 of the Water Code for percolation to the groundwater of water resulting from the irrigation of crops.

Failure of permittee to comply with this term will subject the permit to revocation, after opportunity for hearing.

16. The issuance of this permit shall not be construed as placing a limitation on any riparian right or decreed right to the waters of Lagunitas Creek held by the permittee.

17. The total quantity allowed, the rate of water diverted, and the quantity stored and used under permits or licenses issued pursuant to Applications 9892, 14278 and 26242 and permittee's claimed existing rights from Lagunitas Creek for the place of use specified in the permits or licenses, shall not exceed 46,850 acre-feet per water year, 50 cubic feet per second and 38,550 acre-feet per water year, respectively.

If permittee's claimed existing rights are quantified at some later date as a result of an adjudication or other legally binding proceeding, the total quantity, the rate of diversion, and the storage and use allowed under the permits or licenses shall be the face value of those permits or licenses less the quantities confirmed under the existing rights.

Permittee shall forfeit all rights under this permit if permittee transfers all or any part of the claimed existing right for the place of use covered by this permit to another place of use without the prior approval of the Board.

Permittee shall take and use water under the existing right claimed by permittee only in accordance with law.

18. Permittee shall comply with the following provisions which are derived from the agreements between permittee and the Department of Fish and Game executed on October 16, 1980 and October 17, 1980.

a. Permittee shall operate the enlarged Kent Reservoir and make releases contributing to the maintenance and perpetuation of the California freshwater shrimp population of Lagunitas Creek.

b. Permittee shall engage, during 1981, a consultant acceptable to the State, to conduct a pre-project inventory survey of California freshwater shrimp essential habitats on Lagunitas Creek. Such survey shall be conducted during July and August 1981 or later and include that reach of Lagunitas Creek from Peters Dam to tidewater at Point Reyes Station. Essential habitats are defined as: (1) submerged undercut banks in association with pools and glides, and (2) submerged riparian vegetation in association with pools and glides. Consultant will delineate by mapping, qualitatively describing, and quantifying the amount of such essential habitats by methods acceptable to permittee and Fish and Game. Survey results shall serve as baseline documentation of preproject essential habitat distribution, conditions, and quantify such habitat for future comparative use in defining long-term trends in habitat parameters during the study period and project operation.

c. The Board reserves jurisdiction over this permit until studies specified in the October 1, 1979 agreement and amendment have been completed and joint recommendations for fisheries mitigation and enhancement have been developed by the parties and submitted to the Board:

- (1) the Board may amend the permit accordingly; or
- (2) in the event of failure by the parties to agree on recommendations each party may submit separate recommendations to the Board prior to setting final permit terms; or

- (3) the Board may on its own motion set final permit terms, or may schedule a hearing on its own motion or on request by either party and finalize permit terms based on its findings.

19. Permittee shall report progress on its ongoing water conservation and reclamation activities to the Board annually. The Board shall maintain continuing authority to require permittee to develop and implement a comprehensive water conservation program or specific water conservation actions at any time prior to and after issuance of a license under this permit, upon notice from the Board and opportunity for hearing.

20. By October 30, 1982, permittee shall submit for Board approval an integrated study plan for mitigation of streamflow reductions and sediment buildup in the streambed of Lagunitas Creek and potential effects of flow and temperature changes caused by project operations including the Board's interim study flow schedule on southern and central Tomales Bay. The plan shall identify previous study efforts and coordinate approved study efforts of the permittee with the Department of Fish and Game, the San Francisco Bay Regional Water Quality Control Board, other governmental agencies, and the Board. The objectives of the study plan are to gather data, develop approved stream and reservoir management goals and operating procedures, and define responsibilities and time schedules for participants in achieving those goals.

21. The Board maintains continuing authority in the public interest to coordinate terms in this permit with terms in other permits on Lagunitas Creek and tributaries to establish or limit the amounts of water withdrawn from storage or rates and seasons of diversion for various purposes including bypass or release from storage for sediment management and fish and wildlife

enhancement. Such coordination will be based on further investigation during the instream flow and reservoir management study period. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

22. During the study period, seven years or less after issuance of the Board decision, for protection of fish and wildlife in Lagunitas Creek, permittee shall make a metered release of at least one cfs directly below Peters Dam at all times and shall maintain the following base streamflow schedule except as provided for in (1), (2) and (3) below:

- (a) From October 16 through March 31 bypass or release 15 cfs at or above the Shafter Bridge or maintain 20 cfs at the Park Gage.
- (b) From April 1 through May 15 bypass or release 10 cfs at or above the Shafter Bridge or maintain 13 cfs at the Park Gage.
- (c) From May 16 through July 15 bypass or release five cfs at or above the Shafter Bridge or maintain 8 cfs at the Park Gage.
- (d) From July 16 through October 15 bypass or release four cfs at or above the Shafter Bridge or maintain 6 cfs at the Park Gage.

The Park Gage shall be established within Samuel P. Taylor State Park above the confluence of Devils Gulch and Lagunitas Creek.

(1) Base streamflows may be reduced 25% in the month following a "low inflow month" whenever combined reservoir storage is below the high reservoir storage amounts specified in paragraphs 3A and 3B of the October 1, 1979 Department of Fish and Game agreement. A low inflow month shall exist whenever inflow from the upper Lagunitas Creek watershed is less than 50% of the original 26-year median inflow for that month.

The permittee's high reservoir storage amounts defined in the October 1979 agreement are the total storage in Lagunitas, Bon Tempe, Alpine, Kent and Nicasio Reservoirs during the following periods as determined by the permittee's records: (1) January - 34,000 acre-feet on January 1, (2) February - 40,300 acre-feet on February 1, (3) March - 47,200 acre-feet on March 1, (4) April - 47,200 acre-feet on April 1; and (5) May through December - 45,600 acre-feet on May 1.

A "low inflow month" exists whenever the inflow above Kent Lake (including Lagunitas, Bon Tempe, Alpine and Kent Lakes) is less than the following acre-foot amounts for the respective months:

October 135 af, November 406 af, December 1,651 af, January 3,190 af, February 3,170 af, March 2,158 af, April 655 af, May 263 af, June 91 af, July 47 af, August 34 af and September 60 af.

(2) Scheduled streamflows may be modified for short-term study intervals not to exceed a continuous two-week period, once annually for each scheduled flow period, (a) through (d) above. At no time shall the base streamflows be allowed to drop at a rate greater than one cfs each three days or drop below the following minimums during the respective periods: (a) 10 cfs, (b) 5 cfs, (c) 3.5 cfs, and (d) 3 cfs, unless approved by the Chief of the Division of Water Rights.

(3) Scheduled streamflows may be reduced further only during a water shortage emergency declared in accordance with Water Code Sections 350, et seq., and 71640, et seq. During such emergencies, streamflow maintenance

levels shall be subject to negotiation between the permittee and the Department of Fish and Game and approval by the Chief of the Division of Water Rights. If agreement is not reached on the amounts to be released, or if agreement is not reached within 10 days of declaration of the emergency, separate recommendations on the matter by the permittee and the Department of Fish and Game shall be submitted to the Board for resolution.

23. The amount of release or flow specified in Term 22 above shall be continuously monitored by the permittee at the respective control points and reported monthly to the Department of Fish and Game and the Board within 30 days. The amount of any deficient releases shown by the monitoring shall be stored and accrued for subsequent release. All deficient flows for the water year shall be released from Kent Lake during the period July 16 to October 15 for the year in which the deficiencies occur. Any deficient releases during a water shortage emergency condition, declared in accordance with Water Code Sections 350, et seq., and 71640, et seq., shall be subject to negotiation between the permittee and the Department of Fish and Game and approval by the Board. If agreement is not reached between the parties within 10 days of the declaration of an emergency, separate recommendations on the matter, by permittee and the Department of Fish and Game, shall be submitted to the Board for resolution.

24. For the protection and passage of anadromous fish in Lagunitas Creek during the study period, permittee shall continuously monitor the flows passing over the Giacomini fish ladder whenever the dam is in place and shall maintain a minimum flow of one cfs over the ladder into Tomales Bay except during a water shortage emergency. Flows may be reduced pursuant to 22 (3) above.

25. Prior to the end of the study period, permittee shall investigate and report recommendations, and any independent party may report recommendations, to the Board on the presence and extent of a "nutrient trap" at or near the Tomales Bay headwater, its relationship to freshwater flows at (1) the USGS gage and (2) over the Giacomini Dam fish ladder, and its relationship to downstream migrating salmonids. The Board reserves jurisdiction to change permit terms to establish or adjust minimum flows at the USGS gage or over the Giacomini Dam based on the permittee's study report or other information submitted by protestants or interested parties on the seasons and amounts of any additional flows required at those locations. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

26. Prior to the end of the study period, permittee shall investigate and report recommendations, and any independent party may report recommendations, to the Board on Lagunitas Creek substrate investigations and sediment management studies proposed in MMWD Exhibit 39. The Board maintains continuing authority to require implementation of sediment management actions based on permittee's study report or other information submitted by protestants or interested parties for protection or enhancement of the stream substrate of Lagunitas Creek. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

27. Permittee shall cooperate with any governmental agency conducting independent studies of Lagunitas Creek during the entire study period and provide any requested flows from Kent Lake or Nicasio Reservoir within the limits of the Board's flow schedule or as may be approved by the Chief of the Division of Water Rights.

28. Upon completion of the various studies conducted by permittee and any governmental agency approved by the Board, all study reports, results and recommendations pursuant to the studies will be provided to the Tomales Bay Association and Inverness Association and submitted to the Board for its findings to establish permanent permit terms.

29. Permittee shall bear the cost of any required studies, and construction, operation and maintenance of any facilities required by conditions in this permit or subsequent findings of the Board to the extent that cooperative or other funding s not available.

IT IS FURTHER ORDERED that an extension of time be granted for permitted Application 9892 (Permit 5633) subject to vested rights and the following terms and conditions:

Permit term 5 is amended to read as follows:

5. Complete application of the water to the authorized use shall be made by December 1, 2000.

Permit term 7 is superseded by the following permit term:

7. Pursuant to California Water Code Sections 100 and 275, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water. The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to minimizing waste of water and to

draft on the source. Permittee may be required to implement such programs as (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The following permit terms are hereby added:

8. Permittee shall allow representatives of the State Water Resources Control Board and other parties as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this permit.

9. The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Resources Control Board if, after notice to the permittee and an opportunity for hearing, the Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect

with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

10. No water shall be diverted under this permit until permittee has installed measuring devices, satisfactory to the State Water Resources Control Board, which are capable of measuring and recording the flows required and storage amounts defined by the conditions of this permit. Said measuring devices shall be properly maintained.

11. In compliance with Fish and Game Code Section 5943, permittee shall accord to the public, for the purpose of fishing, reasonable right of access to the waters impounded by Alpine, Bon Tempe and Peters Dam during the open season for the taking of fish, subject to the regulations of the Fish and Game Commission and for domestic water supply reservoirs, subject to Public Health Requirements of Sections 7623 to 7630, Title 17, California Administrative Code.

12. In order to prevent degradation of the quality of water during and after construction of the project, prior to commencement of construction permittee shall file a report pursuant to Water Code Section 13260 and shall comply with any waste discharge requirements imposed by the California Regional Water Quality Control Board, San Francisco Bay Region, or by the State Water Resources Control Board.

Failure of permittee to comply with this term will subject the permit to revocation, after opportunity for hearing.

13. No water shall be used under this permit until the permittee has filed a report of waste discharge with the California Regional Water Quality Control Board, San Francisco Bay Region, pursuant to Water Code Section 13260, and the Regional Board or State Water Resources Control Board has prescribed waste discharge requirements or has indicated that waste discharge requirements are not required. Thereafter, water may be diverted only during such times as all requirements prescribed by the Regional Board or State Board are being met. No discharges of waste to surface water shall be made unless waste discharge requirements are issued by a Regional Board or the State Board. A discharge to ground water without issuance of a waste discharge requirement may be allowed if after filing the report pursuant to Section 13260:

- (1) the Regional Board issued a waiver pursuant to Section 13269, or
- (2) the Regional Board fails to act within 120 days of the filing of the report.

Permittee shall not be required to file a report of waste discharge pursuant to Section 13260 of the Water Code for percolation to the ground water of water resulting from the irrigation of crops.

Failure of permittee to comply with this term will subject the permit to revocation, after opportunity for hearing.

14. The issuance of this permit shall not be construed as placing a limitation on any riparian right or decreed right to the waters of Lagunitas Creek held by the permittee.

15. The total quantity allowed, the rate of water diverted, and the quantity stored and used under permits or licenses issued pursuant to Applications 9892, 14278 and 26242 and permittee's claimed existing rights from Lagunitas Creek for the place of use specified in the permits or licenses, shall not exceed 46,850 acre-feet per water year, 50 cubic feet per second and 38,550 acre-feet per water year, respectively.

If permittee's claimed existing rights are quantified at some later date as a result of an adjudication or other legally binding proceeding, the total quantity, the rate of diversion, and the storage and use allowed under the permits or licenses shall be the face value of those permits or licenses less the quantities confirmed under the existing rights.

Permittee shall forfeit all rights under this permit if permittee transfers all or any part of the claimed existing right for the place of use covered by this permit to another place of use without the prior approval of the Board.

Permittee shall take and use water under the existing right claimed by permittee only in accordance with law.

16. Permittee shall report progress on its ongoing water conservation and reclamation activities to the Board annually. The Board shall maintain continuing authority to require permittee to develop and implement a comprehensive water conservation program or specific water conservation actions at any time prior to and after issuance of a license under this permit, upon notice from the Board and opportunity for hearing.

17. By October 30, 1982, permittee shall submit for Board approval an integrated study plan for mitigation of streamflow reductions and sediment buildup in the streambed of Lagunitas Creek and potential effects of flow and temperature changes caused by project operations including the Board's interim study flow schedule on southern and central Tomales Bay. The plan shall identify previous study efforts and coordinate approved study efforts of the permittee with the Department of Fish and Game, the San Francisco Bay Regional Water Quality Control Board, other governmental agencies, and the Board. The objectives of the study plan are to gather data, develop approved stream and reservoir management goals and operating procedures, and define responsibilities and time schedules for participants in achieving those goals.

18. The Board maintains continuing authority in the public interest to coordinate terms in this permit with terms in other permits on Lagunitas Creek and tributaries to establish or limit the amounts of water withdrawn from storage or rates and seasons of diversion for various purposes including bypass or release from storage for sediment management and fish and wildlife enhancement. Such coordination will be based on further investigation during the instream flow and reservoir management study period. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

19. During the study period, seven years or less after issuance of the Board decision, for protection of fish and wildlife in Lagunitas Creek, permittee shall make a metered release of at least one cfs directly below Peters Dam at all times and shall maintain the following base streamflow schedule except as provided for in (1), (2) and (3) below:

- (a) From October 16 through March 31 bypass or release 15 cfs at or above the Shafter Bridge or maintain 20 cfs at the Park Gage.
- (b) From April 1 through May 15 bypass or release 10 cfs at or above the Shafter Bridge or maintain 13 cfs at the Park Gage.
- (c) From May 16 through July 15 bypass or release five cfs at or above the Shafter Bridge or maintain 8 cfs at the Park Gage.
- (d) From July 16 through October 15 bypass or release four cfs at or above the Shafter Bridge or maintain 6 cfs at the Park Gage.

The Park Gage shall be established within Samuel P. Taylor State Park above the confluence of Devils Gulch and Lagunitas Creek.

(1) Base streamflows may be reduced 25% in the month following a "low inflow month" whenever combined reservoir storage is below the high reservoir storage amounts specified in paragraphs 3A and 3B of the October 1, 1979 Department of Fish and Game agreement. A low inflow month shall exist whenever inflow from the upper Lagunitas Creek watershed is less than 50% of the original 26-year median inflow for that month.

The permittee's high reservoir storage amounts defined in the October 1979 agreement are, the total storage in Lagunitas, Bon Tempe, Alpine, Kent and Nicasio Reservoirs during the following periods as determined by the District's records: (1) January - 34,000 acre-feet on January 1, (2) February - 40,300 acre-feet on February 1, (3) March - 47,200 acre-feet on March 1, (4) April - 47,200 acre-feet on April 1; and (5) May through December - 45,600 acre-feet on May 1.

A "low inflow month" exists whenever the inflow above Kent Lake (including Lagunitas, Bon Tempe, Alpine and Kent Lakes) is less than the following acre-foot amounts for the respective months:

October 135 af, November 406 af, December 1,651 af, January 3,190 af, February 3,170 af, March 2,158 af, April 655 af, May 263 af, June 91 af, July 57 af, August 34 af and September 60 af.

(2) Scheduled streamflows may be modified for short-term study intervals not to exceed a continuous two-week period, once annually for each scheduled flow period, (a) through (d) above. At no time shall the base streamflows be allowed to drop at a rate greater than one cfs each three days or drop below the following minimums during the respective periods: (a) 10 cfs, (b) 5 cfs, (c) 3.5 cfs, and (d) 3 cfs, unless approved by the Chief of the Division of Water Rights.

(3) Scheduled streamflows may be reduced further only during a water shortage emergency declared in accordance with Water Code Sections 350, et seq, and 71640, et seq. During such emergencies, streamflow maintenance levels shall be subject to negotiation between the permittee and the Department of Fish and Game and approval by the Chief of the Division of Water Rights. If agreement is not reached on the amounts to be released, or if agreement is not reached within 10 days of declaration of the emergency, separate recommendations on the matter shall be submitted to the Board for resolution.

20. The amount of release or flow specified in Term 19 above, shall be continuously monitored by the permittee at the respective control points and reported monthly to the Department of Fish and Game and the Board within 30 days. The amount of any deficient releases shown by the monitoring shall be stored and accrued for subsequent release. All deficient flows for the water year shall be released from Kent Lake during the period July 16 to October 15 for the year in which the deficiencies occur. Any deficient releases during a water shortage emergency condition, declared in accordance with Water Code Sections 350, et seq., and 71640, et seq., shall be subject to negotiation between the permittee and the Department of Fish and Game and approval by the Board. If agreement is not reached between the parties within 10 days of the declaration of an emergency, separate recommendations on the matter, by permittee and the Department of Fish and Game, shall be submitted to the Board for resolution.

21. The purpose of use under this permit is corrected to read as follows: municipal, recreational, and fish and wildlife protection and enhancement uses.

22. For the protection and passage of anadromous fish in Lagunitas Creek during the study period, permittee shall continuously monitor the flows passing over the Giacomini fish ladder whenever the dam is in place and shall maintain a minimum flow of one cfs over the ladder into Tomales Bay except during a water shortage emergency. Flows may be reduced pursuant to 19(3) above.

23. Prior to the end of the study period, permittee shall investigate and report recommendations, and any independent party may report recommendations, to the Board on the presence and extent of a "nutrient trap" at or near the Tomales Bay headwater, its relationship to freshwater flows at (1) the USGS gage and (2) over the Giacomini Dam fish ladder, and its relationship to downstream migrating salmonids. The Board reserves jurisdiction to change permit terms to establish or adjust minimum flows at the USGS gage or over the Giacomini Dam based on the permittee's study report or other information submitted by protestants or interested parties on the seasons and amounts of any additional flows required at those locations. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

24. Prior to the end of the study period, permittee shall investigate and report recommendations, and any independent party may report recommendations, to the Board on Lagunitas Creek substrate investigations and sediment management studies proposed in MMWD Exhibit 39. The Board shall maintain continuing authority to require implementation of sediment management actions based on permittee's study report or other information submitted by protestants or interested parties for protection or enhancement of the stream substrate of Lagunitas Creek. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

25. Permittee shall cooperate with any governmental agency conducting independent studies of Lagunitas Creek during the entire study period and provide any requested flows from Kent Lake or Nicasio Reservoir within the limit of the Board's flow schedule or as may be approved by the Chief of the Division of Water Rights.

26. Upon completion of the various studies conducted by permittee and any governmental agency approved by the Board, all study reports, results and recommendations pursuant to the studies will be provided to the Tomales Bay Association and Inverness Association and submitted to the Board for its findings to establish permanent permit terms.

27. Permittee shall bear the cost of any required studies, and construction, operation and maintenance of any facilities required by conditions in this permit or subsequent findings of the Board to the extent that cooperative or other funding is not available.

IT IS FURTHER ORDERED that an extension of time be granted for permitted Application 14278 (Permit 9390) subject to vested rights and the following terms and conditions:

Permit term 4 is amended to read as follows:

4. Construction work shall be completed by December 1, 1983.

Permit term 5 is amended to read as follows:

5. Complete application of the water to the authorized use shall be made on or before December 1, 2000.

Permit term 7 is superseded by the following permit term:

7. Pursuant to California Water Code Sections 100 and 275, all rights and privileges under this permit and under any license issued pursuant

thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to minimizing waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement such programs as: (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintain-ing, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

New permit terms are added as follows:

8. Permittee shall allow representatives of the State Water Resources Control Board and other parties as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this permit.

9. The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Resources Control Board if, after notice to the permittee and an opportunity for hearing, the Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code.

10. No water shall be diverted under this permit until permittee has installed measuring devices, satisfactory to the State Water Resources Control Board, which are capable of measuring and recording the flows required and storage amounts defined by the conditions of this permit. Said measuring devices shall be properly maintained.

11. In compliance with Fish and Game Code Section 5943, if storage of water authorized by this permit is on a stream naturally frequented by fish, permittee shall accord to the public, for the purpose of fishing, reasonable right of access to the waters impounded by Peters Dam during the open season for the taking of fish, subject to the regulations of the Fish and Game Commission and for domestic water supply reservoirs, subject to Public Health Requirements of Sections 7623 to 7630, Title 17, California Administrative Code.

12. In order to prevent degradation of the quality of water during and after construction of the project, prior to commencement of construction permittee shall file a report pursuant to Water Code Section 13260 and shall comply with any waste discharge requirements imposed by the California Regional Water Quality Control Board, San Francisco Bay Region, or by the State Water Resources Control Board.

Failure of permittee to comply with this term will subject the permit to revocation, after opportunity for hearing.

13. No water shall be used under this permit until the permittee has filed a report of waste discharge with the California Regional Water Quality Control Board, San Francisco Bay Region, pursuant to Water Code Section 13260, and the Regional Board or State Water Resources Control Board has prescribed waste discharge requirements or has indicated that waste discharge requirements are not required. Thereafter, water may be diverted only during such times as all requirements prescribed by the Regional Board or State Board are being met. No discharges of waste to surface water shall be made unless waste discharge requirements are issued by a Regional Board or the State Board. A discharge to ground water without issuance of a waste discharge requirement may be allowed if after filing the report pursuant to Section 13260:

- (1) the Regional Board issued a waiver pursuant to Section 13269, or
- (2) the Regional Board fails to act within 120 days of the filing of the report.

Permittee shall not be required to file a report of waste discharge pursuant to Section 13260 of the Water Code for percolation to the ground water of water resulting from the irrigation of crops.

Failure of permittee to comply with this term will subject the permit to revocation, after opportunity for hearing.

14. The issuance of this permit shall not be construed as placing a limitation on any riparian right or decreed right to the waters of Lagunitas Creek held by the permittee.

15. The total quantity allowed, the rate of water diverted, and the quantity stored and used under permits or licenses issued pursuant to Applications 9892, 14278 and 26242 and permittee's claimed existing rights from Lagunitas Creek for the place of use specified in the permits or licenses, shall not exceed 46,850 acre-feet per water year, 50 cubic feet per second and 38,550 acre-feet per water year, respectively.

If permittee's claimed existing rights are quantified at some later date as a result of an adjudication or other legally binding proceeding, the total quantity, the rate of diversion, and the storage and use allowed under the permits or licenses shall be the face value of those permits or licenses less the quantities confirmed under the existing rights.

Permittee shall forfeit all rights under this permit if permittee transfers all or any part of the claimed existing right for the place of use covered by this permit to another place of use without the prior approval of the Board.

Permittee shall take and use water under the existing right claimed by permittee only in accordance with law.

16. Permittee shall comply with the following provisions which are derived from the agreements between permittee and the Department of Fish and Game executed on October 16, 1980 and October 17, 1980:

a. Permittee shall operate the enlarged Kent Reservoir and make releases contributing to the maintenance and perpetuation of the California freshwater shrimp population of Lagunitas Creek.

b. Permittee shall engage during 1981, a consultant acceptable to the State, to conduct a pre-project inventory survey of California freshwater shrimp essential habitats on Lagunitas Creek. Such survey shall be conducted during July and August or later and include that reach of Lagunitas Creek from Peters Dam to tidewater at Point Reyes Station. Essential habitats are defined as: (1) submerged undercut banks in association with pools and glides, and (2) submerged riparian vegetation in association with pools and glides. Consultant will delineate by mapping, qualitatively describing, and quantifying the amount of such essential habitats by methods acceptable to the permittee and Fish and Game. Survey results shall serve as baseline documentation of pre-project essential habitat distribution, conditions, and quantify such habitat for future comparative use in defining long-term trends in habitat parameters during the study period and project operation.

c. The Board reserves jurisdiction over permit issued on this application until studies specified in the October 1, 1979 agreement and amendment have been completed and joint recommendations for fisheries mitigation and enhancement have been developed by the parties and submitted to the Board:

(1) The Board may amend the permit accordingly; or

(2) In the event of failure by the parties to agree on recommendations, each party may submit separate recommendations to the Board prior to setting final permit terms; or

(3) The Board may on its own motion set final permit terms, or may schedule a hearing on its own motion or on request by either party and finalize permit terms based on its findings.

17. Permittee shall report progress on its ongoing water conservation and reclamation activities to the Board annually. The Board shall maintain continuing authority to require permittee to develop and implement a comprehensive water conservation program or specific water conservation actions at any time prior to issuance of a license under this permit, upon notice from the Board and opportunity for hearing.

18. By October 30, 1982 permittee shall submit for Board approval an integrated study plan for mitigation of streamflow reductions and sediment build-up in the streambed of Lagunitas Creek and potential effects of flow and temperature changes caused by project operations including the Board's interim study flow schedule on southern and central Tomales Bay. The plan shall identify previous study efforts and coordinate approved study efforts of the permittee with the Department of Fish and Game, the San Francisco Bay Regional Water Quality Control Board, other governmental agencies, and the Board. The objectives of the study plan are to gather data, develop approved stream and reservoir management goals and operating procedures, and define responsibilities and time schedules for participants in achieving those goals.

19. The Board maintains continuing authority in the public interest to coordinate terms in this permit with terms in other permits on Lagunitas Creek and tributaries to establish or limit the amounts of water withdrawn from storage or rates and seasons of diversion for various purposes including bypass or release from storage for sediment management and fish and wildlife enhancement. Such coordination will be based on further investigation during the instream flow and reservoir management study period. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

20. During the study period, seven years or less after issuance of the Board decision, for protection of fish and wildlife in Lagunitas Creek, permittee shall make a metered release of at least one cfs directly below Peters Dam at all times and shall maintain the following base streamflow schedule except as provided for in (1), (2) and (3) below:

- (a) From October 16 through March 31 bypass or release 15 cfs at or above the Shafter Bridge or maintain 20 cfs at the Park Gage.
- (b) From April 1 through May 15 bypass or release 10 cfs at or above the Shafter Bridge or maintain 13 cfs at the Park Gage.
- (c) From May 16 through July 15 bypass or release five cfs at or above the Shafter Bridge or maintain 8 cfs at the Park Gage.
- (d) From July 16 through October 15 bypass or release four cfs at or above the Shafter Bridge or maintain 6 cfs at the Park Gage.

The Park Gage shall be established within Samuel P. Taylor State Park above the confluence of Devils Gulch and Lagunitas Creek.

(1) Base streamflows may be reduced 25% in the month following a "low inflow month" whenever combined reservoir storage is below the high reservoir storage amounts specified in paragraphs 3A and 3B of the October 1, 1979 Department of Fish and Game agreement. A low inflow month shall exist whenever inflow from the upper Lagunitas Creek watershed is less than 50% of the original 26-year median inflow for that month.

The permittee's high reservoir storage amounts defined in the October 1979 agreement are, the total storage in Lagunitas, Bon Tempe, Alpine, Kent and Nicasio Reservoirs during the following periods as determined by the permittee's records: (1) January - 34,000 acre-feet on January 1; (2) February - 40,300 acre-feet on February 1; (3) March - 47,200 acre-feet on March 1; (4) April - 47,200 acre-feet on April 1; and (5) May through December - 45,600 acre-feet on May 1.

A "low inflow month" exists whenever the inflow above Kent Lake (including Lagunitas, Bon Tempe, Alpine and Kent Lakes) is less than the following acre-foot amounts for the respective months:

October 135 af, November 406 af, December 1651 af, January 3190 af, February 3170 af, March 2158 af, April 655 af, May 263 af, June 91 af, July 57 af, August 34 af and September 60 af.

(2) Scheduled streamflows may be modified for short-term study intervals not to exceed a continuous two-week period, once annually for each scheduled flow period, (a) through (d) above. At no time shall the base streamflows be allowed to drop at a rate greater than one cfs each three

days or drop below the following minimums during the respective periods:

(a) 10 cfs, (b) 5 cfs, (c) 3.5 cfs, and (d) 3 cfs, unless approved by the Chief of the Division of Water Rights.

(3) Scheduled streamflows may be reduced further only during a water shortage emergency declared in accordance with Water Code Sections 350, et seq, and 71640, et seq. During such emergencies, streamflow maintenance levels shall be subject to negotiation between the permittee and the Department of Fish and Game and approval by the Chief of the Division of Water Rights. If agreement is not reached on the amounts to be released, or if agreement is not reached within 10 days of declaration of the emergency, separate recommendations on the matter, by permittee and the Department of Fish and Game shall be submitted to the Board for resolution.

21. The amount of release or flow specified in Term 20 above, shall be continuously monitored by the permittee at the respective control points and reported monthly to the Department of Fish and Game and the Board within 30 days. The amount of any deficient releases shown by the monitoring shall be stored and accrued for subsequent release. All deficient flows for the water year shall be released from Kent Lake during the period July 16 to October 15 for the year in which the deficiencies occur. Any deficient releases during a water shortage emergency condition, declared in accordance with Water Code Sections 350, et seq, and 71640 et seq, shall be subject to negotiation between the permittee and the Department of Fish and Game and approval by the Board. If agreement is not reached between the parties within 10 days of the declaration of the emergency, separate recommendations on the matter, by permittee and the Department of Fish and Game, shall be submitted to the Board for resolution.

22. The purpose of use under this permit is corrected to read as follows: municipal, recreational, and fish and wildlife protection and enhancement uses.

23. For the protection and passage of anadromous fish in Lagunitas Creek during the study period, permittee shall continuously monitor the flows passing over the Giacomini fish ladder whenever the dam is in place and shall maintain a minimum flow of one cfs over the ladder into Tomales Bay except during a water shortage emergency. Flows may be reduced pursuant to 20(3) above.

24. Prior to the end of the study period, permittee shall investigate and report recommendations, and any independent party may report recommendations, to the Board on the presence and extent of a "nutrient trap" at or near the Tomales Bay headwater, its relationship to freshwater flows at (1) the USGS gage and (2) over the Giacomini Dam fish ladder, and its relationship to downstream migrating salmonids. The Board reserves jurisdiction to change permit terms to establish or adjust minimum flows at the USGS gage or over the Giacomini Dam based on the permittee's study report or other information submitted by protestants or interested parties on the seasons and amounts of any additional flows required at those locations. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

25. Prior to the end of the study period, permittee shall investigate and report recommendations, and any independent party may report recommendations, to the Board on Lagunitas Creek substrate investigations and sediment management studies proposed in MMWD Exhibit 39. The Board maintains

continuing authority to require implementation of sediment management actions based on permittee's study report or other information submitted by protestants or interested parties for protection or enhancement of the stream substrate of Lagunitas Creek. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

26. Permittee shall cooperate with any governmental agency conducting independent studies of Lagunitas Creek during the entire study period and provide any requested flows from Kent Lake or Nicasio Reservoir within the limit of the Board's flow schedule or as may be approved by the Chief of the Division of Water Rights.

27. Upon completion of the various studies conducted by the permittee and any governmental agency approved by the Board, all study reports results and recommendations pursuant to the studies will be provided to the Tomales Bay Association and Inverness Association and submitted to the Board for its findings to establish permanent permit terms.

28. Permittee shall bear the cost of any required studies, and construction, operation and maintenance of any facilities required by conditions in this permit or subsequent findings of the Board to the extent that cooperative or other funding is not available.

IT IS FURTHER ORDERED that an extension of time be granted for permitted Application 17317 (Permit 12800) subject to vested rights and the following terms and conditions:

Permit term 3 is amended to read as follows:

3. Construction work shall be completed by December 1, 1985.

Permit term 4 is amended to read as follows:

Complete application of the water to the authorized use shall be made on or before December 1, 2000.

Permit term 6 is superseded by the following permit term:

6. Pursuant to California Water Code Sections 100 and 275, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to minimizing waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement such programs as: (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with

the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

7. Term 7 of Permit 12800 is amended to read as follows:

7. Permittee shall comply with the following provisions which are also included in the agreement between permittee and the California Department of Fish and Game executed on July 21, 1960. Any negotiated amendment to this agreement shall be submitted to the Board by the permittee and Department of Fish and Game for coordination of terms and conditions prior to implementation of changes which may affect other diverters and beneficial use of stored water for fish and wildlife protection and enhancement use in Nicasio Creek, Lagunitas Creek and Tomales Bay.

"(1) Pursuant to this agreement, the District shall provide during the period November 1 through March 31, eight hundred acre-feet of water per month from Nicasio Reservoir for the preservation of fish and wildlife. The water thus stored shall be made available on the first day of each month during the above period and released in increments to be specified by and at the discretion of the Department of Fish and Game. The above conditions shall be considered normal and shall prevail except in years of deficient run-off as hereafter provided.

"(a) If the run-off in the month preceding that period described in paragraph(1) above is less than fifty per cent of the computed mean run-off for that specific month, based on an average of cumulative United States Geological Survey records subsequent to 1953, or such an average of District records if United States Geological Survey records are no longer maintained, the District shall provide six hundred acre-feet of water to be used in the manner and for the purposes described above.

"(b) If the run-off in the month preceding that period described in paragraph (1) above is less than twenty-five per cent of the computed mean run-off for that specific month, based on said records subsequent to 1953, the required releases for fishlife shall be subject to negotiations between the District and the Department.

"(c) Provided further that whenever the mean run-off at the beginning of any month within the period November 1 to March 1 reaches fifty per cent or more of the mean for the same period, based on said records subsequent to 1953, the Department shall be credited for the full eight hundred acre-feet per month for the past period. Said water shall be used in the manner of and for the purposes described above."

"(6) Water released from Nicasio Dam shall, with the exception of spillway flows, be released from the lower depths of the reservoir so as to maintain a low temperature range."

"(7) The District shall install screens with a mesh size of not greater than one-half inch squares on all reservoir outlets to prevent loss of fish."

"(8) Should the District assign, convey or otherwise dispose of any interest in said project, it agrees that such disposition shall be specifically made subject to the provisions as hereinabove set forth."

The Board reserves jurisdiction to confirm or amend the releases required during any season of year pursuant to the Nicasio agreement of July 21, 1960 (Permit Term #7) based on further study and recommendations by permittee's consultant and the Department of Fish and Game. Granting permittee's petition for extension of time in which to complete construction of the Nicasio Project shall not be construed as waiving any responsibility that the Board or the permittee has under the California Environmental Quality Act prior to commencement of construction on raising Nicasio Dam and Reservoir. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

New permit terms are added as follows:

8. Permittee shall allow representatives of the State Water Resources Control Board and other parties as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this permit.

9. The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Resources Control Board if, after notice to the permittee and an opportunity for hearing, the Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code.

10. No water shall be diverted under this permit until permittee has installed measuring devices, satisfactory to the State Water Resources Control Board, which are capable of measuring and recording the flows required and storage amounts defined by the conditions of this permit. Said measuring devices shall be properly maintained.

11. In compliance with Fish and Game Code Section 5943, permittee shall accord to the public, for the purpose of fishing, reasonable right of access to the waters impounded by and Nicasio Dam during the open season for the taking of fish, subject to the regulations of the Fish and Game Commission and for domestic water supply reservoirs, subject to Public Health Requirements of Sections 7623 to 7630, Title 17, California Administrative Code.

12. In order to prevent degradation of the quality of water during and after construction of the project, prior to commencement of construction permittee shall file a report pursuant to Water Code Section 13260 and shall comply with any waste discharge requirements imposed by the California Regional Water Quality Control Board, San Francisco Bay Region, or by the State Water Resources Control Board.

Failure of permittee to comply with this term will subject the permit to revocation, after opportunity for hearing.

13. No water shall be used under this permit until the permittee has filed a report of waste discharge with the California Regional Water Quality Control Board, San Francisco Bay Region, pursuant to Water Code Section 13260, and the Regional Board or State Water Resources Control Board has prescribed

waste discharge requirements or has indicated that waste discharge requirements are not required. Thereafter, water may be diverted only during such times as all requirements prescribed by the Regional Board or State Board are being met. No discharges of waste to surface water shall be made unless waste discharge requirements are issued by a Regional Board or the State Board. A discharge to ground water without issuance of a waste discharge requirement may be allowed if after filing the report pursuant to Section 13260:

- (1) the Regional Board issued a waiver pursuant to Section 13269, or
- (2) the Regional Board fails to act within 120 days of the filing of the report.

Permittee shall not be required to file a report of waste discharge pursuant to Section 13260 of the Water Code for percolation to the ground water of water resulting from the irrigation of crops.

Failure to comply with this term will subject the permit to revocation, after opportunity for hearing.

14. The total quantity of water diverted under this permit shall not exceed 29,000 acre-feet per water year of October 1 to September 30.

15. Permittee shall report progress on its ongoing water conservation and reclamation activities to the Board annually. The Board shall maintain continuing authority to require permittee to develop and implement a comprehensive water conservation program or specific water conservation actions at any time prior to and after issuance of a license under this permit, upon notice from the Board and opportunity for hearing.

16. By October 30, 1982 permittee shall submit for Board approval an integrated study plan for mitigation of streamflow reductions and sediment build-up in the streambed of Lagunitas Creek and potential effects of flow and temperature changes caused by project operations including the Board's interim study flow schedule on southern and central Tomales Bay. The plan shall identify previous study efforts and coordinate approved study efforts of the permittee with the Department of Fish and Game, the San Francisco Bay Regional Water Quality Control Board, other governmental agencies, and the Board. The objectives of the study plan are to gather data, develop approved stream and reservoir management goals and operating procedures, and define responsibilities and time schedules for participants in achieving those goals.

17. The Board maintains continuing authority in the public interest to coordinate terms in this permit with terms in other permits on Lagunitas Creek and tributaries to establish or limit the amounts of water withdrawn from storage or rates and seasons of diversion for various purposes including bypass or release from storage for sediment management and fish and wildlife enhancement. Such coordination will be based on further investigation during the instream flow and reservoir management study period. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

18. During the study period, seven years or less after issuance of the Board decision, for protection of fish and wildlife in Lagunitas Creek, permittee shall make a metered release of at least one cfs directly below Peters Dam at all times and shall maintain the following base streamflow schedule except as provided for in (1), (2) and (3) below:

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- (a) From October 16 through March 31 bypass or release 15 cfs at or above the Shafter Bridge or maintain 20 cfs at the Park Gage.
 - (b) From April 1 through May 15 bypass or release 10 cfs at or above the Shafter Bridge or maintain 13 cfs at the Park Gage.
 - (c) From May 16 through July 15 bypass or release five cfs at or above the Shafter Bridge or maintain 8 cfs at the Park Gage.
 - (d) From July 16 through October 15 bypass or release four cfs at or above the Shafter Bridge or maintain 6 cfs at the Park Gage.

The Park Gage shall be established within Samuel P. Taylor State Park above the confluence of Devils Gulch and Lagunitas Cree.

(1) Base streamflows may be reduced 25% in the month following a "low inflow month" whenever combined reservoir storage is below the high reservoir storage amounts specified in paragraphs 3A and 3B of the October 1, 1979 Department of Fish and Game agreement. A low inflow month shall exist whenever inflow from the upper Lagunitas Creek watershed is less than 50% of the original 26-year median inflow for that month.

The permittee's high reservoir storage amounts defined in the October 1979 agreement are, the total storage in Lagunitas, Bon Tempe, Alpine, Kent and Nicasio Reservoirs during the following periods as determined by the Permittee's records: (1) January - 34,000 acre-feet on January 1; (2) February - 40,300 acre-feet on February 1; (3) March - 47,200 acre-feet on March 1; (4) April - 47,200 acre-feet on April 1; and (5) May through December - 45,600 acre-feet on May 1.

A "low inflow month" exists whenever the inflow above Kent Lake (including Lagunitas, Bon Tempe, Alpine and Kent Lakes) is less than the following acre-foot amounts for the respective months:

October 135 af, November 406 af, December 1,651 af, January 3,190 af, February 3,170 af, March 2,158 af, April 655 af, May 263 af, June 91 af, July 57 af, August 34 af and September 60 af.

(2) Scheduled streamflows may be modified for short-term study intervals not to exceed a continuous two-week period, once annually for each scheduled flow period, (a) through (d) above. At no time shall the base streamflows be allowed to drop at a rate greater than one cfs each three days or drop below the following minimums during the respective periods: (a) 10 cfs, (b) 5 cfs, (c) 3.5 cfs, and (d) 3 cfs, unless approved by the Chief of the Division of Water Rights.

(3) Scheduled streamflows may be reduced further only during a water shortage emergency declared in accordance with Water Code Sections 350, et seq., and 71640, et seq. During such emergencies, streamflow maintenance levels shall be subject to negotiation between the permittee and the Department of Fish and Game and approval by the Chief of the Division of Water Rights. If agreement is not reached on the amounts to be released, or if agreement is not reached within 10 days of declaration of the emergency, separate recommendations on the matter, by permittee and the Department of Fish and Game shall be submitted to the Board for resolution.

19. The amount of release or flow specified in Term 18 above, shall be continuously monitored by the permittee at the respective control points and reported monthly to the Department of Fish and Game and the Board within 30 days. The amount of any deficient releases shown by the monitoring shall be stored and accrued for subsequent release. All deficient flows for the water year shall be released from Kent Lake during the period July 16 to October 15 for the year in which the deficiencies occur. Any deficient releases during a water shortage emergency condition, declared in accordance with Water Code Sections 350, et seq., and 71640, et seq., shall be subject to negotiation between the permittee and the Department of Fish and Game and approval by the Board. If agreement is not reached between the parties within 10 days of the declaration of an emergency, separate recommendations on the matter, by permittee and the Department of Fish and Game, shall be submitted to the Board for resolution.

20. The purpose of use under this permit is corrected to read as follows: municipal, recreational, and fish and wildlife protection and enhancement uses.

21. For the protection and passage of anadromous fish in Lagunitas Creek during the study period, permittee shall continuously monitor the flows passing over the Giacomini fish ladder whenever the dam is in place and shall maintain a minimum flow of one cfs over the ladder into Tomales Bay except during a water shortage emergency. Flows may be reduced pursuant to 18(3) above.

22. Prior to the end of the study period, permittee shall investigate and report recommendations, and any independent party may report recommendations, to the Board on the presence and extent of a "nutrient trap" at or near the Tomales Bay headwater, its relationship to freshwater flows at (1) the USGS gage and (2) over the Giacomini Dam fish ladder, and its relationship to downstream migrating salmonids. The Board reserves jurisdiction to change permit terms to establish or adjust minimum flows at the USGS gage or over the Giacomini Dam based on the permittee's study report or other information submitted by protestants or interested parties on the seasons and amounts of any additional flows required at those locations. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

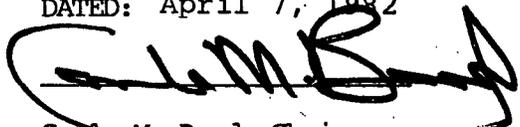
23. Prior to the end of the study period, permittee shall investigate and report recommendations, and any independent party may report recommendations, to the Board on Lagunitas Creek substrate investigations and sediment management studies proposed in MMWD Exhibit 39. The Board shall maintain continuing authority to require implementation of sediment management actions based on permittee's study report or other information submitted by protestants or interested parties for protection or enhancement of the stream substrate of Lagunitas Creek. Action by the Board pursuant to this term will be taken only after notice to interested parties and opportunity for hearing.

24. Permittee shall cooperate with any governmental agency conducting independent studies of Lagunitas Creek during the entire study period and provide any requested flows from Kent Lake or Nicasio Reservoir within the limit of the Board's flow schedule or as may be approved by the Chief of the Division of Water Rights.

25. Upon completion of the various studies conducted by permittee and any governmental agency approved by the Board, all study reports, results and recommendations pursuant to the studies will be provided to the Tomales Bay Association and Inverness Association and submitted to the Board for its findings to establish permanent permit terms

26. Permittee shall bear the cost of any required studies, and construction, operation and maintenance of any facilities required by conditions in this permit or subsequent findings of the Board to the extent that cooperative or other funding is not available.

DATED: April 7, 1982



Carla M. Bard, Chairwoman

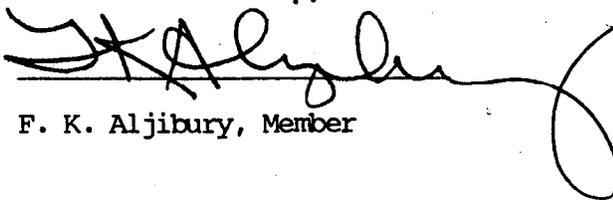
WE CONCUR:



I. I. Mitchell, Vice-Chairman



Jill B. Dunlap, Member



F. K. Aljibury, Member