CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
BOARD ORDER NO. 6-91-31
WDID NO. 6A0999999999

GENERAL WASTE DISCHARGE REQUIREMENTS FOR CONSTRUCTION OF SMALL COMMERCIAL, MULTI-FAMILY RESIDENTIAL UTILITY AND PUBLIC WORKS PROJECTS LAKE TAHOE BASIN

The California Regional Water Quality Control Board, Lahontan Region, finds:

1. The discharge of stormwater runoff and products of erosion from small commercial, multi-family residential, utility and public works projects within the Lake Tahoe Basin during and after construction is considered to be a discharge of waste that could affect the quality of waters of the State, as defined in Section 13260 of the California Water Code.

2. The Regional Board may prescribe requirements for any proposed discharge, in accordance with Section 13263 of the California Water Code.

3. Implementation of temporary best management practices (BMP's) is an effective and economical means of preventing or minimizing the discharge of the products of erosion, sediment-laden stormwater and accidental waste discharge spillage from the site during construction of commercial, multi-family residential, utility and public works projects.

4. Implementation of permanent best management practices (BMP's) after construction is an effective means of treating storm water runoff from impervious surfaces and of preventing erosion during operation of the facility on the site.

5. For purposes of this Order, individual property owners and/or operators to whom a Notification of Applicability has been issued by the Executive Officer are referred to as the "Discharger", and the individual projects described in the Notification of Applicability of General Waste Discharge Requirements as the "project". For the purposes of this Order, a "small commercial project" is one which in conjunction with existing parking, provides parking for approximately 50 vehicles. For the purposes of this Order, a "multi-family residential project" is any individual residential project involving five or more residential units. For the purposes of this Order, a "utility project" is any project proposed by a public or private utility. For the purposes of this Order, a "public works project" is any project proposed by a public entity. Public works projects include both erosion control projects covered under a general stormwater permit, and small construction projects which, in conjunction with existing parking, provide parking for approximately 50 vehicles.

6. A separate report of waste discharge must be submitted for each project subject to these general waste discharge requirements. The report of waste discharge must include a plan which proposes implementation of specific BMP's to prevent or minimize the discharge of waste from the project site, a proposed time schedule for completion of the project, and a proposal for any perpetual maintenance.

7. These general waste discharge requirements are for small projects which will normally be completed within two construction seasons.

8. Potential pollutant discharge from the projects consists of products of erosion, construction waste materials, and small amounts of petroleum products from construction equipment.

9. Projects covered under these requirements are located on land classified as land capability Classes 2 through 7. Projects may also be located on land classified as land capability Class 1 if appropriate exemptions from the Basin Plan discharge prohibitions are granted.

10. The Regional Board adopted a Water Quality Control Plan for the North Lahontan Basin on June 26, 1975.

11. The State Water Resources Control Board adopted a Water Quality Plan for the Lake Tahoe Basin on October 29, 1980, which was amended on January 20, 1983 and June 22, 1989. This Order implements the Plan as amended. The Plan contains water quality objectives for Lake Tahoe and its tributaries. To the extent of any inconsistencies the Lake Tahoe Basin Water Quality plan supersedes the Water Quality Control Plan for the North Lahontan Basin.

12. The projects covered under these requirements must comply with the land coverage requirements in the Lake Tahoe Basin Water Quality Plan, as amended on January 20, 1983 and June 22, 1989. Compliance can be achieved by coverage transfers, relocation or other mitigation procedures specified in the Tahoe Regional Planning Agency Regional Plan and the revised 208 Plan.

13. Runoff from the project sites will potentially enter either ground or surface waters of the Lake Tahoe Hydrologic Unit as defined in the Lake Tahoe Basin Water Quality Plan.

14. The beneficial uses of Lake Tahoe and its tributaries as set forth and defined in the Water Quality Control Plan for the North Lahontan Basin are:
    a. municipal and domestic supply;
    b. agricultural supply;
    c. water-contact recreation;
    d. non-water-contact recreation;
    e. cold freshwater habitat;
    f. wildlife habitat; and
    g. groundwater recharge.

15. The beneficial uses of ground water in the Lake Tahoe Hydrologic Unit as set forth and defined in the Water Quality Control Plan for the North Lahontan Basin are:

    a. municipal and domestic supply;
    b. agricultural supply; and
    c. freshwater replenishment.

16. A Negative Declaration for the adoption of these General Waste Discharge Requirements was certified by the Regional Board on May 9, 1991 in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.)

17. The California State Water Resources Control Board adopted the California Inland Surface Waters Plan on April 11, 1991. This Order incorporates specific effluent limitations and water quality objectives that are required by that plan.

18. The California Inland Surface Waters Plan states that within 5 years of the adoption of the plan the Regional Board shall determine what actions are appropriate to ensure that stormwater discharges are in compliance with the numerical objectives in that plan. The Discharger shall be given a maximum of ten years from the date of adoption of the plan to come into compliance with the numerical objectives.

19. The projects regulated by these general requirements are nonrecurring and short term construction projects. Upon project completion the applicability of these requirements to the specific project will be revoked.

20. The Board has notified the interested agencies and persons of its intent to adopt general waste discharge requirements for small commercial, utility public works and multi-family residential projects and has provided them with an opportunity to submit their written views and recommendations.

21. The Board in a public meeting heard and considered all comments pertaining to the requirements.

IT IS HEREBY ORDERED THAT:

A. Applicability

This Order shall serve as General Waste Discharge Requirements for the temporary discharge of products of erosion and construction waste materials during and after the construction of specified small commercial, multi-family residential, utility, or public works projects. Upon receipt of a Report of Waste Discharge describing a proposed discharge, the Executive Officer shall determine if such a discharge satisfies condition 1 or 2, and conditions 3 through 7 below:

1. The discharge will be generated from the construction or modification of a small commercial, multi-family residential, or utility project which does not include any other outdoor waste-generating activities.

2. The discharge will be generated from the construction of a public works project which, including existing parking, provides parking for approximately 50 vehicles.

3. The project does not include construction on Category 1 low capability lands (unless an exemption is granted) or on backshore areas as defined in the Water Quality Control Plan for the Lake Tahoe Basin.

4. The amount of proposed coverage is equal to or less than that allowed by the Water Quality Control Plan for the Lake Tahoe Basin.

5. The project incorporates appropriate BMP's, as feasible, to infiltrate and/or treat stormwater runoff from existing and proposed impervious surfaces on the site.

6. The project plans include specific dates for: (a) completion of construction; (b) completion of construction of stormwater infiltration and/or treatment facilities; and, (c) completion of any necessary restabilization and revegetation.

7. The project plans include an erosion control and stormwater runoff management plan which proposes specific temporary and permanent measures to prevent the discharge of pollutants from the site.

When the Executive Officer finds the above conditions are met, the Discharger shall be notified in writing by issuance of a Notice of Applicability of General Waste Discharge Requirements.

Notwithstanding the provisions of the above paragraph, appropriate projects may be brought to the Board for consideration of adoption of project-specific waste discharge requirements when the Executive Officer deems it desirable or necessary to do so.

B. Stormwater Treatment Best Management Practices

The operation of any stormwater infiltration and/or treatment facility shall be in compliance with the effluent standards and receiving water objectives of the Water Quality Control Plan for the North Lahontan Basin and the Water Quality Control Plan for the Lake Tahoe Basin, and the California Inland Surface Water Plan as applicable, and as listed in part, in Attachments "A", "B", "C", and "D" of this Order. The review and determination of the appropriateness of proposed BMP's shall include consideration of the potential for attaining the applicable effluent standards and receiving water objectives. Unless it can be demonstrated by the Discharger that the alternate BMP's can attain the applicable effluent standards and receiving water objectives, BMP's shall meet the following standards:

1. All surface flow from the project site shall be controlled so as to not cause downstream erosion.

2. Stormwater runoff collection, treatment, and/or infiltration disposal facilities should be designed, installed, and maintained for a discharge of stormwater runoff from a 20-year, 1-hour design storm (approximately 1" of rainfall) from all impervious surfaces.

3. Stormwater runoff in excess of the design storm shall only be discharged to a storm drain or stabilized drainage.

The Regional Board reserves the right to require additional or different BMP's if it determines that the additional or different BMP's would provide a better assurance that effluent standards and receiving water objectives will be achieved.

C. Discharge Specifications and Prohibitions

1. The discharge of treated or untreated domestic wastewater, industrial water, garbage or other solid wastes, or any deleterious material to surface waters of the Lake Tahoe Hydrologic Unit is prohibited.

2. The discharge or threatened discharge, attributable to human activities, of solid or liquid waste materials including soil, silt, clay, sand, and other organic and earthen materials to surface waters to lands within the highwater rim (Elevation 6229.1 ft. Lake Tahoe Datum) of Lake Tahoe or within the 100-year floodplain of any tributary to Lake Tahoe is prohibited.

3. The discharge of oil, gasoline, diesel fuel, or any other petroleum derivative or any toxic chemical or hazardous waste is prohibited.

4. The discharge of waste shall not cause a pollution or nuisance as defined in Section 13050 of the California Water Code, or a threatened pollution.

D. Construction Best Management Practices

The following conditions apply to project sites undergoing construction. These practices have been developed to prevent or minimize the temporary discharge of pollutants or nutrients associated with construction activities.

1. Prior to the initiation of any construction-related activities, the Discharger shall install temporary erosion control measures to prevent transport of earthen materials and other wastes off the property.

2. There shall be no removal of vegetation nor disturbance of ground surface conditions between October 15 of any year and May 1 of the following year. A written variance to the ground disturbance dates stated above may be granted by the Executive Officer where it can be shown that granting such a variance would not contribute to the degradation of water quality.

3. Ground compaction and disturbance activities shall be prevented in unpaved areas not subject to construction. Areas not subject to construction shall be fenced or otherwise marked to limit access. These boundary facilities shall be inspected periodically and shall be repaired when necessary.

4. Dust shall be controlled to prevent the transport of such material off the project site or into any surface water drainage course.

5. All disturbed areas shall be adequately restabilized or revegetated. Revegetated areas shall be continually maintained until vegetation becomes established.

6. Prior to October 15 of each year, the Discharger shall provide permanent or temporary (if project is incomplete) stabilization of all disturbed or eroding areas through commencement of revegetation and/or completion of mechanical stabilization measures. Commencement of revegetation shall consist of seeding, planting, mulching, initial fertilization as needed, and initial watering as needed.

7. All surface flow from the project site shall be controlled so as to not cause downstream erosion.

8. All disturbed soils and surplus waste earthen materials shall be removed from the project site and deposited only at a legal, authorized point of disposal or restabilized on-site in accordance with erosion control plans previously approved by the Executive Officer.

9. At no time shall waste earthen materials be placed in surface water drainage courses, or in such a manner as to allow the discharge of such materials to adjacent undisturbed land or to any surface water drainage course.

10. Fresh concrete or grout shall not be allowed to contact or enter surface waters.

11. The Discharger shall immediately clean up and transport to a legal treatment or disposal site, any spilled petroleum products or other hazardous material to the maximum extent practicable.

12. All slopes steeper than two horizonal to one vertical shall be stabilized.

E. Provisions

1. The Discharger shall at all times fully comply with the engineering plans, specifications, and technical reports submitted with the completed report of waste discharge.

2. The Discharger shall permit the Regional Board staff:

   a. to enter upon premises in which an effluent source is located or in which any required records are kept;

   b. to copy any records required to be kept under terms and conditions of this Order;

   c. to inspect monitoring equipment or records; and

   d. to sample any discharge.

3. Pursuant to California Water Code Section 13267, the Discharger shall immediately notify the Board by telephone whenever an adverse condition occurs as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, a violation or threatened violation of waste discharge requirements, significant spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

4. The owners of property subject to waste discharge requirements shall be considered to have a continuing responsibility for ensuring compliance with applicable waste discharge requirements in the operations or use of the owned property. Any change in the ownership and/or operation of property subject to waste discharge requirements shall be reported to the Board. Notification of applicable waste discharge requirements shall be furnished to the new owners and/or operators and a copy of such notification shall be sent to the Board.

5. In accordance with Section 13260 of the California Water Code, the Discharger shall file a report with this Regional Board of any material change or proposed change in the character, location, or volume of the discharge. Any proposed material change in the operation shall be reported to the Executive Officer at least 30 days in advance of implementation of any such proposal. this shall include, but not be limited to, all significant new soil disturbances, all proposed expansion of development extent, increase in impervious surface coverage, or any change in drainage characteristics at the project site. Any proposed change in the time schedule submitted with the report of waste discharge will require the submittal of a revised report.

6. In accordance with Section 13263 of the Water Code, these waste discharge requirements are subject to periodic review and revision by this Regional Board.

7. These requirements do not exempt the Discharger from compliance with any other laws, regulations, or ordinances which may be applicable, they do not legalize these land treatment and disposal facilities and they leave unaffected any further restraints on those facilities which may be contained in other statutes or required by other regulatory agencies.

8. Pursuant to California Water Code Section 13267, the Discharger shall comply with the attached Monitoring and Reporting Program. (Attachment "E")

F. Revocation Procedures

After completion of the construction of the project, installation of permanent BMP's, submittal of the information required by the attached Monitoring and Reporting Program, and an inspection of the project site by Regional Board staff, if necessary, the Notification of Applicability of General Waste Discharge Requirements to the specific project will be revoked in writing by the Executive Officer.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on May 9, 1991.

Harold J. Singer

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachment A: Uniform Runoff Guidelines, Lake Tahoe Basin

Attachment B: Water Quality Objectives, Lake Tahoe Basin Surface Waters

Attachment C: Water Quality Objectives for Protection of Human Health

Attachment D: Effluent Limitations for Protection of Human Health

Attachment E: Monitoring and Reporting Program

ATTACHMENT "A"

UNIFORM REGIONAL RUNOFF QUALITY GUIDELINES *

SURFACE DISCHARGES

Surface water runoff which directly enters Lake Tahoe or a tributary thereto should meet the following constituent levels:

CONSTITUENT	MAXIMUM CONCENTRATION
Total Nitrogen as N	0.5 mg/l
Total Phosphate as P	0.1 mg/l
Total Iron	0.5 mg/l
Turbidity	20 JTU
Grease and Oil	2.0 mg/l

If the constituent levels of water entering a site from upstream areas are of a superior or equal quality to the above, those waters should meet the quality level listed above prior to discharge from the site.

If the constituent levels of waters entering a site do not meet the above, there should be no statistically significant increase (at a 90 percent confidence level) in the water discharged from the site.

RUNOFF DISCHARGED TO GROUNDWATERS

Waters infiltrated into soils should not contain excessive concentrations of nutrients which may not be effectively filtered out by soil vegetation.

CONSTITUENT	MAXIMUM CONCENTRATION
Total Nitrogen as N	5 mg/l
Total Phosphate	1 mg/l
Iron	4 mg/l
Turbidity	200 JTU
Grease and Oil	40 mg/l

* These guidelines shall apply in addition to any more stringent effluent limitations necessary to achieve the water quality objectives set forth in Table II–8.

ATTACHMENT "B"

WATER QUALITY OBJECTIVES for SURFACE WATERS of the NORTH LAHONTAN BASIN

Surface Water	Constituent[1] (mg/l except as noted)						
	TFR[2]	Cl	SO_4	B	Total N	Total P	Total Iron
Lake Tahoe Hydrologic Unit[3] [4]							
Lake Tahoe[5]	60/65	3.0 /4.0	1.0/2.0	0.01/-	0.15/-	0.008/-	
Fallen Leaf Lake	50/-	0.30/0.50	1.3/1.4	0.01/0.02	0.20/-	0.005/0.010	
Griff Creek	80/-	0.40/-	-/-	-/-	0.19/-	0.010/-	0.03/-
Carnelian Bay Creek	80/-	0.40/-	-/-	-/-	0.19/-	0.015/-	0.03/-
Watson Creek	80/-	0.35/-	-/-	-/-	0.22/-	0.015/-	0.04/-
Dollar Creek	80/-	0.30/-	-/-	-/-	0.16/-	0.030/-	0.03/-
Burton Creek	90/-	0.30/-	-/-	-/-	0.16/-	0.015/-	0.03/-
Ward Creek	70/85	0.30/0.50	1.4/2.8	-/-	0.15/-	0.015/-	0.03/-
Blackwood Creek	70/90	0.30/-	-/-	-/-	0.19/-	0.015/-	0.03/-
Madden Creek	60/-	0.10/0.20	-/-	-/-	0.18/-	0.015/-	0.015/-
McKinney Creek	55/-	0.40/0.50	-/-	-/-	0.19/-	0.015/-	0.03/-
General Creek	50/90	1.0 /1.5	0.4/0.5	-/-	0.15/-	0.015/-	0.03/-
Meeks Creek	45/-	0.40/-	-/-	-/-	0.23/-	0.010/-	0.07/-
Lonely Gulch Creek	45/-	0.30/-	-/-	-/-	0.19/-	0.015/-	0.03/-
Eagle Creek	35/-	0.30/-	-/-	-/-	0.20/-	0.010/-	0.03/-
Cascade Creek	30/-	0.40/-	-/-	-/-	0.21/-	0.005/-	0.01/-
Tallac Creek	60/-	0.40/-	-/-	-/-	0.19/-	0.015/-	0.03/-
Taylor Creek	35/-	0.40/0.50	-/-	-/-	0.17/-	0.010/-	0.02/-
Upper Truckee River	55/75	4.0 /5.5	1.0/2.0	-/-	0.19/-	0.015/-	0.03/-
Trout Creek	50/60	0.15/0.20	-/-	-/-	0.19/-	0.015/-	0.03/-

1. Annual average Value/90th percentile value.
2. Total filtrable residue (total dissolved solids).
3. The water quality objectives presented here are derived from those contained in the Water Quality Control Plan for the North Lahontan Basin, (State Water Resources Control Board and Lahontan Regional Water Quality Control Board, 1975) with the following modifications. Several of the narrative objectives applying to waters of Lake Tahoe proper, are clarified. In addition, water quality objectives limiting the nutrient content of tributary streams have been reviewed, and, in some cases, revised. Revised stream standards are based on data contained in Table B-1 of the Tahoe Regional Planning Agency draft 208 plan (1977), which classifies tributary streams as draining disturbed or undisturbed watersheds and provides a summary of measured water quality characteristics derived from a number of different monitoring programs. Data for total nitrogen, total phosphorus and iron have been examined for the purpose of updating water quality objectives. A weighted mean concentration (weighted on the basis of the number of samples reported for the different monitoring programs) was first determined for each of the three nutrient constituents, for each tributary stream. For a stream draining an undisturbed watershed, the revised water quality objectives represent the weighted mean concentrations determined for that specific stream. For streams draining disturbed watersheds, revised water quality objectives are based on the overall mean nutrient concentration for all streams draining undisturbed watersheds.
4. In addition, the following standard for fecal coliform shall apply to Lake Tahoe and its tributaries; the fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 20/100 ml, nor shall more than 10% of the total samples during any 30-day period exceed 40/100 ml.
5. In addition, the following water quality objectives apply specifically to Lake Tahoe:
   - Algal Growth Potential: Mean annual algal growth potential at any point in the Lake shall not be greater than twice the mean annual algal growth potential at the limnetic reference station.
   - Plankton Count: Mean seasonal concentration of plankton organisms shall not be greater than 100 per ml and the maximum concentration shall not be greater than 500 per ml at any point in the Lake.
   - Clarity: The vertical extinction coefficient shall be less than 0.08 per meter when measured below the first meter. The turbidity shall not exceed 3 JTU at any location in the Lake too shallow to determine a reliable extinction coefficient. In addition, turbidity shall not exceed 1 JTU in shallow waters of the Lake not directly influenced by stream discharges. Secchi disk transparency shall not be decreased below levels recorded in 1967-71, based on a statistical comparison of seasonal and annual mean values.
   - Electrical Conductivity: The mean annual electrical conductivity shall not exceed 95 umhos/cm at 50°C and the 90 percentile value shall not exceed 100 umhos/cm at 25°C at any location in the Lake.
   - Additional Biological Indicators: Algal productivity and the biomass of phytoplankton, zooplankton, and periphyton shall not be increased beyond levels recorded in 1967-71, based on a statistical comparison of seasonal and annual mean values.

Attachment "C"

Water Quality Objectives for Protection of Human Health

Constituent	Existing or Potential Sources of Drinking Water Unit	30-day Average	Other Waters Unit	30-Day Average
Noncarcinogens**				
cadmium	ug/l	10	ug/l	--
4-chloro-3-methylphenol	ug/l	3000***	--	--
chromium (VI)[a]	mg/l	0.05	--	--
copper	ug/l	1000.0***	--	--
1,2-dichlorobenzene*	ug/l	2700	mg/l	18
1,3-dichlorobenzene	ug/l	400	ug/l	2600
2-4-dichlorophenol	ug/l	0.30***	--	--
endosulfan*	ug/l	0.9	ug/l	2.0
endrin*	ug/l	~~1/0~~ 0.8	ug/l	0.8
fluoranthene	ug/l	42	ug/l	42
lead	ug/l	50.0	--	--
mercury	ng/l	12	ng/l	12
nickel	mg/l	0.6	mg/l	4.6
phenol	ug/l	300***	--	--
selenium	ug/l	10	ug/l	--
silver	mg/l	0.05	mg/l	--
toluene	ug/l	10000	~~u~~mg/l	300
zinc	mg/l	5.0***	--	--
Carcinogens**				
aldrin	pg/l	130	pg/l	140
arsenic	ug/l	5.0	--	--
benzene	ug/l	0.34	ug/l	21
chlordane*	ng/l	0.08	pg/l	81
chloroform	ug/l	5.7	ug/l	480
DDT*	ng/l	0.59	pg/l	600
1,4-dichlorobenzene	ug/l	9.9	ug/l	64
dichloromethane	ug/l	4.6	ug/l	1600
dieldrin	pg/l	140	pg/l	140
halomethanes*	ug/l	5.7	ug/l	480
heptachlor	ng/l	0.16	ng/l	0.17
heptachlor epoxide	ng/l	0.07	ng/l	0.07
hexachlorobenzene	ng/l	0.66	pg/l	690
hexachlorocyclohexane				
alpha	ng/l	3.9	ng/l	13
beta	ng/l	14	ng/l	46
gamma	ng/l	19	ng/l	62
PAHs*	ng/l	2.8	ng/l	31
PCBs*	pg/l	70	pg/l	70
pentachlorophenol	ug/l	0.28	ug/l	8.2
TCDD* equivalents	pg/l	0.013	pg/l	0.014
toxaphene	ng/l	0.67	pg/l	690
2,4,6-trichlorophenol	ug/l	0.34	ug/l	1.0

* = See Appendix 1 for definition of terms *** = taste and/or odor-based objectives

** = Note: Certain dischargers may be subject to more stringent requirements pursuant to Chapter 6.6 of Division 20 of the California Health and Safety Code.

mg/l = milligram(s) per liter; ug/l = microgram(s) per liter;

ng/l = nanogram(s) per liter; pg/l = picogram(s) per liter; "--" = Not applicable

a = Dischargers may, at their option, meet this limitation as total chromium.

Water Quality Objectives for Protection of Freshwater Aquatic Life

Constituent	Unit	4-Day Average	Daily Average	1-Hour Average	Instantaneous Maximum
arsenic	ug/l	190	--	360	--
cadmium	ug/l	b	--	b	--
chromium (VI)[a]	ug/l	11	--	16	--
copper	ug/l	c	--	c	--
mercury	ug/l	--	--	2.4	--
lead	ug/l	d	--	d	--
nickel	ug/l	e	--	e	--
selenium	ug/l	5.0	--	20	--
silver	ug/l	--	--	--	f
zinc	ug/l	g	--	g	--
endosulfan*	ng/l	--	56	--	220
endrin*	ng/l	--	2.3	--	180
pentachlorophenol	ug/l	h	--	h	--
toxaphene	ng/l	0.2	--	730	--
tributyltin	ng/l	20[i]	40	--	60

* = See Appendix 1 for definition of terms mg/l = milligram(s) per liter; ug/l = microgram(s) per liter; ng/l = nanogram(s) per liter; "--" = Not applicable

a = Dischargers may, at their option, meet this limitation as total chromium.

b-g = Objectives for these metals are expressed by the following formulas, where H = ln (hardness) in mg/l as $CaCO_3$.

b = 4-DAY AVERAGE cadmium = $e^{0.7852H - 3.490}$; 1-HOUR AVERAGE cadmium = $e^{1.128H - 3.828}$. For example where hardness is 50 mg/l, the 4-DAY AVERAGE cadmium = 0.66 ug/l and the 1-HOUR AVERAGE cadmium = 1.8 ug/l.

c = 4-DAY AVERAGE copper = $e^{0.8545H - 1.465}$; 1-HOUR AVERAGE copper = $e^{0.9422H - 1.464}$. For example where hardness is 50 mg/l, the 4-DAY AVERAGE copper = 6.5 ug/l and the 1-HOUR AVERAGE copper = 9.2 ug/l.

d = 4-DAY AVERAGE lead = $e^{1.273H - 4.705}$; 1-HOUR AVERAGE lead = $e^{1.273H - 1.460}$. For example where hardness is 50 mg/l, the 4-DAY AVERAGE lead = 1.3 ug/l and the 1-HOUR AVERAGE lead = 34 ug/l.

e = 4-DAY AVERAGE nickel = $e^{0.846H + 1.1645}$; 1-HOUR AVERAGE nickel = $e^{0.846H + 3.3612}$. For example where hardness is 50 mg/l, the 4-DAY AVERAGE nickel = 88 ug/l and the 1-HOUR AVERAGE nickel = 790 ug/l.

f = INSTANTANEOUS MAXIMUM silver = $e^{1.72H - 6.52}$. For example where hardness is 50 mg/l, the INSTANTANEOUS MAXIMUM silver = 1.2 ug/l.

g = 4-DAY AVERAGE zinc = $e^{0.8473H + 0.7614}$; 1-HOUR AVERAGE zinc = $e^{0.8473H + 0.8604}$. For example where hardness is 50 mg/l, the 4-DAY AVERAGE zinc = 59 ug/l and the 1-HOUR AVERAGE zinc = 65 ug/l.

h = The 4-DAY AVERAGE objective for pentachlorophenol is $e^{1.005(pH) - 5.290}$. This is 13 ug/l at pH = 7.8. The 1-Hour AVERAGE objective for pentachlorophenol is $e^{1.005(pH) - 4.830}$. This is 20 ug/l at pH = 7.8.

i = Six-Month Median.

Effluent Limitations for Protection of Human Health

	Existing or Potential Sources of Drinking Water		Other Waters	
Constituent	Unit	30-day Average	Unit	30-Day Average
Noncarcinogens**				
cadmium	ug/l	10	ug/l	--
4-chloro-3-methylphenol	ug/l	3000***	--	--
chromium (VI)[a]	mg/l	0.05	--	--
copper	ug/l	1000.0***	--	--
1,2-dichlorobenzene*	ug/l	2700	mg/l	18
1,3-dichlorobenzene	ug/l	400	ug/l	2600
2-4-dichlorophenol	ug/l	0.30***	--	--
endosulfan*	ug/l	0.9	ug/l	2.0
endrin*	ug/l	1/0 0.8	ug/l	0.8
fluoranthene	ug/l	42	ug/l	42
lead	ug/l	50.0	--	--
mercury	ng/l	12	ng/l	12
nickel	mg/l	0.6	mg/l	4.6
phenol	ug/l	300***	--	--
selenium	ug/l	10	ug/l	--
silver	mg/l	0.05	mg/l	--
toluene	ug/l	10000	ømg/l	300
zinc	mg/l	5.0***	--	--
Carcinogens**				
aldrin	pg/l	130	pg/l	140
arsenic	ug/l	5.0	--	--
benzene	ug/l	0.34	ug/l	21
chlordane*	ng/l	0.08	pg/l	81
chloroform	ug/l	5.7	ug/l	480
DDT*	ng/l	0.59	pg/l	600
1,4-dichlorobenzene	ug/l	9.9	ug/l	64
dichloromethane	ug/l	4.6	ug/l	1600
dieldrin	pg/l	140	pg/l	140
halomethanes*	ug/l	5.7	ug/l	480
heptachlor	ng/l	0.16	ng/l	0.17
heptachlor epoxide	ng/l	0.07	ng/l	0.07
hexachlorobenzene	ng/l	0.66	pg/l	690
hexachlorocyclohexane				
alpha	ng/l	3.9	ng/l	13
beta	ng/l	14	ng/l	46
gamma	ng/l	19	ng/l	62
PAHs*	ng/l	2.8	ng/l	31
PCBs*	pg/l	70	pg/l	70
pentachlorophenol	ug/l	0.28	ug/l	8.2
TCDD* equivalents	pg/l	0.013	pg/l	0.014
toxaphene	ng/l	0.67	pg/l	690
2,4,6-trichlorophenol	ug/l	0.34	ug/l	1.0

* = See Appendix 1 for definition of terms *** = taste and/or odor-based objectives

** = Note: Certain dischargers may be subject to more stringent requirements pursuant to Chapter 6.6 of Division 20 of the California Health and Safety Code.

mg/l = milligram(s) per liter; ug/l = microgram(s) per liter;

ng/l = nanogram(s) per liter; pg/l = picogram(s) per liter; "--" = Not applicable

a = Dischargers may, at their option, meet this limitation as total chromium.

ATTACHMENT "D", CONTINUED

Effluent Limitations for Protection of Aquatic Life

Constituent	Unit	4-Day Average	Daily Average	1-Hour Average	Instantaneous Maximum
arsenic	ug/l	190	--	360	--
cadmium	ug/l	b	--	b	--
chromium (VI)[a]	ug/l	11	--	16	--
copper	ug/l	c	--	c	--
mercury	ug/l	--	--	2.4	--
lead	ug/l	d	--	d	--
nickel	ug/l	e	--	e	--
selenium	ug/l	5.0	--	20	--
silver	ug/l	--	--	--	f
zinc	ug/l	g	--	g	--
endosulfan*	ng/l	--	56	--	220
endrin*	ng/l	--	2.3	--	180
pentachlorophenol	ug/l	h	--	h	--
toxaphene	ng/l	0.2	--	730	--
tributyltin	ng/l	20[i]	40	--	60

* = See Appendix 1 for definition of terms mg/l = milligram(s) per liter; ug/l = microgram(s) per liter; ng/l = nanogram(s) per liter; "--" = Not applicable

a = Dischargers may, at their option, meet this limitation as total chromium.

b-g = Objectives for these metals are expressed by the following formulas, where H = ln (hardness) in mg/l as $CaCO_3$.

b = 4-DAY AVERAGE cadmium = $e^{0.7852H - 3.490}$; 1-HOUR AVERAGE cadmium = $e^{1.128H - 3.828}$. For example where hardness is 50 mg/l, the 4-DAY AVERAGE cadmium = 0.66 ug/l and the 1-HOUR AVERAGE cadmium = 1.8 ug/l.

c = 4-DAY AVERAGE copper = $e^{0.8545H - 1.465}$; 1-HOUR AVERAGE copper = $e^{0.9422H - 1.464}$. For example where hardness is 50 mg/l, the 4-DAY AVERAGE copper = 6.5 ug/l and the 1-HOUR AVERAGE copper = 9.2 ug/l.

d = 4-DAY AVERAGE lead = $e^{1.273H - 4.705}$; 1-HOUR AVERAGE lead = $e^{1.273H - 1.460}$. For example where hardness is 50 mg/l, the 4-DAY AVERAGE lead = 1.3 ug/l and the 1-HOUR AVERAGE lead = 34 ug/l.

e = 4-DAY AVERAGE nickel = $e^{0.846H + 1.1645}$; 1-HOUR AVERAGE nickel = $e^{0.846H + 3.3612}$. For example where hardness is 50 mg/l, the 4-DAY AVERAGE nickel = 88 ug/l and the 1-HOUR AVERAGE nickel = 790 ug/l.

f = INSTANTANEOUS MAXIMUM silver = $e^{1.72H - 6.52}$. For example where hardness is 50 mg/l, the INSTANTANEOUS MAXIMUM silver = 1.2 ug/l.

g = 4-DAY AVERAGE zinc = $e^{0.8473H + 0.7614}$; 1-HOUR AVERAGE zinc = $e^{0.8473H + 0.8604}$. For example where hardness is 50 mg/l, the 4-DAY AVERAGE zinc = 59 ug/l and the 1-HOUR AVERAGE zinc = 65 ug/l.

h = The 4-DAY AVERAGE objective for pentachlorophenol is $e^{1.005(pH) - 5.290}$. This is 13 ug/l at pH = 7.8. The 1-Hour AVERAGE objective for pentachlorophenol is $e^{1.005(pH) - 4.830}$. This is 20 ug/l at pH = 7.8.

i = Six-Month Median.

ATTACHMENT "E"

GENERAL WASTE DISCHARGE REQUIREMENTS
FOR CONSTRUCTION OF COMMERCIAL AND PUBLIC WORKS PROJECTS

MONITORING AND REPORTING PROGRAM

A. An inspection of the construction site shall be made daily at the end of each work day and monthly during long periods of inactivity (e.g. winter), by the Discharger, resident engineer, superintendent, general contractor, or equivalent. The purpose of the inspection is to discover potential water quality problems at the construction site so that the Discharger can implement corrective measures. The inspection shall include, at least, the following items, as applicable:

1. Damaged containment dikes or erosion fencing
2. Unauthorized access by vehicles
3. Boundary fence damage or removal
4. Disturbed areas with no erosion control protection
5. Evidence of any sediment leakage through erosion control fencing or containment dikes
6. Soil piles unprotected or located in drainage ways
7. Spilled chemicals, paints, fuels, oils, sealants, etc.
8. Upstream runoff diversion structures in place and operational
9. Any signs of downstream erosion from runoff discharges
10. Sediment accumulation within onsite stormwater drainage facilities

The inspector shall maintain a daily log noting the date of the inspection, the inspector's name, problem areas discovered, and corrective measures taken. The log shall be made available to Regional Board staff for review, if so requested.

B. Following completion of project construction, the Discharger shall submit a final report containing, at a minimum, the following information:

1. Details on any modification from the construction plans to the proposed stormwater collection, treatment, or disposal facilities.
2. Details on any changes to the amount of impervious coverage for this project.

3. Any significant problems which occurred during project construction and remedial measures taken.

4. Statement that onsite stabilization/revegetation measures have been completed.

5. Certification that project was constructed in strict accordance with the plans and specifications. This certification shall be signed by a Civil Engineer registered in the State of California.

The final report shall contain the name of the project and shall be signed and dated by the property owner or his legal representative. The report shall be submitted to the Regional Board office in South Lake Tahoe.

Ordered by Harold J. Singer Date: May 9, 1991
HAROLD J. SINGER
EXECUTIVE OFFICER