

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

RESOLUTION NO. R9-2015-0008

A RESOLUTION APPROVING AN AMENDMENT TO THE *WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO BASIN (9)* TO CHANGE THE NITRATE WATER QUALITY OBJECTIVE FOR GROUNDWATERS, INCORPORATE THE ONSITE WASTEWATER TREATMENT SYSTEMS POLICY AND TO INCORPORATE MISCELLANEOUS UPDATES

WHEREAS, the California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board), finds that:

1. The Water Boards have the authority to formulate and adopt water quality control plans, establish water quality objectives, and develop implementation plans under Water Code sections 13240, 13241 and 13242. Water quality objectives are defined under state law as “the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.” (Wat. Code, § 13050, subd. (h).) The water quality standards for waters in the San Diego Region are established in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan). Water quality standards include beneficial uses, water quality objectives that are established pursuant to Water Code section 13241 at levels sufficient to protect those beneficial uses, and an antidegradation policy to regulate discharges to waters of the state to achieve the highest “water quality consistent with the maximum benefit to the people of the State.”¹ Pursuant to Water Code section 13242, the Basin Plan also establishes implementation programs needed for achieving water quality objectives, specifies certain conditions or areas where the discharge of waste, or certain types of waste, are prohibited, and incorporates statewide plans and policies adopted by the State Water Resources Control Board (State Water Board).

¹ State Water Resources Control Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Of Waters in California*.

2. The Basin Plan was adopted by the San Diego Water Board on September 8, 1994, and has been amended periodically, each time with approval by the State Water Board, the Office of Administrative Law (OAL) and the United States Environmental Protection Agency (U.S. EPA), where required.
3. The Basin Plan amendment, including specifications on its physical placement in the Basin Plan, is set forth in Attachment A hereto and consists of the following:
 - (a) Revisions to Chapter 3 to change the water quality objectives for nitrate in groundwaters in all hydrologic areas with a set numeric limit in the San Diego Region to 45 milligrams per liter as nitrate (mg/L as NO₃) with the exception to the Warner Valley Hydrologic Area where the nitrate water quality objective in groundwaters will remain at 5 mg/L as NO₃;
 - (b) Revisions to Chapter 4 to update the implementation plan regarding regulation of Onsite Wastewater Treatment Systems (OWTS) in the San Diego Region by incorporating the statewide OWTS policy adopted by the State Water Board; update all relevant text and make corrections to other sections regarding waste discharge requirements; add implementation provisions for the nitrate water quality objective in groundwater to protect surface water quality where groundwater and surface water are interconnected;
 - (c) Revisions to Chapter 5 to add descriptions of new Water Board policies and resolutions and to delete expired resolutions;
 - (d) Deletions of expired conditional waivers in Appendix D; and
 - (e) Minor non-substantive changes to ensure consistency and formatting integrity are maintained once all changes are incorporated into the Basin Plan.
4. Pursuant to Public Resources Code section 21080.5, the Natural Resources Agency has approved the San Diego Water Board's basin planning process as a "certified regulatory program" that adequately satisfies the California Environmental Quality Act (CEQA) requirements (Public Resources Code section 21000 et seq; 14 CCR section 15251(g)) for preparing environmental documents (23 CCR sections 3777-3781).

5. The State Water Board adopted the *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* (OWTS Policy) on June 12, 2012. The OWTS Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements and sets the level of performance and protection expected from OWTS. The OWTS Policy was approved by the OAL on November 13, 2012 and became effective on May 13, 2013.
6. The State Water Board prepared substitute environmental documentation (SED) for the OWTS Policy in accordance with the Water Boards' certified regulatory program (Public Resources Code, section 21000 et seq; 14 CCR section 15251(g)). This Basin Plan amendment removes existing Basin Plan provisions regulating onsite systems and incorporates the OWTS Policy without making substantive changes or modifications to the OWTS Policy. As described in the SED for this Basin Plan amendment, the San Diego Water Board was not required to and has not conducted further analysis of the environmental impacts associated with the amendments to incorporate the OWTS Policy or of the non-substantive, non-regulatory changes to the Basin Plan.
7. The SED for this Basin Plan amendment includes a technical report and environmental CEQA checklist completed by San Diego Water Board staff that evaluates the environmental effects of the Basin Plan amendment's revisions to the water quality objectives for nitrate as NO₃ in groundwater and implementation measures. As such, the SED that supports the San Diego Water Board's basin planning action contains the required environmental documentation under CEQA. San Diego Water Board staff concluded that the Basin Plan amendment could not have a significant effect on the environment, and therefore, no alternatives or mitigation measures are proposed.
8. The water quality objective of 45 mg/L as NO₃ is a maximum contaminant level (MCL) established by the State Board Division of Drinking Water (formerly California Department of Public Health) and is based on a level that is protective of human health. This standard is protective of the beneficial use for municipal and domestic supply.

9. Incorporating the OWTS Policy into the Basin Plan is required by the OWTS Policy as adopted by the State Water Board and will allow the San Diego Water Board to utilize the conditional waivers of waste discharge requirements contained in the OWTS policy. Modifying the water quality objective for nitrate as NO_3 in groundwater will eliminate the need to impose requirements for additional costly treatment to remove nitrate to meet existing water quality objectives in groundwater that are more stringent than the drinking water standard.
10. Water Code section 13241 requires the San Diego Water Board to establish, with consideration of enumerated factors, water quality objectives that will ensure the reasonable protection of beneficial uses and the prevention of nuisance. In establishing revised nitrate objectives for groundwaters, the San Diego Water Board considered each of the factors specified in Water Code section 13241, including economic considerations. The San Diego Water Board finds that modification of the groundwater quality objective for nitrate will provide region wide economic benefits.
11. Pursuant to Water Code section 13269 the conditional waivers of waste discharge requirements for specified types of discharge within the San Diego Region that are described in Appendix D of the Basin Plan expired on February 3, 2014 and are therefore of no regulatory effect and should be deleted.
12. Water Code section 13242 specifies factors for Basin Plan implementation, and implementation measures in permits are necessary to ensure discharges of nitrate to land and/or groundwater do not pollute or cause nuisance in interconnected surface waters and impair their beneficial uses.
13. Because groundwater basins are covered by an overburden in which the nitrogen levels may be unknown, understanding the overall contribution of nitrogen from various sources moving through the vadose zone is important. Additional information can provide guidance to permit writers to ensure that the 45 mg/L nitrate water quality objective in receiving groundwater is not exceeded, especially in vulnerable drinking water aquifers. If appropriate, additional implementation measures may be added to the Basin Plan to guide permit writers.

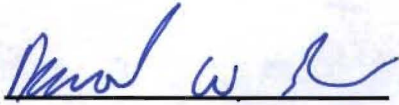
14. Raising the nitrate water quality objective in groundwater to 45 mg/L as NO₃, revising corresponding implementation sections of the Basin Plan, and incorporating the OWTS Policy into the Basin Plan, are actions consistent with the State's Antidegradation Policy (State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California") because such changes are consistent with the maximum benefit of the public, will not unreasonably affect present and anticipated beneficial use of waters and will comply with the requirements of the Basin Plan.
15. The San Diego Water Board's Practical Vision strives to achieve a sustainable local water supply while concurrently ensuring that water quality supports beneficial uses and calls for increasing the use of recycled water. Use of recycled water is important for achieving a sustainable local water supply. The Basin Plan amendment will encourage wider use of recycled water by reducing the cost to lower nitrate levels in the production and discharges of recycled water.
16. The regulatory action proposed meets the "Necessity" standard of Government Code section 13353, subdivision (b).
17. The San Diego Water Board has notified all known interested parties, the public and public agencies with jurisdiction in the San Diego Region of its intent to consider adoption of this Basin Plan amendment in accordance with Water Code section 13244 and Title 40 Code of Federal Regulations part 25. The San Diego Water Board held a CEQA scoping meeting on July 31, 2014 and a public workshop on January 23, 2015. The San Diego Water Board issued a Notice of Filing and circulated a Notice of Public Hearing for the Draft SED and Basin Plan amendment. The documents were available for at least 45 days for public review and comment in accordance with state and federal environmental regulations.
18. The San Diego Water Board held a public hearing on April 15, 2015 for the purpose of receiving testimony on the Basin Plan amendment and supporting documents. The San Diego Water Board considered all timely submitted written comments and all oral comments at the public hearing and prepared written responses to comments.
19. Based on the record as a whole, including the draft Basin Plan amendment, accompanying written documentation, the SED and public comments received, the San Diego Water Board concurs with staff's conclusion that the amendment will result in no significant effect on the environment and therefore no alternatives or mitigation measures are proposed.

20.A Basin Plan amendment does not become effective until approved by the State Water Board and until the regulatory provisions are approved by the Office of Administrative Law.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The San Diego Water Board hereby approves the Substitute Environmental Documentation that includes a technical report and environmental documentation prepared in conformity with the CEQA regulations pertaining to Certified Regulatory Programs and directs the Executive Officer to sign the environmental checklist.
2. Pursuant to Water Code section 13240, et seq., the San Diego Water Board, after considering the record, including oral testimony at the hearing, hereby approves the Amendment to the Basin Plan set forth in Attachment A.
3. The San Diego Water Board Executive Officer is directed to submit this Basin Plan amendment to the State Water Board for approval in accordance with Water Code section 13245.
4. The San Diego Water Board requests the State Water Board approve the Basin Plan amendment in accordance with requirements of Water Code sections 13245 and 13246 and forward it to OAL.
5. If, during the approval process for this amendment, the San Diego Water Board, State Water Board, or OAL determines that minor, nonsubstantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the San Diego Water Board of any such changes.
6. Following approval of the Basin Plan amendment by OAL, the Executive Officer shall file a Notice of Decision with the Secretary for Resources in accordance with Public Resources Code section 21080.5(d)(2)(E) and California Code of Regulations, title 23, section 3781.

I, David W. Gibson, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Diego Region, on April 15, 2015.

A handwritten signature in blue ink, appearing to read "David W. Gibson", is written over a horizontal line.

DAVID W. GIBSON
Executive Officer

Attachment: A. Revisions to Basin Plan Chapters 3, 4, 5, and Appendix D

SUPPORTING DOCUMENT 1

ATTACHMENT A

Revisions to Basin Plan Chapters 3, 4, 5, and Appendix D

CHAPTER 3

WATER QUALITY OBJECTIVES

Note: The proposed changes to Chapters 3, 4, 5, and Appendix D of the Basin Plan are shown in underline/strikeout text.

Table 3-3. Water Quality Objectives

Concentrations not to be exceeded more than 10% of the time during any one year period.

Ground Water			Constituent (mg/L or as noted)												
			TDS	Cl	SO4	%Na	NO3	Fe	Mn	MBAS	B	ODOR	Turb NTU	Color Units	F
SAN JUAN HYDROLOGIC UNIT		901.00													
Laguna	HA	1.10													
San Joaquin Hills	HSA	1.11	1,200	400	500	60	4510	0.3	0.05	0.5	0.75	none	5	15	1.0
Laguna Beach	HSA	1.12	1,200	400	500	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Aliso	HSA	1.13	1,200	400	500	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Dana Point	HSA	1.14	1,200	400	500	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Mission Viejo	HA	1.20													
Oso	HSA	1.21	1,200	400	500	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Upper Trabuco	HSA	1.22	500	250	250	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Middle Trabuco	HSA	1.23	750	375	375	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Gobernadora	HSA	1.24	1,200	400	500	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Upper San Juan	HSA	1.25	500	250	250	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Middle San Juan	HSA	1.26	750	375	375	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Lower San Juan	HSA	1.27	1,200	400	500	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Ortega	HSA	1.28	1,100	375	450	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
San Clemente	HA	1.30													
Prima Deshecha	HSA	1.31	1,200	400	500	60	4510	0.3	0.05	0.5	0.75	none	5	15	1.0
Segunda Deshecha	HSA	1.32	1,200	400	500	60	4510	0.3	0.05	0.5	0.75	none	5	15	1.0
San Mateo Canyon	HA ^a	1.40	500 ^b	250	250 ^b	60	45 ^b	0.3 ^b	0.05 ^b	0.5	0.75 ^b	none	5	15	1.0
San Onofre	HA ^a	1.50	500 ^b	250	250 ^b	60	45 ^b	0.3 ^b	0.05 ^b	0.5	0.75 ^b	none	5	15	1.0

HA - Hydrologic Area

HSA - Hydrologic Sub Area (Lower case letters indicate endnotes following the table.)

Table 3-3. Water Quality Objectives

Concentrations not to be exceeded more than 10% of the time during any one year period.

Ground Water	Hydrologic Basin Unit Number	Constituent (mg/L or as noted)													
		TDS	Cl	SO4	%Na	NO3	Fe	Mn	MBAS	B	ODOR	Turb NTU	Color Units	F	
SANTA MARGARITA HYDROLOGIC UNIT 902.00															
Ysidora	HA ^a	2.10	750 ^c	300 ^c	300 ^c	60	4540 ^c	0.3 ^c	0.05 ^c	0.5	0.75 ^c	none	5	15	1.0
Deluz	HA	2.20	500	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0
Deluz Creek	HSA ^m	2.21	750	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0
Gavilan	HSA ^m	2.22	750	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0
Murrieta	HA	2.30	750 ^c	300 ^c	300 ^c	60	4540 ^c	0.3 ^c	0.05 ^c	0.5	0.75 ^c	none	5	15	1.0
Domenigoni	HSA	2.35	2,000	-	-	-	-	-	-	-	-	-	-	-	-
Auld	HA	2.40	500	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0
Pechanga	HA	2.50	500	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0
Pauba	HSA ^o	2.51	750	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0
Wolf	HSA ^p	2.52	750	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0
Wilson	HA	2.60	500	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0
Cave Rocks	HA	2.70	500	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0
Aguanga	HA	2.80	500	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0
Oakgrove	HA	2.90	500	250	250	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0

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Table 3-3. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

Ground Water		Hydrologic Basin Unit Number	Constituent (mg/L or as noted)													
			TDS	Cl	SO4	%Na	NO3	Fe	Mn	MBAS	B	ODOR	Turb NTU	Color Units	F	
SAN LUIS REY HYDROLOGIC UNIT		903.00														
Lower San Luis	HA	3.10	800 ^r	300	400	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0	
Mission	HSA ^a	3.11	1,500 ^{cd}	500 ^{cd}	500 ^{cd}	60	45 ^{cd}	0.85 ^{cd}	0.15 ^{cd}	0.5 ^d	0.75 ^{cd}	none	5	15 ^d	1.0 ^d	
Bonsall	HSA	3.12	1,500 ^{cd}	500 ^{cd}	500 ^{cd}	60	45 ^{cd}	0.85 ^{cd}	0.15 ^{cd}	0.5 ^d	0.75 ^{cd}	none	5	15 ^d	1.0 ^d	
Moosa	HSA	3.13	1,200 ^r	300	400	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0	
Valley Center	HSA	3.14	1,100 ^r	300	400	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0	
Monserate	HA	3.20														
Pala	HSA	3.21	900 ^c	300 ^c	500 ^c	60	4545 ^c	0.3 ^c	0.05 ^c	0.5	0.75	none	5	15	1.0	
Pauma	HSA	3.22	800 ^c	300 ^c	400 ^c	60	4540 ^c	0.3 ^c	0.05 ^c	0.5	0.75	none	5	15	1.0	
La Jolla Amago	HSA	3.23	500	250	250	60	455	0.3	0.05	0.5	0.75	none	5	15	1.0	
Warner Valley	HA	3.30	500	250	250	60	5	0.3	0.05	0.5	0.75	none	5	15	1.0	
CARLSBAD HYDROLOGIC UNIT		904.00														
Loma Alta	HA	4.10	-	-	-	-	-	-	-	-	-	-	-	-	-	
Buena Vista Creek	HA	4.20														
El Salto	HSA ^a	4.21	3,500	800	500	60	45	0.3	0.05	0.5	2.0	none	5	15	1.0	
Vista	HSA ^a	4.22	1,000 ^b	400 ^b	500 ^b	60	4540 ^b	0.3 ^b	0.05 ^b	0.5	0.75 ^b	none	5	15	1.0	
Agua Hedionda	HA ^a	4.30	1,200	500	500	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0	
Los Monos	HSA ^{aj}	4.31	3,500	800	500	60	45	0.3	0.05	0.5	2.0	none	5	15	1.0	
Encinas	HA ^a	4.40	3,500 ^b	800 ^b	500 ^b	60	45 ^b	0.3 ^b	0.05 ^b	0.5	2.0 ^b	none	5	15	1.0	
San Marcos	HA ^{ae}	4.50	1,000	400	500	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0	
Batiquitos	HSA ^{ae k}	4.51	3,500	800	500	60	45	0.3	0.05	0.5	2.0	none	5	15	1.0	
Escondido Creek	HA ^a	4.60	750	300	300	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0	
San Elijo	HSA ^a	4.61	2,800	700	600	60	45	0.3	0.05	0.5	1.0	none	5	15	1.0	
Escondido	HSA	4.62	1,000	300	400	60	4540	0.3	0.05	0.5	0.75	none	5	15	1.0	

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Table 3-3. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

Ground Water	Hydrologic Basin Unit Number	Constituent (mg/L or as noted)													
		TDS	Cl	SO4	%Na	NO3	Fe	Mn	MBAS	B	ODOR	Turb NTU	Color Units	F	
SAN DIEGUITO HYDROLOGIC UNIT		905.00													
Solana Beach	HA ^a	5.10	1,500 ^b	500 ^b	500 ^b	60	45 ^b	0.85 ^b	0.15 ^b	0.5	0.75 ^b	none	5	15	1.0
Hodges	HA	5.20	1,000 ^b	400 ^b	500 ^b	60	45 40 ^b	0.3 ^b	0.05 ^b	0.5	0.75 ^b	none	5	15	1.0
San Pasqual	HA	5.30	1,000 ^b	400 ^b	500 ^b	60	45 40 ^b	0.3 ^b	0.05 ^b	0.5	0.75 ^b	none	5	15	1.0
Santa Maria Valley	HA	5.40	1,000	400	500	60	45 40	0.3	0.05	0.5	0.75	none	5	15	1.0
Santa Ysabel	HA	5.50	500	250	250	60	45 5	0.3	0.05	0.5	0.75	none	5	15	1.0
PENASQUITOS HYDROLOGIC UNIT		906.00													
Miramar Reservoir	HA ^{a f}	6.10	1,200	500	500	60	45 40	0.3	0.05	0.5	0.75	none	5	15	1.0
Poway	HA	6.20	750 ^g	300	300	60	45 40	0.3	0.05	0.5	0.75	none	5	15	1.0
Scripps	HA	6.30	-	-	-	-	-	-	-	-	-	-	-	-	-
Miramar	HA ^g	6.40	750	300	300	60	45 40	0.3	0.05	0.5	0.75	none	5	15	1.0
Tecolote	HA	6.50	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 3-3. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

Ground Water	Hydrologic Basin Unit Number	Constituent (mg/L or as noted)														
		TDS	Cl	SO4	%Na	NO3	Fe	Mn	MBAS	B	ODOR	Turb NTU	Color Units	F		
SAN DIEGO HYDROLOGIC UNIT		907.00														
Lower San Diego	HA	7.10														
Mission San Diego	HSA ^a	7.11	3,000 ^b	800 ^b	600 ^b	60	45 ^b	0.3 ^b	0.05 ^b	0.5	2.0 ^b	none	5	15	1.0	
Santee	HSA	7.12	1,000 ^b	400 ^b	500 ^b	60	45 ^b	0.3 ^b	0.05 ^b	0.5	0.75 ^b	none	5	15	1.0	
Santee (alluvial aquifer for lower Sycamore Canyon)	HSA ⁿ	7.12	2,000 ^b	800 ^b	600 ^b	60	45 ^b	0.3 ^b	0.05 ^b	0.5	2.0 ^b	none	5	15	1.0	
El Cajon	HSA	7.13	1,200 ^b	250 ^b	500 ^b	60	45 ^b	0.3 ^b	0.05 ^b	0.5	0.75 ^b	none	5	15	1.0	
Coches	HSA	7.14	600 ^b	250 ^b	250 ^b	60	45 ^b	0.3 ^b	0.05 ^b	0.5	0.75 ^b	none	5	15	1.0	
El Monte	HSA	7.15	600 ^b	250 ^b	250 ^b	60	45 ^b	0.3 ^b	0.05 ^b	0.5	0.75 ^b	none	5	15	1.0	
San Vicente	HA	7.20	600	250	250	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0	
El Capitan	HA	7.30	1,000	400	500	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0	
Conejos Creek	HSA	7.31	350	60	60	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0	
Boulder Creek	HA	7.40	350	60	60	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0	
PUEBLO SAN DIEGO HYDROLOGIC UNIT		908.00														
Point Loma	HA ⁱ	8.10	-	-	-	-	-	-	-	-	-	-	-	-	-	
San Diego Mesa	HA ⁱ	8.20	-	-	-	-	-	-	-	-	-	-	-	-	-	
National City	HA ⁱ	8.30	750	250	250	60	45 ⁴⁰	0.3	0.05	0.5	0.75	none	5	15	1.0	

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Table 3-3. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

Ground Water			Hydrologic Basin Unit Number	Constituent (mg/L or as noted)											
				TDS	Cl	SO4	%Na	NO3	Fe	Mn	MBAS	B	ODOR	Turb NTU	Color Units
SWEETWATER HYDROLOGIC UNIT			909.00												
Lower Sweetwater	HA	9.10													
Telegraph	HSA	9.11	3,000 ^b	750 ^b	500 ^b	60	45 ^b	0.3 ^b	0.05 ^b	0.5	2.0 ^b	none	5	15	1.0
La Nacion	HSA	9.12	1,500 ^b	500 ^b	500 ^b	60	45 ^b	0.3 ^b	0.15 ^b	0.5	0.75 ^b	none	5	15	1.0
Middle Sweetwater	HA	9.20	1,000	400	500	60	45 40	0.3	0.05	0.5	0.75	none	5	15	1.0
Upper Sweetwater	HA	9.30	500	250	250	60	40 45	0.3	0.05	0.5	0.75	none	5	15	1.0
OTAY HYDROLOGIC UNIT			910.00												
Coronado	HA	10.10	-	-	-	-	-	-	-	-	-	-	-	-	-
Otay Valley	HA	10.20	1,500 ^b	500 ^b	500 ^b	60	45 40 ^b	0.3 ^b	0.05 ^b	0.5	0.75 ^b	none	5	15	1.0
Otay Valley	HA ^l	10.20	-	-	-	-	-	-	-	-	-	none	-	-	-
Dulzura	HA	10.30	1,000	400	500	60	45 40	0.3	0.05	0.5	0.75	none	5	15	1.0
TIJUANA HYDROLOGIC UNIT			911.00												
Tijuana Valley	HA ^h	11.10	2,500 ^b	550 ^b	900 ^b	70	-	-	-	-	2.0 ^b	none	-	-	-
Potrero	HA	11.20	500	250	250	60	45	0.3	0.05	0.5	1.0	none	5	15	1.0
Barrett Lake	HA	11.30	500	250	250	60	45	0.3	0.05	0.5	1.0	none	5	15	1.0
Monument	HA	11.40	500	250	250	60	45	0.3	0.05	0.5	1.0	none	5	15	1.0
Morena	HA	11.50	500	250	250	60	45	0.3	0.05	0.5	1.0	none	5	15	1.0
Cottonwood	HA	11.60	500	250	250	60	45	0.3	0.05	0.5	1.0	none	5	15	1.0
Cameron	HA	11.70	500	250	250	60	45	0.3	0.05	0.5	1.0	none	5	15	1.0
Campo	HA	11.80	500	250	250	60	45	0.3	0.05	0.5	1.0	none	5	15	1.0

HA - Hydrologic Area

HSA - Hydrologic Sub Area (Lower case letters indicate endnotes following the table.)

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4. IMPLEMENTATION

INTRODUCTION



Elegant tern

The purpose of this chapter is to describe actions that are necessary to protect the beneficial uses described in Chapter 2 and achieve the water quality objectives

specified in Chapter 3. One of the elements in a Water Quality Control Plan as defined in California Water Code (Water Code) section 13050(j) is the implementation program for achieving water quality objectives. This chapter describes the Regional Board's implementation program.

Water Code section 13242 requires that the implementation program have the following elements:

- A description of the actions which are necessary to achieve water quality objectives. (This may include recommendations for appropriate action directed to any entity, public or private);
- A time schedule for the actions to be taken; and
- A description of surveillance to be undertaken to determine compliance with the water quality objectives.

The Regional Board's mission is to achieve and maintain water quality objectives that are necessary to protect all beneficial uses of the waters in the Region. Depending on the nature of the water quality problem, several different strategies, as outlined below, are employed to accomplish this mission.

This Chapter is divided into four sections, Control of Point Source Pollutants, Control of Nonpoint Source Pollutants, Remediation of Pollution, and Other Programs as shown below. Areas of overlap between the point and nonpoint source categories are described later in this Chapter.

- ★ **Control of Point Source Pollutants:** Pollutants from point sources are discharged to waterbodies from discrete conveyance systems (e.g., pipes and channels) in controlled flows at well-defined locations. Examples of point sources include waste

discharges from municipal and industrial wastewater treatment facilities.

Programs that protect water quality from point source pollutants are primarily regulatory in nature. Waste discharge permitting programs such as California's Waste Discharge Requirements (WDRs) and the federal National Pollutant Discharge Elimination System (NPDES) are examples of key regulatory point source control programs. Significant progress toward the control of point source pollutants has been made through these permitting programs.

- ★ **Control of Nonpoint Source Pollutants:** Pollutants from nonpoint sources are diffuse, both in terms of their origin and mode of transport to surface and ground waters. Unlike pollutants from point sources, nonpoint source pollutants often enter waters in sudden episodic surges and large quantities. This occurs as rain, irrigation, and other types of runoff mobilizes and transports contaminants into surface and ground waters. Nationwide, pollutants from nonpoint sources represent the greatest threat to water quality. Examples of nonpoint sources in southern California include lawn and garden chemicals transported by storm water or water from irrigation sprinklers; household and automotive care products dumped or drained on streets and into storm drains; fertilizers and pesticides washed from agricultural fields by rain or irrigation waters; sediment that erodes from construction sites; and various pollutants deposited by atmospheric deposition.

Nonpoint source pollutants are more difficult to control than point source pollutants, and require different control strategies. For example, traditional permitting programs are neither a practical nor effective means of water quality protection from lawn and garden chemicals. Accordingly, the Regional Board integrates non-regulatory programs with regulatory programs in order to control pollutants from nonpoint sources. Through public outreach (an example of a non-regulatory program), residents are informed of threats to the quality of the waters in their communities and are encouraged to voluntarily implement Best Management Practices (BMPs) that eliminate or reduce nonpoint sources of pollution. Emphasis is placed on pollution prevention through careful management of resources, as opposed to cleaning up the waterbody after the fact. Local governments play a key role in the control of nonpoint sources by adopting and enforcing ordinances and by supplementing the Regional Board's public outreach efforts. This flexible

approach can be an effective means of controlling pollutants from many nonpoint sources.

- ★ **Remediation of Pollution:** The Regional Board oversees remediation of both ground and surface waters through the investigation of polluted waters and enforcement of corrective actions needed to restore water quality. These activities are managed through the following programs, namely: Underground Storage Tanks; ~~Spills, Leaks, Investigations and Cleanups (SLIC) Site Cleanup Program (which includes above ground petroleum storage tanks); Aboveground Petroleum Storage Tanks;~~ NPDES Program, ~~Chapter 15 Land Disposal and Non-Chapter 15 Waste Discharge Requirements (WDR) Regulatory Programs;~~ and US Department of Defense (DoD) and Department of Energy (DOE) Sites; ~~Toxic Pits Cleanup Act; and Bay Protection and Toxic Cleanup.~~

These programs are designed to return polluted sites to productive use by identifying and eliminating the sources of pollutants, preventing the spread of pollution, and restoring water quality.

- ★ **Other Programs:** The Regional Board is involved with the investigation, assessment and protection of water quality through other programs which are discussed in this Basin Plan. These include California's Clean Water Act section 303(d) process and California's water quality assessment program.

CONTROL OF POINT SOURCE POLLUTANTS

DEFINITION OF POINT SOURCE

Waste loads from point sources are those that are generally associated with pollutant discharges from an identifiable location to waters of the state. A point source is any discernable, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. Point source wastes can be

generated by residential, commercial, industrial, agricultural, certain recreational and solid waste disposal activities and/or practices. Other wastes are considered under the category of nonpoint source waste loads and are discussed in appropriate sections of this chapter. Many of the water quality problems in the San Diego region have been attributable to point source discharges.

The Regional Board regulates most point source discharges of waste through the issuance of waste discharge requirements and NPDES permits. Certain surface water discharges of waste described in 40 Code of Federal Regulations (CFR) 122.3 do not require NPDES permits. The need to obtain waste discharge requirements for certain categories of waste discharges to land may be waived by the Regional Board where such waiver is not against the public interest. The waste discharge requirements and the NPDES permits establish terms and conditions such as effluent limitations to ensure that point source waste discharges comply with applicable water quality objectives and ensure protection of beneficial uses.

EFFLUENT LIMITATIONS

Effluent limitations for discharge of treated point source wastes are developed for individual point sources and are included in the waste discharge requirements or NPDES permits. The effluent limitations are placed on the quality and quantity of the waste discharge or effluent and can be either numeric and/or narrative limitations. Effluent limitations are based on applicable water quality objectives, United States Environmental Protection Agency (USEPA) effluent guidelines and standards, beneficial uses for the area of effluent disposal, and applicable state and federal regulations and policies.

POINT SOURCE CONTROL CATEGORIES

Waste discharge requirements for waste discharges to land are issued for reclaimed water discharges, sanitary landfills, subsurface waste disposal by septic tank systems, dredge spoil disposal projects, sewage treatment plants and a variety of other activities which can affect ground water quality. NPDES permits are issued for waste discharges to surface waters from facilities such as power plants, sewage treatment plants, shipyards, boatyards, dewatering operations, ground water cleanups and a variety of other activities which can affect surface water quality.

Table 4-1 contains a summary listing of facility types regulated under waste discharge requirements and NPDES permits as of July 1994.

Table 4-2 contains examples of pollutants found in industrial and municipal point source discharges to surface and ground waters.

REGIONAL BOARD PERMITTING PROGRAMS

The Regional Board's primary means of protecting the Region's water resources is through the issuance of WDRs, Water Reclamation Requirements (WRRs), and Master Reclamation Permits (MRP) for each individual discharger. The WDRs impose conditions which protect water quality, implement the Water Quality Control Plan, and when the discharge is to waters of the United States, meet the requirements of the Clean Water Act. The WDRs impose limits on the quality and quantity of waste discharges and specify conditions to be maintained in the receiving waters. WRRs impose conditions for all reuses of treated wastewater. In addition, because the USEPA has delegated responsibility to the State and regional boards for implementation of the federal NPDES program, WDRs for discharges to surface waters also serve as NPDES permits. These programs are the legal means to regulate controllable discharges. It is illegal to discharge wastes into any waters of the State and to reuse treated wastewater without obtaining appropriate WDRs, WRRs, or NPDES permits.

Any person who discharges or proposes to discharge wastes to waters in the Region (other than into a community sanitary sewage system) must describe the quantity and nature of the proposed discharge in a report of waste discharge (RWD) or an NPDES permit application. The RWD must contain information required by the Regional Board. The filing of the

RWD with the Regional Board is mandatory unless waived by the Board on the grounds that the waiver is not against the public interest. Such waivers are conditional and can be revoked by the Regional Board at any time. Upon review of the RWD or NPDES permit application and all other pertinent information (including comments received at a public hearing), the Regional Board will hold a public hearing to consider issuance of WDRs containing appropriate measures and limitations to protect public health and water quality. The basic elements of WDRs or NPDES permits include:

- Effluent limitations on the quality and quantity of the waste discharge. The effluent standards or limitations are designed to implement water quality control plans, protect beneficial uses, and prevent nuisance;
- Standard terms and conditions and discharge prohibitions to ensure compliance with applicable provisions of state and federal law; and
- A monitoring and reporting program requiring the discharger to collect and analyze samples and submit monitoring reports to the Regional Board on a prescribed schedule.

Water Code section 13263 provides that in prescribing WDRs the Regional Board need not authorize the utilization of the waste assimilation capacities of the receiving waters. No discharge of waste into waters of the state creates a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights.

Waste discharges are categorized according to their threat to water quality and operational complexity (Table 4-3). Additionally, discharges to surface waters are categorized as major or minor discharges. Filing and annual fees are based on these categories. WDRs or WRRs do not have an expiration date but are reviewed periodically on a schedule based on the level of threat to water quality. NPDES permits are adopted for a five-year period.

**Table 4-1. National Pollutant Discharge Elimination System Permitted Facilities
In the San Diego Region (as of July 28, 1994)¹**

Facility Type	Number Regulated
Above Ground Tanks	2
Boatyards	7
Ground Water Cleanup	7
Ground Water Dewatering	9
Industrial	8
Military	13
Power Plants	7
Sewage Treatment Plants	24
Shipyards	4
Storm Water (Construction)	542
Storm Water (Industrial)	619
Storm Water (Municipal)	34
Water Softener / Brine Treatment	6
Total	1283

**Table 4-1. Waste Discharge Requirement Permitted Facilities in the
San Diego Region (as of ~~November July 28, 1994~~2014)²**

Facility Type	Number Regulated
Campgrounds	59
Dairy	254
Dredging	5
Ground Water Cleanup	3
Industrial	4
Landfills	2951
Miscellaneous	5
Nursery	1
Private Sewage Treatment Plants	7
Sand and Gravel	3314
Sewage Treatment Plants	42
Sludge Treatment	1
Water Reclamation Requirements	4622
Water Softener / Brine Treatment	1
Winery	3
Total	234227

¹ The list of regulated facilities under NPDES permits is updated periodically and is available at the Regional Board office.

² The list of regulated facilities under WDR permits is updated periodically and is available at the Regional Board office.

Table 4-2. Examples of Industrial and Municipal Point Source Discharges to Surface and Ground Waters.

Discrete Discharge	Examples of Pollutants	Examples of Affected Waterbodies
Municipal wastewater treatment plants (See Table 4-4 for more information).	Biological oxygen demand (BOD), chemical oxygen demand (COD), TDS, chlorides, sulfates, nutrients, ammonia (NH ₃), residual chlorine, metals, organic chemicals	Most inland waters, Pacific Ocean, various ground water basins
Power generation plants	Temperature, chemical additives, minerals	San Diego Bay, Pacific Ocean
Waste water discharge from remediation or construction de-watering projects	TDS; chlorides; sulfates; volatile organic chemicals (VOCs); BTEX (e.g., benzene, toluene, ethylbenzene, xylene) and other petroleum hydrocarbons	Surface waters region-wide
Underground Storage Tanks	TDS; chlorides; sulfates; VOC's; BTEX and other petroleum hydrocarbons	Ground waters region-wide
Shipyard, boatyard wastes	Oil and grease, metals [lead (Pb), chromium (Cr), copper (Cu) and zinc (Zn)], suspended solids, settleable solids, tributyltin (TBT), temperature, chemical additives	San Diego Bay, Mission Bay, Dana Point, Oceanside Harbor
Sand and gravel	TDS, turbidity, sedimentation	San Diego River, Otay River, San Luis Rey River, Temecula Creek, San Dieguito River, Aliso Creek, San Clemente Canyon Creek, San Vicente Creek, Trabuco Canyon Creek, El Toro Creek, Carroll Canyon Creek or their tributaries.
Dairies	BOD, TDS, bacteria, nutrients	Various ground water basins
Dredging	Suspended solids, turbidity	San Diego Bay, Mission Bay, Oceanside Harbor, Dana Point
Landfills	Metals; TDS; chlorides; sulfates; VOC's; BTEX and other petroleum hydrocarbons	Various ground water basins
Recreational Vehicle (RV) Campgrounds	Formaldehyde, phenols, zinc, chlorides, aluminum sulfates	Various ground water basins

Table 4-3. "Threat to Water Quality" and "Complexity" Definition.

CATEGORY & THREAT TO WATER QUALITY	DEFINITION	EXAMPLE
Category I (Major threat)	Those discharges which could cause the long-term loss of a designated beneficial use of the receiving water, render unusable a ground water or surface water resource used as a significant drinking water supply, require closure to an area used for contact recreation, result in long-term deleterious effects on shellfish spawning or growth areas of aquatic resources, or directly expose the public to toxic substances.	Loss of a drinking water supply
Category II (Moderate threat)	Those discharges of waste which could cause short-term violations of water quality objective, cause secondary drinking water standards to be violated, or cause a nuisance. The discharge could have a major adverse impact on receiving biota, cause aesthetic impairment to a significant human population, or render unusable a potential domestic or municipal supply.	Aesthetic impairment from nuisance from a waste treatment facility.
Category III (Minor threat)	Those discharges of waste which could degrade water quality without violating water quality objectives, or cause a minor impairment of designated beneficial uses compared with Category I and Category II.	Small pulses of water from low volume discharges.
COMPLEXITY		
Category "a"	Any major NPDES discharger, and any discharge of toxic wastes; any small volume discharge containing toxic waste or having numerous discharge points or ground water monitoring; any Class I waste management unit.	Small volume complex discharger with numerous discharge points, leak detection systems or ground water monitoring wells.
Category "b"	Any discharger not include above which has a physical, chemical, or biological treatment system (except for septic systems with subsurface disposal), or any Class II or Class III waste management unit.	Marinas with petroleum products, solid wastes or sewage pump-out facilities.
Category "c"	Any discharger for whom WDRs have been or would be prescribed pursuant to section 13263 of the Water Code not included as a Category "a" or Category "b" as described above.	Discharges having no waste treatment systems or that must comply with BMPs, discharges having passive treatment and disposal systems, or discharges having waste storage system with land disposal such as dairy waste ponds.
NPDES		
Major	Publicly owned treatment works with a yearly average flow of over 0.5 million gallons per day (MGD) or an industrial source with a yearly average flow of over 0.1 MGD and those with lesser flows but with acute or potential adverse environmental impacts.	
Minor	All other dischargers that are not categorized as a major.	

Most WDRs and NPDES permits establish conditions tailored to specific discharges. In some cases, discharges can be regulated under general WDRs or NPDES permits (General Permits) which simplify the permit process for certain types of discharges. These General Permits are issued administratively to the discharger after a completed Notice of Intent or appropriate application has been filed and, if necessary, the Regional Board Executive Officer has determined that the discharger meets the conditions specified in the General Permit. The Regional Board plans to increase the use of General Permits for regulating similar categories of waste discharges in the future. The use of General Permits is a step towards permit streamlining and the reduction of permitting delays. The Regional Board will use the following principles in issuing or reviewing General Permits:

- The General Permit will have a streamlined process for obtaining coverage with adequate protective measures to assure compliance.
- The General Permit will focus on constituents of environmental concern for which there is a reasonable likelihood the constituent is, or may be, present in the discharge.
- The General Permits should be flexible to the extent practicable, and should allow for different testing, monitoring, and reporting requirements recognizing various significance levels of discharges.
- Duration, volume, and dilution of discharge should be considered in determining the significance of a discharge.

WASTE DISCHARGE REQUIREMENTS

WDRs are permits for waste discharges to land which could primarily affect ground water quality and beneficial uses. All waste discharges, whether to land or water, are subject to Water Code section 13263. Furthermore unless exempt, discharges to land (e.g., landfills) are also subject to [requirements of California Code of Regulations \(CCR\) Title 27 and Title 23, CCR California Code of Regulations \(CCR\), Title 23](#), Chapter 15. Examples of such waste discharges include:

- Sewage treatment plants with discharges to land;

- On-site ~~disposal system~~ [wastewater treatment systems, or- "OWTS"](#) (septic tanks and advanced treatment systems);
- [Sanitary-Class III \(nonhazardous waste\) and Class I \(hazardous waste\)](#) landfills;
- Industrial discharges;
- Land treatment units (bioremediation);
- Dairies; and
- A variety of other activities which can affect ground water quality.

Some types of dredging operations in surface waters are also regulated under WDRs. WDRs may also protect surface waters in those instances where surfacing ground water may adversely affect surface water quality or beneficial uses. [As discussed in the following subsection, operations that contribute nitrate loading to ground water are of particular concern for interconnected surface water. This is because the water quality objective for nitrate in ground water is an order of magnitude higher than the biostimulatory substances water quality objective for total nitrogen in surface water.](#)

A standard WDR permit typically includes the following elements:

- **Findings:** Official description of the facility, processes, type and quantity of wastes, existing WDRs, enforcement actions, public notice and applicable Water Quality Control Plans, beneficial uses and water quality objectives;
- **Effluent limitations:** Narrative and numerical limits for effluent and discharge prohibitions;
- **Receiving water limitations:** Narrative and numerical objectives for the receiving waters;
- **Provisions:** Standard provisions required by the Regional Board and by state and federal law;
- **Compliance schedules:** Time schedules for completion of activities to achieve compliance with permit conditions;
- **Sludge requirements:** Sludge monitoring and control requirements, if necessary; and a
- **Monitoring and reporting program:** Specific locations of monitoring stations and sampling frequency for all constituents limited in the

permit, including flow, and other constituents that may be required by the Board.

Any person proposing to discharge waste, other than to a community sanitary sewage system, must file a report of waste discharge (application) to obtain WDRs at least 120-days prior to commencing the discharge.

The Water Code, Division 7, Chapter 4, Article 4 authorizes the Regional Board to issue WDRs, review self-monitoring reports submitted by the discharger, and perform independent compliance checking. The Regional Board is authorized to take a variety of enforcement actions to obtain compliance with WDRs. Enforcement of WDRs is done through the issuance of cleanup and abatement orders, cease and desist orders, administrative civil liability orders and court action. The Regional Board is also authorized to update and review WDRs periodically.

NITROGEN IN INTERCONNECTED GROUND WATERS AND SURFACE WATERS

Ground water and surface waters interact with one another, thus, discharges to one may result in impacts to the other (USGS, 1998). Understanding this interaction is important in establishing appropriate discharge specifications for total nitrogen in WDRs because ground water can be a significant source of the total nitrogen load in interconnected surface water bodies. High total nitrogen loads in surface water bodies can cause nuisance algal blooms and low dissolved oxygen leading to fish kills.

Nitrogen is not present in waste streams in its elemental form. It typically occurs in one or more of the following compounds: nitrate (NO₃), nitrite (NO₂), ammonia (NH₃), ammonium (NH₄), and organic nitrogen. The term "total nitrogen" refers to the sum of all forms of nitrogen compounds. The majority of the total nitrogen load in both surface waters and ground waters is in the form of nitrate (NO₃).

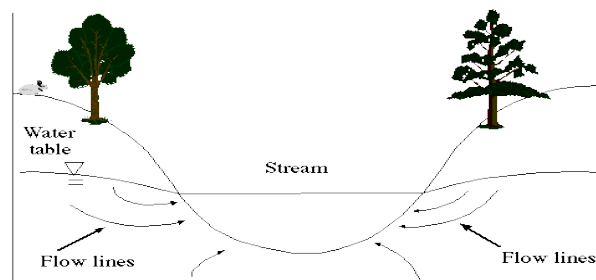
The USGS (2010) concluded that, nationwide 66 percent of streams evaluated had more than 37 percent of their total nitrate load contributed by base flow from ground water seepage. The USGS report also stated that the proportion of the nitrate load in streams attributed to nitrate in base flow was significantly higher in areas with permeable soils or bedrock similar to conditions found in the San Diego Region.

For discharges of waste with significant total nitrogen loads, the biostimulatory substances surface water quality objective may limit the discharge specification for total nitrogen in WDRs for projects or facilities that discharge to land near surface water bodies. Discharges with significant total nitrogen loads include:

- Discharges to land from Onsite Wastewater Treatment Systems (OWTS) and wastewater treatment plants.
- Deep percolation of rainfall or irrigation water from agricultural and nursery operations where nitrogen fertilizers have been applied.
- Deep percolation of rainfall or irrigation water from urban landscapes where nitrogen fertilizers have been applied.
- Deep percolation of recycled water applied for irrigation of agricultural and nursery lands, and urban landscapes.

Natural processes, including physical, chemical, and biological, can affect nitrogen exchanges between ground water and surface water bodies. Total nitrogen concentrations in effluent plumes discharged from OWTS will lose strength through dispersion and dilution as the plumes migrate along ground-water flow paths through an aquifer. In stream settings containing organic-rich sediments and low dissolved-oxygen concentrations, bacteria convert dissolved nitrate in ground water to innocuous nitrogen gas through the process of denitrification and reduce the total nitrogen load entering the stream. Nitrate can also be removed from the ground water as it moves through streamside riparian zones. Nitrate can be removed from stream water that flows through sediments in the streambed. Vegetation in riparian buffer zones can also take up nitrate. All of these processes could be very effective at reducing total nitrogen concentrations in some settings and not in others.

Figure 4-1. Interconnected Surface and Groundwater



Loading of nitrogen through the groundwater pathway includes transport through the unsaturated (or vadose) zone, into a shallow water table and through a deeper saturated zone, which may include confined and unconfined aquifer systems.

Discharges of wastes with significant total nitrogen loads to ground waters that are located in proximity to surface waters, or where ground water is connected to surface waters require additional evaluation to ensure the protection of water quality and beneficial uses.

Where potential discharges of total nitrogen to surface waters are determined to exist via the ground water pathway, the Regional Board may and most likely will adopt WDRs that require a reduced concentration in the proposed discharge effluents, reduction in total nitrogen loads, and or compliance with more stringent water quality objectives in receiving surface waters for the protection of beneficial uses of water resources.

Discharges to Land from Wastewater Treatment Systems

Discharges from wastewater treatment systems that are located in ground water basins interconnected with surface waters could adversely affect surface water quality. The State *Water Quality Control Policy for Siting, Design, and Maintenance of Onsite Wastewater Treatment Systems* (OWTS Policy) includes a waiver of WDRs for smaller systems that meet design and siting conditions specified in the Policy. The OWTS Policy includes setback distances that are to be maintained from various types of surface water bodies. Setbacks allow for diffusion, dilution, and dispersion of an effluent plume before the affected ground water discharges to a surface stream. Denitrification of the effluent plume can also occur along the flow path between the wastewater treatment system disposal area to the surface-water body. Denitrification can occur due to site specific processes including: plant uptake of nutrients within the dispersal area, denitrification in the soil column as the effluent percolates to the water table, and denitrification in the riparian zone bordering the surface-water body.

Systems that do not qualify for the waiver must be regulated with WDRs. These systems are typically located at rural parks, schools, campgrounds, mobile home parks, roadside rest stops, small commercial or residential subdivisions, restaurants, resort hotels/lodges, small correctional facilities, temporary fire-fighting camps, and recreational

vehicle (RV) dump locations, including RV parks. WDRs for these systems require some combination of setbacks from surface waters, higher levels of treatment, or dispersal systems with nitrogen uptake to protect interconnected surface water quality.

For systems that pose a potential threat to surface water quality due to their size or proximity to a surface water body, the Regional Board can and most likely will require the Report of Waste Discharge (RWD) to include a nitrate study. The purpose of the nitrate study is to provide the Regional Board with the information needed to establish discharge specifications for total nitrogen in effluent that will not cause the water quality objective for total nitrogen to be exceeded in any surface water body interconnected with receiving ground water. The nitrate study must utilize an acceptable mass balance method to evaluate if the proposed discharge will cause the water quality objectives for nitrate to be exceeded in ground water, and determine if the proposed discharge will adversely affect surface water quality. The nitrate study may also include, but not be limited to, an evaluation of following nitrogen fate and transport factors:

- Nitrogen uptake, if any, in the discharge area.
- Denitrification in the soil column of the discharge area.
- Concentration of nitrogen in the effluent when it reaches the ground water table.
- Effects of dilution of the effluent along the flow path to the surface water body.
- Effects of diffusion of the effluent along the flow path to the surface water body.
- Effects of nitrogen uptake/reduction by vegetation (e.g., within the root zone and by riparian vegetation) along the flow path to the surface water body.
- Travel time and distance from the point of discharge to the surface water body and riparian zone.
- Assimilative capacity, if any, in the ground water and surface water body.

Discharges to Ground Water from Agricultural and Nursery Operations

Use of fertilizer at agricultural operations can be a significant contributor of total nitrogen to surface waters via both shallow and deep groundwater pathways. The State Water Board convened an Agricultural Expert Panel to assess agricultural nitrate control programs and develop recommendations for its Irrigated Lands Regulatory Program to ensure protection of ground water quality. The Agricultural Expert Panel proposed a comprehensive regulatory program that focuses on minimizing loads of nitrates to ground water (ITRC, 2014). Key elements of the Agricultural Expert Panel's recommendations include: creation and implementation of customized nitrogen/water management plans; trend monitoring of ground water nitrate concentrations; and development of a comprehensive educational and outreach program for different audiences (such as individuals who may need certification, managers of irrigation/nutrient plans, irrigators, and farmers/managers, etc).

WDRs for agricultural and nursery operations in the San Diego Region should require dischargers to implement appropriate management measures to ensure that their operations do not adversely affect ground water or surface water quality. Management measures may include but are not limited to the following:

- Develop and implement an effective irrigation water and nitrogen management plan that includes: an estimate of nitrogen required, agronomic rate of fertilizer application considering soil properties and crops nutrient requirements, estimate of nitrogen uptake/removal, the distribution and uniformity of the irrigation system, volume of water infiltration in a field, and actions taken to periodically assess and improve performance of the system. Increasing the water use efficiency will typically reduce the discharge volume and the total pollutant discharge loading to ground water. Discharges need to regularly inspect irrigation systems for leaks to ensure that excessive infiltration of runoff is not occurring.
- Convert paved or bare soil areas to vegetation that will retard runoff and increase storm water infiltration (wherever possible). The increased infiltration will help dilute total nitrogen concentrations in ground water.
- Group plants with similar water needs together to improve irrigation efficiency.
- Establish plant buffer zones between production areas and surface water bodies to effectively reduce nitrate in interconnected surface water.

- Install and use moisture sensors and automatic sprinklers for more accurate scheduling of irrigation.
- Improve efficiency of irrigation return flow conveyance systems and prevent leaks.
- Train employees on management measures, stormwater discharge prohibitions, WDR requirements, and appropriate irrigation and fertilizer application practices.

Discharges to Ground Water from Animal Feeding Operations

Discharges from animal feeding operations contain nitrogen compounds and other pollutants that can percolate to ground water and affect interconnected surface waters. Discharges from animal feeding operations may include wash water and waste from animal activities, and storm water runoff which can also transport pollutants from animal operations to ground water.

There are statewide minimum standards for discharges of animal wastes established in the California Code of Regulations.³ These minimum standards are included in waivers and WDRs for animal feeding operation. If needed, the Regional Board will also prescribe more stringent requirements in individual WDRs for discharges from animal feeding operations that potentially pose a higher threat to surface water quality.

Landscape Irrigation with Recycled Water

Irrigating landscapes with recycled water is critical to developing a local, sustainable water supply for the Region. Recycled water that percolates past the landscape root zone, however, can be a source of nitrate to ground water and interconnected surface water. The State Recycled Water Policy establishes criteria that landscape irrigation projects must meet to be eligible for streamlined permitting. The following criteria will protect surface water quality as well as ground water quality and should be included in Master Reclamation Permits, Water Recycling Requirements, and WDRs (permits) for landscape irrigation projects that use recycled water.

- Recycled water agencies must ensure recycled water is applied in amounts and at rates as needed for the landscape (i.e., at agronomic rates and not when the soil is saturated). New and revised recycled water permits must require that the recycled water agency prepare

³ Title 27, Division 2, Subdivision 1, Chapter 7, Subchapter 2, Article 1.

~~and submit an operations and management plan to the Regional Board, that may apply to multiple sites, that specifies the agronomic rate(s) and describes a set of reasonably practicable measures to ensure compliance with this requirement, which may include the development of water budgets for use areas, site supervisor training, periodic inspections, tiered rate structures, the use of smart controllers, or other appropriate measures.~~

~~Recycled water purveying agencies must monitor nutrient levels in their recycled water supplies, and annually notify recycled water users of the nutrient value of recycled water.~~

- ~~• Recycled water site supervisors shall be responsible for determining onsite fertilizer needs and shall complete training and education in compliance with recycled water agency rules and regulations to: (1) Minimize the potential for runoff or over-irrigation and, (2) Take into account the nutrient value of recycled water.~~
- ~~• Recycled water agencies must ensure their discharges comply with any applicable salt and nutrient management plan.~~
- ~~• For recycled water use in a basin where a Salt and Nutrient Management Plan has been adopted and incorporated into the Basin Plan by the Regional Board, recycled water purveying agencies will implement any applicable nutrient management requirements mandated within the Salt and Nutrient Management Plan.~~
- ~~• Recycled water agencies must ensure appropriate use of fertilizers that takes into account the nutrient levels in the recycled water. Recycled water agencies must monitor and communicate to the users the nutrient levels in their recycled water.~~

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Waste Discharge Requirements that implement federal National Pollutant Discharge Elimination System (NPDES) regulations ("NPDES requirements" or "NPDES permits") are issued to regulate discharges of "pollutants" from point sources to "waters of the United States" to ensure that the quality and quantity of such discharges does not adversely affect surface water quality or beneficial uses. The phrase "waters of the United

States" is defined in Title 40, CFR, Parts 122.2, 230.3 and 232.3. The definition of "waters of the United States" emphasizes protection of a broad range of surface waters, including interstate and intrastate lakes, creeks, streams, wetlands, rivers, bays, and ocean waters. Ephemeral creeks, and streams are considered to be "waters of the United States" for the purpose of issuing NPDES permits. In this Basin Plan the term "waters of the United States" is used interchangeably with the term "surface waters".

NPDES permits are authorized by section 402 of the Clean Water Act and section 13370 of the Water Code. Permit conditions and the issuance process are described in Title 40, CFR, Part 122 (40 CFR 122) and CCR, Title 23, Chapters 3 and 4. The responsibility for issuing NPDES permits in California has been delegated to the regional boards, subject to review and approval by the Regional Administrator (USEPA Region IX, San Francisco). NPDES permits issued by the Regional Board are also "waste discharge requirements" issued under the authority of the Water Code, Chapter 5.5.

A standard NPDES permit typically includes the following elements:

- **Findings:** Official description of the facility, processes, type and quantity of wastes, existing NPDES permits, enforcement actions, public notice and applicable USEPA effluent guidelines and standards, Water Quality Control Plans, beneficial uses and water quality objectives;
- **Effluent limitations:** Narrative and numerical limits for effluent and discharge prohibitions;
- **Receiving water limitations:** Narrative and numerical objectives for the receiving waters;
- **Provisions:** Standard provisions required by the Regional Board and by state and federal law, expiration date of permit;
- **Compliance schedules:** Time schedules for completion of activities to achieve compliance with permit conditions;
- **Pretreatment requirements:** Standard pretreatment requirements for municipal facilities (see below);
- **Sludge requirements:** Sludge monitoring and control requirements, if necessary; and a

- **Monitoring and reporting program:** Specific locations of monitoring stations and sampling frequency for all constituents limited in the permit, including flow, and other constituents that may be required by the Regional Board.

The NPDES permit regulates discharges of wastes for the purpose of limiting the quantity of pollutants and volume of waste discharged to surface waters. NPDES permits contain prerequisite conditions which must be met by dischargers to ensure protection of beneficial uses of the receiving water as described in the Regional Board's Water Quality Control Plan, Statewide Water Quality Control Plans, and other water quality control policies.

Any person proposing to discharge pollutants into surface waters must submit a report of waste discharge in application for an NPDES permit at least 180-days in advance of the date on which it is desired to commence the proposed discharge. Certain discharges do not require an NPDES permit. The following discharges are exempt from the requirements for NPDES coverage pursuant to 40 CFR 122.3:

- Any discharge of sewage from vessels, effluent from properly functioning marine engines, laundry, shower, and galley sink wastes, or any other discharge incidental to the normal operation of a vessel;
- Discharges of dredged or fill material into waters of the United States which are regulated under the Clean Water Act, section 404;
- The introduction of sewage, industrial wastes, or other pollutants into publicly owned treatment Any discharge in compliance with the instructions of an On-Scene Coordinator pursuant to 40 CFR 300 (The National Oil and Hazardous Substances Pollution Contingency Plan) or 33 CFR 153.10(e) (Pollution by Oil and Hazardous Substances);
- Any introduction of pollutants from nonpoint source agricultural and silvicultural activities, including storm water runoff from orchards, cultivated crops, pastures, range lands, and forest lands;
- Return flows from irrigated agriculture; and
- Discharges into a privately owned treatment works.

NPDES permits are issued for a term of five years or less. The terms and conditions of the permit are

regularly updated as necessary. NPDES permits can be revoked for cause by the Regional Board.

The Water Code, Division 7, Chapter 5.5, Article 6 authorizes the Regional Board to issue NPDES permits, review self-monitoring reports submitted by the discharger, and perform independent compliance checking. The Regional Board is authorized to take a variety of enforcement actions to obtain compliance with an NPDES permit. Enforcement of NPDES permits is done through the issuance of cleanup and abatement orders, cease and desist orders, administrative civil liability orders and court action.

The Regional Board will consider the establishment of mixing zones for inland surface waters and enclosed bays and estuaries on a case-by-case basis. Criteria to be established for mixing zones will be specified in the waste discharge requirements established for the discharge.

In addition to regulating discharges of wastewater to surface waters, NPDES permits also require municipal sewage treatment plants having a design capacity greater than 5 MGD to conduct pretreatment programs. Smaller municipal treatment systems may be required to conduct pretreatment programs if there are significant industrial users of their systems. Pretreatment is discussed in more detail later in this chapter.

COMPLIANCE TIME SCHEDULES

The Regional Board may establish compliance time schedules in NPDES requirements where the Regional Board determines that, for an existing discharger⁴, achieving immediate compliance in a discharge with new or more stringent water quality based effluent limitations or receiving water limitations that implement new, revised, or newly interpreted water quality objectives,⁵ and/or that resulted from new knowledge on the characteristics

⁴ "Existing discharger" means any discharger that is not a new discharger. An existing discharger includes an increasing discharger (i.e., an existing facility with treatment systems in place for its current discharge that is or will be expanding, upgrading, or modifying its existing permitted discharge after a new, revised, or newly interpreted water quality objective becomes applicable). A "new discharger" is defined as any building, structure, facility, or installation from which there is or may be a "discharge of pollutants" (as defined in 40 CFR section 122.2) to surface waters of the San Diego Region, the construction of which commences after a new, revised, or newly interpreted water quality objective becomes applicable.

⁵ "New, revised, or newly interpreted water quality objectives" means objectives as defined in section 13050(h) of Porter-Cologne, issued, revised or newly interpreted after November 9, 2005. Objectives may be narrative or numeric.

and impacts of the discharge is infeasible.⁶ New knowledge about the characteristics and impacts of the discharge that can result in new or more stringent WQBELs or receiving water limitations include, but are not limited to, the following situations:

- Pollutants previously unregulated in an existing discharge are newly regulated because the new information indicates a reasonable potential for the discharge to exceed an applicable water quality objective in the receiving water;
- Pollutants are newly detected in an existing discharge due to improved analytical techniques;
- The point of compliance for a receiving water limitation is changed; and
- The dilution allowance for an existing discharge is changed.

Compliance time schedules are authorized by this provision only for new or more stringent effluent and/or receiving water limitations that implement water quality objectives issued, revised, or newly interpreted after November 9, 2005, or that resulted from new knowledge on the characteristics and impacts of the discharge for any pollutant for which a water quality objective was issued, revised, or newly interpreted after July 1, 1977.

The compliance time schedule shall include a time schedule for completing or achieving specific actions (including interim effluent limitations) that demonstrate reasonable progress toward compliance with water quality based effluent limitations or receiving water limitations and, thereby, attainment of water quality objectives. The compliance time schedule shall contain a final compliance date, based on the shortest practicable time (determined by the Regional Board at a public hearing after considering the factors identified below) required to achieve compliance. In addition, in all cases, the findings of the NPDES requirements shall specify the final effluent limitations.

Compliance time schedules in NPDES requirements shall be as short as practicable but in no case exceed five years from the date of order issuance, reissuance, or modification. The Regional Board may grant an additional extension of up to five years, but only where the discharger has

⁶ "Infeasible" means that discharger compliance cannot be accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

demonstrated satisfactory progress toward achieving compliance with applicable water quality based effluent limitations and receiving water limitations and the Regional Board concurs with the demonstration. In no case, shall a compliance time schedule for these discharges exceed ten years from the date of adoption, revision, or interpretation of the applicable water quality objective, whichever is the shorter period of time.

Nothing in this provision limits the Regional Board's authority (1) to develop alternate implementation provisions for water quality objectives adopted or revised in the future, or (2) to rely on alternate implementation provisions authorized pursuant to State Board policies for water quality control, State regulations, or federal regulations. Compliance time schedules to meet WQBELs and receiving water limitations that implement California Toxics Rule criteria will be limited by the provisions of the State Board "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California."

To document the need for and justify the duration of any such compliance time schedule, a discharger must submit the following information, at a minimum: (1) the results of a diligent effort to quantify pollutant levels in the discharge and the sources of the pollutant(s) in the waste stream; (2) Identification of the sources of the pollutant in the waste stream, documentation of source control efforts currently underway or completed, including compliance with any pollution prevention programs that have been established, and a proposed schedule for additional source control measures or waste treatment needed to meet the WQBELs and/or receiving water limitations; (3) evidence that the discharge quality is the highest that can reasonably be achieved until final compliance is attained; and (4) a demonstration that the proposed schedule is as short as practicable, taking into account economic, technical and other relevant factors. The need for additional information and analyses will be determined by the Regional Board on a case-by-case basis. The need for and justification of the duration of any such compliance time schedule will be subject to Regional Board review and approval.

CONDITIONAL WAIVERS OF WASTE DISCHARGE REQUIREMENTS

The Regional Board may waive issuance of waste discharge requirements and/or the requirement to file reports of waste discharge for a specific discharge or specific types of discharge pursuant to

Water Code section 13269 if such waiver is determined to be consistent with the Basin Plan and in the public interest.

The waiver of adoption of waste discharge requirements is not applicable to discharges subject to federal NPDES regulations. The federal Clean Water Act does not provide for a waiver of the need to obtain an NPDES permit for point source discharges of pollutants to surface waters.

Amendments to Water Code section 13269, effective January 1, 2003 provided that waivers may not exceed five years duration and must be conditional. Under these amendments the regional boards were required to:

- Renew waivers every five years;
- Review the terms, conditions and effectiveness of each waiver at a public hearing;
- Determine if general or individual waste discharge requirements should be issued for ongoing discharges where waivers have been terminated; and,
- Require compliance with waiver conditions.

A waiver of waste discharge requirements is conditional and may be terminated at any time by the Regional Board for any specific discharge or any specific type of discharge. A conditional waiver is not required to be used by the Regional Board. Even if a discharger complies with all the conditions of a conditional waiver, the Regional Board may still choose to regulate any specific discharge with waste discharge requirements.

The Regional Board has determined that a waiver of adoption of waste discharge requirements for a specific type of discharge would not be against the public interest under one or more of the following circumstances:

- The type of discharge is effectively regulated by other public agencies; or
- The type of discharge does not adversely affect the quality or the beneficial uses of the waters of the state; or

- The type of discharge is not readily amenable to regulation through adoption of waste discharge requirements but warrants Regional Board oversight to insure compliance with mandated conditions.

~~The On October 10, 2007, the~~ Regional Board conditionally waives the adoption of waste discharge requirements for certain specific types of discharges through the issuance of an Order, described in Table 4-4. The Waiver Order describes the specific types of discharges subject to a waiver, and the conditions the discharge must meet to be eligible for the waiver. The Regional Board's current Waiver Order A listing of the These conditional waivers and their respective discharge types may be viewed or downloaded obtained from the Regional Board by visiting the conditional waiver website (http://www.waterboards.ca.gov/rwqcb9/water_issues/programs/waivers/waivers.shtml), or contacting Regional Board Staff.

~~took effect on January 1, 2008 and expire on January 1, 2013.~~

In The following general the discharges eligible for a waiver must comply with the following conditionseconditions apply to all discharge types described in Table 4-4:

- The discharge shall not create a nuisance or pollution as defined in the Water Code; and
- The discharge shall not cause a violation of any applicable water quality standard for the receiving waters adopted by the Regional Board, or the State Water Resources Control Board, as required by the Clean Water Act; and
- The discharge of any substance in concentrations toxic to animal or plant life is prohibited.

In addition, the discharges must satisfy the general and specific conditions described in each conditional waiver Table 4-4 and Appendix D.

Table 4-4. Types of Discharges Eligible for Conditional Waivers of Waste Discharge Requirements

Conditional Waiver No.	Discharge Classification	Types of Discharge Included in Conditional Waiver Discharge Classification	Conditions
4	Discharges from on-site disposal systems	<ul style="list-style-type: none"> a) Discharges from conventional septic tank/subsurface disposal systems for residential units b) Discharges from conventional septic tank/subsurface disposal systems for commercial/industrial establishments c) Discharges from alternative individual sewerage systems d) Discharges from conventional septic tank/subsurface disposal systems for campgrounds e) Discharges from on-site graywater disposal systems 	See Appendix D
2	"Low threat" discharges to land	<ul style="list-style-type: none"> a) Discharges from construction and test pumping of water wells to land b) Discharges of air conditioner condensate and non-contact cooling water to land c) Swimming pool discharges to land d) Discharges from short-term construction dewatering operations to land e) "Low Threat" discharges to land and/or groundwater including the following: <ul style="list-style-type: none"> - Groundwater pumped from drinking water wells - Groundwater from foundation drains, crawl space pumps, and footing drains - Discharges from flushing water lines - Discharges from washing vehicles, pavement, buildings, etc. - Infiltration from residential/commercial/industrial/recreational facility landscape and lawn irrigation using groundwater or municipal supply water - Infiltration from structural infiltration-based BMPs 	See Appendix D

Table 4-4 (continued). Types of Discharges Eligible for Conditional Waivers of Waste Discharge Requirements

Conditional Waiver No.	Discharge Classification	Types of Discharge Included in Conditional Waiver Discharge Classification	Conditions
3	Discharges from animal operations	<ul style="list-style-type: none"> a) Discharges from medium animal feeding operations (300-999 animal units, where 1 animal unit is equivalent to 1 cow or 1,000 animal pounds) b) Discharges from small animal feeding operations (less than 300 animal units) c) Discharges of storm water runoff d) Discharge/application of manure to soil as an amendment or mulch e) Discharges from grazing lands 	See Appendix D
4	Discharges from agricultural and nursery operations	<ul style="list-style-type: none"> a) Discharges of plant crop residues to land b) Discharges of storm water runoff c) Discharge/application of amendments or mulches to soil d) Discharges of agricultural irrigation return water e) Discharges of nursery irrigation return water 	See Appendix D
5	Discharges from silvicultural operations	<ul style="list-style-type: none"> a) Discharges of storm water runoff b) Discharges from timber harvesting projects c) Discharges from wildfire suppression and fuels management activities 	See Appendix D
6	Discharges of dredged or fill materials nearby or within surface waters	<ul style="list-style-type: none"> a) Discharges from sand and gravel mining operations b) Discharges from dredging projects c) Discharges from stream channel alternation projects d) Other projects proposing to discharge dredged or fill material nearby or within surface waters of the state 	See Appendix D
7	Discharges of recycled water to land	<ul style="list-style-type: none"> a) Discharges to land from short-term recycled water projects (without permanent recycled water delivery and/or distribution systems, not to exceed 365 days) b) Discharges to land from permanent recycled water projects (with permanent recycled water delivery and/or distribution systems, limited to the period prior to the discharge being authorized and regulations under WDRs, WRRs, and/or MRP, not to exceed 365 days) 	See Appendix D

Table 4-4 (continued). Types of Discharges Eligible for Conditional Waivers of Waste Discharge Requirements

Conditional Waiver No.	Discharge Classification	Types of Discharge Included in Conditional Waiver Discharge Classification	Conditions
8	Discharges/ disposal of solid wastes to land	<ul style="list-style-type: none"> a) Discharges of plant crop residues to land b) Discharge/application of amendments and mulches to soil c) Discharges of inert wastes to solid waste disposal facilities accepting only inert wastes d) Discharges of soils containing wastes to temporary waste piles e) Discharge/disposal/reuse of soils characterized as inert from contaminated sites to land 	See Appendix D
9	Discharges of slurries to land	<ul style="list-style-type: none"> a) Discharges of on-site drilling mud to land b) Discharges of concrete grinding residues to land 	See Appendix D
10	Discharges of emergency/ disaster related wastes	<ul style="list-style-type: none"> a) Incidental discharges of oil and oily water within a response area during an oil spill response in marine waters b) Discharges of disaster related waste to temporary waste piles and surface impoundments c) Discharges of mass mortality wastes to temporary waste piles and emergency landfills d) Other discharges of emergency/disaster related wastes 	See Appendix D
11	Aerially discharged wastes over land	<ul style="list-style-type: none"> a) Discharges of wastes related to fireworks displays over land b) Other wastes discharged aerially over land that may adversely affect the quality of the groundwaters of the state, but determined to be "low threat" by the San Diego Water Board 	See Appendix D

WATER RECLAMATION REQUIREMENTS

Reclaimed water is water that, as a result of treatment, is suitable for a direct beneficial use or a controlled use that would otherwise not occur. Reclaimed water uses in the Region include, but are not limited to, landscape irrigation, crop irrigation, freeway landscape irrigation, ground water recharge, soil compaction at construction sites, and for recreational lakes.

The Regional Board may prescribe water reclamation requirements to reclaimed water producers and those governing the use of reclaimed water, which the Regional Board has determined are necessary to protect public health, safety, and welfare pursuant to Water Code, Division 7, Chapter 7, sections 13500-13556 "Water Reclamation Law". Water Reclamation Law provides that no person shall reclaim water or use reclaimed water for any purpose subject to Title 22 criteria until water reclamation requirements have been established or the Regional Board determines no requirements are necessary. The Regional Board may not deny issuance of water reclamation requirements to a project which violates only a salinity standard in the Basin Plan.

In lieu of issuing water reclamation requirements pursuant to Water Code, section 13523, for each user of reclaimed water, the Regional Board establishes master reclamation requirements as part of the waste discharge requirements which are issued to a supplier or distributor, or both, of reclaimed water. Reclamation requirements must include the following components:

- A requirement that the permittee comply with the uniform statewide reclamation criteria established pursuant to section 13521. Permit conditions for a use of reclaimed water not addressed by the uniform statewide reclamation criteria shall be considered on a case-by-case basis;
- A requirement that the permittee establish and enforce rules or regulations for reclaimed water users, governing the design and construction of reclaimed water use facilities and the use of reclaimed water, in accordance with the uniform statewide reclamation criteria established pursuant to section 13521;
- A requirement that the permittee submit a quarterly report summarizing reclaimed water

use, including the total amount of reclaimed water supplied, the total number of reclaimed water use sites, and the locations of those sites, including the names of the hydrologic areas underlying the reclaimed water use sites;

- A requirement that the permittee conduct periodic inspections of the facilities of the reclaimed water users to monitor compliance by users with the uniform statewide reclamation criteria and the requirements of the master reclamation permit; and
- Any other requirements determined to be appropriate by the Regional Board.

The "Rules and Regulations for Reclaimed Water Users" that must be issued and enforced by the permittee govern the design and construction of reclaimed water use facilities and the use of reclaimed water. The rules and regulations must have the following elements:

- Provisions implementing Title 22, Division 4, Chapter 3, Wastewater Reclamation Criteria; and Title 17, Division 1, Chapter 5, Group 4, Articles 1 & 2, of the CCR;
- Provisions implementing the State ~~Department of Health Services (DHS)~~[Board Division of Drinking Water \(State Board DDW-but formerly DHS\)](#) "Guidelines For Use of Reclaimed Water and Guidelines for Use of Reclaimed Water for Construction Purposes" and measures that are deemed necessary for protection of public health, such as the "American Water Works Association (AWWA) California/Nevada Section, Guidelines for the Distribution of Non-Potable Water" or alternate measures, acceptable to [DHS State Board DDW](#), providing equivalent protection of public health;
- Provisions authorizing the Regional Board, the discharger/producer, or an authorized representative of these parties, upon presentation of proper credentials, to inspect the facilities of any reclaimed water user to ascertain whether the user is complying with the discharger/producer's rules and regulations;
- Provision for written notification, in a timely manner, to the discharger/producer by the reclaimed water user of any material change or proposed change in the character of the use of reclaimed water;
- Provision for submission of a preconstruction report to the discharger/producer by the

reclaimed water user in order to enable the discharger/producer to determine whether the user will be in compliance with the discharger/producer's rules and regulations;

- Provision requiring reclaimed water users to designate a reclaimed water supervisor responsible for the reclaimed water system at each use area under the user's control. Reclaimed water supervisors should be responsible for the installation, operation, and maintenance of the irrigation system, enforcement of the discharger/producer's reclaimed water user rules and regulations, prevention of potential hazards, and maintenance of the reclaimed water distribution system plans in "as built" form;
- Provision authorizing the discharger/ producer to cease supplying reclaimed water to any person who uses, transports, or stores such water in violation of the discharger/producer's rules and regulations;
- Provision requiring notification and concurrence of the State ~~DHS~~ Board DDW and the local county health department for new reclaimed water users. The notification of the county health department shall include a site distribution plan for new and retrofit facilities and a cross-connection control inspection plan for sites containing both potable and reclaimed water distribution lines;
- Provision requiring all windblown spray and surface runoff of reclaimed water applied for irrigation onto property not owned or controlled by the discharger or reclaimed water user to be prevented by implementation of BMPs;
- Provision requiring all reclaimed water storage facilities owned and/or operated by reclaimed water users to be protected against erosion, overland runoff, and other impacts resulting from a 100-year frequency storm, 24 hour storm. This requirement may be waived if the discharger submits information demonstrating that releases from the storage facilities caused by storm events of less than 100-year frequency will not cause violation of the Basin Plan water quality standards;
- Provision requiring all reclaimed water storage facilities owned and/or operated by reclaimed water users to be protected against 100-year frequency peak stream flows as defined by the local flood control agency. However, if information is made available to the Regional Board which shows that a reclaimed water

storage facility presents no potential impairment to the beneficial uses, the Regional Board may exempt requirements for 100-year flood protection on a case-by-case basis;

- Provision for notification to reclaimed water users that the Regional Board may initiate enforcement action against any reclaimed water user who discharges reclaimed water in violation of any applicable discharge prohibitions prescribed by the Regional Board or in a manner which creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050; and
- Provision for notification to reclaimed water users that the Regional Board may initiate enforcement action against the discharger/producer, which may result in the termination of the reclaimed water supply, if any person uses, transports, or stores such water in violation of the discharger/ producer's rules and regulations or in a manner which creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.

WASTE DISCHARGE PROHIBITIONS

Water Code section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by section 13050(c) of the Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

- (1) The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.
- (2) The discharge of waste to land, except as authorized by WDRs or the terms described in Water Code section 13264 is prohibited.
- (3) The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the

exemption described in Water Code section 13376) is prohibited.

(4) Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State ~~DHS-Board Division of Drinking-Water~~ and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

(5) The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

(6) The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.

~~(6)~~(7) The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.

~~(7)~~(8) Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities.] [Section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

~~(8)~~(9) The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.

~~(9)~~(10) The discharge of industrial wastes to conventional septic tank/ subsurface disposal systems, except as authorized by the terms described in Water Code section 13264, is prohibited.

~~(10)~~(11) The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.

~~(11)~~(12) The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.

~~(12)~~(13) The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.

~~(13)~~(14) The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

~~(14)~~(15) The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

~~(15)~~(16) The discharge of untreated sewage from vessels to San Diego Bay is prohibited.

~~(16)~~(17) The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at MLLW is prohibited.

~~(17)~~(18) The discharge of treated sewage from vessels, which do not have a properly functioning USCG certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at MLLW is prohibited.

WATER QUALITY CERTIFICATION (SECTION 401)

In addition to the issuance of NPDES permits or WDRs, the Regional Board acts to protect the quality of surface waters through water quality certification pursuant to section 401 of the Clean Water Act. Section 401 requires that any person applying for a federal permit or license which may result in a discharge of pollutants into waters of the United States, must obtain a state water quality certification that the activity complies with all applicable water quality standards, limitations, and restrictions.

No license or permit may be issued by a federal agency until certification required by section 401 has been granted or waived by the state. Further, no license or permit may be issued if certification has been denied by the state. The activity must also meet the requirements of the Coastal Nonpoint Pollution Control Program required under the Coastal Zone Act Reauthorization Amendments (CZARA).

The following permits or licenses are subject to section 401 of the Clean Water Act:

- NPDES permits issued by the USEPA under section 402 of the Clean Water Act;
- Clean Water Act, section 404 permits issued by the United States Army Corps of Engineers (USACOE);
- Permits issued under sections 9 and 10 of the Rivers and Harbors Act (for activities which may affect navigation);
- Licenses for hydroelectric power plants issued by the federal Energy Regulatory Commission under the Federal Power Act; and
- Licenses issued by the Nuclear Regulatory Commission.

The Regional Board's water quality certification activities have focused on applications for permits for the discharge of dredged or fill material to surface waters. These permits are issued by the USACOE (Clean Water Act, section 404 permits) subject to any conditions imposed by the Regional Board pursuant to section 401.

The section 404 program is administered at the federal level by the USACOE and the USEPA. The US Fish and Wildlife Service and the National Marine Fisheries Service have important advisory

roles. The USACOE has the primary responsibility for the permit program and is authorized, after notice and opportunity for a public hearing, to issue permits for the discharge of dredged or fill material. USEPA develops the regulations under which permits may be granted.

The Regional Board evaluates the projects for which section 404 permits are requested and determines whether to deny water quality certification, issue a certification with or without conditions, or waive the certification pursuant to regulations in Article 4, Title 23. Regional Board certification is dependent upon assurance that the project will not reduce water quality below applicable standards as defined in the Clean Water Act (i.e., the water quality objectives established and the beneficial uses which have been designated for the surface waters). A certification is usually denied if the proposed activity does not meet water quality standards. If the activity may violate standards, a conditional certification is given. If the activity does not violate any standards, a section 401 waiver may be given. The Executive Director of the State Board may issue a water quality certification after review of the application, all relevant data, and taking into consideration any recommendations from the Regional Board.

SELF MONITORING, COMPLIANCE MONITORING, AND INSPECTIONS

Compliance with NPDES permits and WDRs is generally self-monitored by each individual discharger, with oversight by the Regional Board. Dischargers are required to report and take necessary corrective actions when they discover that they are not in compliance with the permit effluent limits. The Regional Board conducts periodic inspections and compliance monitoring and, as necessary, will take enforcement actions to ens

Self Monitoring Program: WDRs and NPDES permits issued by the Regional Board include requirements for the discharger to collect samples of the waste discharge. In some cases, the receiving waters must also be monitored by the dischargers. The results of the "self monitoring" programs are reported to the Board and are used to determine compliance with the WDRs. (Additional information on this topic is presented in Chapter 6, Surveillance and Monitoring).

Compliance Monitoring and Inspections: Regional Board staff can conduct unannounced inspections (including collection of samples) to

determine the status of compliance with NPDES permit or WDRs / WRRs requirements. All major dischargers are inspected at least once a year. (Additional information on this topic is presented in Chapter 6, Surveillance and Monitoring).



ENFORCEMENT

The Regional Board is committed to the maintenance of a strong and uniform enforcement program. Appropriate and timely response to instances of noncompliance with Regional Board NPDES permits, WDRs, waste discharge prohibitions and enforcement orders is necessary to ensure protection of the quality of surface and ground waters in the Region.

Regional Board response to noncompliance incidents include the establishment of a specific time frame for compliance and or correction. All dischargers are expected to correct violations in the shortest time frame possible. With the exception of special circumstances, failure to terminate, comply, or complete corrective actions on a noncompliance incident in a specified time frame will result in the escalation of the matter to a higher level enforcement action.

Regional Board responses to instances of violation correspond to the following enforcement action level sequence, unless circumstances warrant a more expeditious escalation to a higher level.

LEVEL A ENFORCEMENT ACTION

In this action level the Regional Board staff requests the discharger, by telephone or letter, to correct the problem and prevent recurrence. Regional Board staff may also request the discharger to correct the problem during routine compliance inspections.

LEVEL B ENFORCEMENT ACTION

In this action level the Regional Board Executive Officer issues a notice of violation to the discharger for failure to comply with a compliance schedule for corrective action.

LEVEL C ENFORCEMENT ACTION

In this action level the Regional Board may take a variety of formal higher level enforcement actions. The Water Code provides the Regional Board with a number of enforcement remedies for violations of requirements. These remedies include time schedules, cease and desist orders, cleanup and

abatement orders, and administrative civil liability orders.

Time Schedule Orders

When a discharge is taking place or threatening to occur that will cause a violation of a Regional or State Board requirement, a discharger may be required to submit a detailed list of specific actions the discharger will take to correct or prevent the violation. (Water Code section 13300). These schedules may also be required when the waste collection, treatment, or disposal facility of a discharger are approaching capacity. Time schedule orders are adopted by the Board after a public hearing or issued by the Executive Officer pursuant to authority delegated by the Regional Board.



Cleanup and Abatement Orders

The Regional Board may issue a cleanup and abatement order to any person who has discharged, is discharging or is threatening to discharge wastes that will result in a violation of WDRs or other order or prohibition of the State or Regional Board. The Regional Board may also issue a cleanup and abatement order to any person who discharges or has discharged waste to waters of the state and causes, or threatens to cause, a condition of pollution or nuisance. The cleanup and abatement order may require the waste discharger(s) to cleanup and abate the effects of the discharge or to take other appropriate remedial action (Water Code section 13304). A cleanup and abatement order is issued if a pollutant can actually be cleaned up or the pollutant effects abated. The Regional Board has delegated issuance of these orders to the Executive Officer. Cleanup and abatement orders do not require Board adoption, but may be brought before the Regional Board for consideration at the request of the discharger.

Cease and Desist Orders

If discharge prohibitions or requirements of the State Board or Regional Board are violated or threatened, the Regional Board may adopt a cease and desist order (Water Code section 13301) requiring the discharger to comply forthwith, to comply in accordance with a time schedule, or if the violation is threatened, to take appropriate remedial or preventive action. Cease and desist orders may restrict or prohibit the volume, type or concentration of waste added to community sewer systems, if existing or threatened violations of waste discharge requirements occur. Cease and desist orders may specify interim time schedules as well as limitations

that must be complied with until full compliance is achieved. Cease and desist orders are adopted by the Regional Board after a public hearing.

Administrative Civil Liability

Administrative civil liability complaints and orders may be issued by the Regional Board for certain categories of violations. In this process the Regional Board may impose monetary penalties on dischargers. The Regional Board (or the Executive Officer) may issue Administrative Civil Liability complaints (ACLs) to persons who intentionally or negligently violate enforcement orders of the Board, or who intentionally or negligently discharge wastes in violation of any order, prohibition, or requirement of the Board where the discharge causes conditions of pollution or nuisance (Water Code section 13350). ACLs may also be issued in cases where a person fails to submit reports requested by the Board (Water Code sections 13261 and 13268) or when a person discharges waste without first having filed the appropriate RWD (Water Code section 13265). ACLs may be issued pursuant to Water Code section 13385 for violations of any Regional Board prohibition or requirement implementing specified sections of the Clean Water Act, or any requirement in an approved pretreatment program. Amounts of administrative civil liability that the Board can impose range up to \$10,000 per day of violation. The Water Code also provides that a superior court may impose civil liability assessments in substantially higher amounts. The Regional Board may conduct a hearing if a discharger contests the imposition of the Administrative Civil Liability.

LEVEL D ENFORCEMENT ACTION

Referral to the Attorney General or District Attorney

Judicial Civil Liability: The Water Code provides that a Regional Board may request the State Attorney General to petition a superior court to enforce orders and complaints issued by the Board and impose civil monetary remedies. The monetary remedies may be in excess of the administrative civil liability penalties that the Regional Board is authorized to impose. The court imposed fines and or imprisonment vary depending upon the seriousness of the violation.

Injunctive Relief: The Regional Board may also request that the Attorney General seek injunctive relief in specific situations, such as violations of cease and desist orders or discharges which cause or threaten to cause a nuisance or pollution that

could result in a public health emergency (Water Code section 13331 and section 13340).

Criminal Penalties: The Regional Board may also refer violations to the District Attorney to seek criminal penalties by judicial action in the county where the discharge occurred. The court imposed fines and or imprisonment vary depending upon the seriousness of the violation.

SELECTION OF APPROPRIATE ENFORCEMENT ACTION

The following criteria are considered by the Regional Board in selecting the appropriate enforcement action in response to an incident of noncompliance:

- Degree of water quality impairment and/or threat to the public health including the degree of toxicity of the discharge;
- Past history of discharge violations;
- Degree of cooperation or recalcitrance shown by the discharger;
- Culpability of the discharger;
- Financial resources of the discharger;
- Whether the circumstances leading to the noncompliance have been corrected;
- Whether the discharge violations are likely to continue in the future;
- Whether the discharge can be cleaned up;
- The need to take immediate cleanup action;
- Any economic benefit realized by the discharger as a result of the noncompliance; and
- Other actions as justice may require.



STATE WATER RESOURCES CONTROL BOARD PLANS AND POLICIES

The State Water Resources Control Board (State Board) has adopted a number of plans and policies for statewide water quality management. The Regional Board implements these plans through

WDRs, NPDES permits, and any necessary enforcement actions. These policies are explained in more detail in Chapter 5, Plans and Policies.

HAZARDOUS WASTE SOURCE REDUCTION

The Department of Toxic Substance Control (DTSC) has adopted regulations regarding hazardous waste source reduction pursuant to the Hazardous Waste Source Reduction and Management Review Act of 1989 (Article 11.9, starting with section 25244.12 of the Health and Safety Code). These regulations are contained in sections 67100.1 through sections 67100.14 of Title 22 of the CCR. These regulations require that each generator of hazardous or extremely hazardous waste within the limits set by the regulations conduct a source reduction evaluation review and plan, plan summary, hazardous waste management performance report, and report summary on or before September 1, 1991 and every four years thereafter. Every generator is required to retain a copy of the current review and plan, plan summary, report, report summary, progress report, and compliance checklist at each site, at a public library, or at a local governmental agency. The Regional Board supports these efforts of hazardous waste source reduction because any successes achieved will mean less hazardous waste which could pollute California's waters.

MUNICIPAL AND DOMESTIC WASTEWATER

Municipal wastewater in the San Diego Region consists primarily of domestic sewage and minor quantities of industrial wastes in some of the more highly urbanized and industrialized areas. Facilities to control municipal wastewater include wastewater collection systems, pumping stations, transport pipelines, treatment plants, storage ponds and ocean outfalls. These facilities are sometimes collectively referred to by the term Publicly Owned Treatment Works (POTW).

Municipal wastewater treatment in the San Diego Region is generally at the secondary treatment level. Secondary treatment results in the removal of more than 85 percent of the biochemical oxygen demand and suspended solids found in municipal wastewater. Tertiary (advanced) wastewater treatment is used at some treatment plants for additional removal of pollutants to reclaim wastewater for beneficial reuse. Effluent from the wastewater treatment plants is disposed of by various means including:

- Discharge to the Pacific Ocean via long deep ocean outfalls;
- Percolation into the soil; and
- Reclamation and reuse in conformance with uniform reclamation criteria (CCR, Title 22, Division 4, Chapter 3).

Sludge disposal at most major municipal wastewater treatment plants in the Region consists of aerobic or anaerobic digestion and land disposal. Dried sludge is either disposed of at landfills or made available to the public as a soil conditioner. Some treatment plants, located upstream of major regional wastewater treatment plants discharge sludge to the sewage collection system for treatment at a "downstream" regional wastewater plant. The term municipal sewage treatment plant and Publicly Owned Treatment Works are used interchangeably in the Basin Plan.

The Regional Board regulates wastewater discharges from municipal wastewater treatment plants through either the issuance of NPDES permits where the discharge is to surface waters or through WDRs where the discharge is to land.

Discharges of wastewater to surface water must meet the effluent limitations prescribed in the NPDES permit issued by the Regional Board. Effluent limitations are based on the following criteria:

- Secondary treatment effluent limitations defined by USEPA contained in 40 CFR 133, unless a waiver to the secondary treatment standards is obtained (more stringent effluent limitations than secondary treatment may be imposed by the Regional Board if necessary);
- Applicable water quality objectives and beneficial uses contained in the Basin Plan and State Board Water Quality Control Plans;
- Applicable public health protection standards for total and fecal coliform;
- Assimilative capacity of the receiving water;
- The terms and conditions of the federal Antidegradation Policy (40 CFR 131.12) and the State Antidegradation Policy (Resolution No. 68-16) (See Chapter 3);
- Anti-backsliding provisions described in Clean
- Land disposal or recycling of sludge as a soil amendment.

Discharges of wastewater onto land must meet the effluent limitations in the waste discharge requirements prescribed by the Regional Board through the issuance of WDRs. The WDRs contain effluent limitations based on the following criteria:

- The treatment capability of the treatment process employed by the dischargers;
- Applicable water quality objectives and beneficial uses contained in the Basin Plan;
- Applicable public health protection standards for total and fecal coliform;
- Assimilative capacity of the receiving water
- The terms and conditions of the State Antidegradation Policy (Resolution No. 68-16) (See Chapter 3); and
- Land disposal or recycling of sludge as a soil amendment



CLEAN WATER GRANTS AND LOANS

From 1972 until 1988 the State Board assisted the USEPA in administering the multibillion dollar Clean Water Grants Program in California to finance the construction of municipal wastewater treatment facilities. This program ended in 1988. The Clean Water Act provides for the creation of a State Revolving Fund (SRF) Loan Program capitalized in part by federal funds. The Clean Water Act authorizes loan funding for construction of Publicly Owned Treatment Works (POTWs), for implementation of a nonpoint source pollution control management program, and for the development and implementation of an estuary conservation and management program. The State Board converted the Clean Water Grant Program to a Grants and Loans program on October 1, 1988, and ultimately replaced this completely with the State Revolving Fund Loan Program on June 30, 1989.

ONSITE WASTEWATER TREATMENT SYSTEMS INDIVIDUAL DOMESTIC SUBSURFACE DISPOSAL SYSTEMS

Some areas in the Region rely on onsite wastewater treatment systems subsurface disposal systems (OWTS) for subsurface disposal of domestic household sewage. OWTS are used to treat domestic wastewater from residences and

commercial and industrial establishments that are not connected to community sewer systems and/or municipal wastewater treatment plants. Although, OWTS typically serve individual residences, larger systems are suitable for commercial facilities or communities. When properly designed, sited, operated, and maintained, OWTS treat domestic wastewater to reduce its polluting impacts on the environment and to protect public health. The most common type of subsurface disposal system OWTS is the septic tank-leach field disposal system. Seepage pits are sometimes used when site conditions are not suitable for leachfields.

The purpose of a septic tank system is to treat household wastes so that the treated effluent discharge will readily percolate into the soil for final treatment. Treatment or conditioning of the waste is initially achieved by the removal of solids through settling and decomposition of some of the soluble organic chemicals in the tank portion of the system. Further treatment of organic chemicals, nutrients, and bacteria occurs as the effluent released from the tank percolates through the soil. Proper construction of septic systems is imperative. Poorly designed and constructed septic systems will not function properly and can result in pollution of surface or ground waters. Septic tank systems used in undersized lots or unsuitable soils are subject to failure, and can lead to untreated or poorly treated sewage seeping-surfacing into yards, roadside ditches, streams, lagoons and surface waters, or seeping into ground water, thus creating a public nuisance and health hazard. Even well-functioning septic systems can pollute ground water under adverse conditions.

Conventional septic tank/leachfield or seepage pit systems may be infeasible in some sites due to unfavorable site-specific soil or ground water conditions, such as, shallow soils, high ground water elevation, steep slopes, rocky soils, etc. In such instances, advanced or alternative OWTS may be appropriate. Examples of advanced or alternative OWTS include mound systems, evapotranspiration systems, evapotranspiration/infiltration systems, small in-house package treatment facilities, media filters, aerobic treatment units, disinfection units, and other innovative approaches.

Advanced or alternative OWTS provide additional removal of pollutants such as pathogens, organics, suspended solids, oil and grease, and nitrogen found in wastewater. Several of these treatment systems have been certified by the National Science Foundation as being able to achieve federal treatment standards for removal of biodegradable organics and total suspended solids.

~~Some have also been certified to achieve at least a fifty percent removal rate for nitrogen. Subsurface drip dispersal systems are often used for dispersal of effluent from advanced or alternative OWTS. Subsurface drip dispersal systems are a pressure-dosed method of effluent dispersal capable of delivering small, precise volumes of wastewater effluent to the soil. The drip lines are normally flexible polyethylene tubes that are about one-half inch in diameter. The drip lines are typically installed in shallow trenches about 2 feet apart and buried 6-12 inches beneath the soil. Because of the unique construction of subsurface drip dispersal systems, they may cause less site disruption during installation, and are adaptable to irregularly shaped lots, or lots with other difficult site constraints. Subsurface drip dispersal systems apply wastewater at the root zone of the soil, which allows for maximum uptake of nutrients in the treated wastewater by vegetation in the disposal area.~~

Nitrogen compounds, which are typically present in treated effluent from septic systems, are highly soluble and stable in aqueous environments. When not denitrified by bacteria or assimilated into organic growth in the unsaturated zone, these nitrogen compounds are easily transported to ground water. Although there is controversy about the possible health effects of nitrate on adults, it has been shown that high levels of nitrate cause methemoglobinemia (blue-baby syndrome) in infants. Both the federal drinking water standard of 10 mg/l nitrogen (or nitrate +plus nitrite (expressed as nitrogen) and the equivalent state drinking water standard of 45 mg/l nitrate (expressed as NO₃) is based on this relationship.

~~The Water Code, Chapter 4, Article 5, sets forth criteria for regulating on-site disposal systems. In the past, the Regional Board placed certain types of septic tank systems under individual waste discharge requirements. However, the regulatory process for establishing and enforcing waste discharge requirements for individual disposal systems is cumbersome and for the most part overlaps the regulatory process of local agencies. Consequently, the Regional Board has deferred regulation of most single-family dwellings and certain commercial septic tank disposal systems to the local health departments. The Regional Board has asserted its authority with multiple dwelling units, some larger developments in problem areas, non-domestic septic tank systems, and any situation which is creating, or has the potential to create, a water quality problem.~~

~~In the past, the Regional Board staff reviewed all proposals of individual OWTS or sewerage systems for residential subdivisions involving more than five~~

~~family units and for all commercial and industrial establishments. As part of this review, the Regional Board staff evaluated the adequacy of the consultants' field tests, the conformance of the design proposal with the criteria of the appropriate county regulatory agency, and in most instances, the cumulative impacts of the discharges on nitrate concentrations in the groundwater. Letters were forwarded to the appropriate local health agency approving those projects that demonstrated: (a) surfacing sewage from the proposed disposal systems will not take place either adjacent to, or within, the project boundaries; (b) the historic high groundwater and the effects of the discharge will not result in groundwater rising within 5 feet below the base of the disposal system; and (c) the cumulative impacts of the discharges will not cause nitrate concentrations in the ground water to exceed water quality standards.~~

~~Generally, project proponents have been able to address water quality issues by completing the routine field investigations required by the local health agencies. Regional Board staff review of the investigation reports often duplicated the review efforts of the local agencies. On occasion, the Regional Board staff has required further investigations to address concerns regarding the cumulative impacts of the discharges. These investigations are not part of the local agencies' normal review process and the criteria for conducting these investigations are not specified by local regulations. On these occasions, significant staff resources are expended evaluating the technical information submitted by the project proponents.~~

Management Principles for OWTS

The following management principles are designed to ensure that the goals of the Basin Plan are implemented.

- ~~• Sewerage systems OWTS~~ must be designed, constructed, and installed so as to be capable of preventing pollution or contamination of the waters of the State or creating nuisance for the duration of the development.
- ~~• Sewerage systems OWTS~~ must be operated, maintained and monitored so as to continually prevent pollution or contamination of the waters of the State and the creation of a nuisance.
- The responsibility for both of the above must be clearly and legally assumed by an entity with the financial and legal capability to assure that the system provides protection to the quality of

the waters of the State for the duration of the development.

~~In 1990, Regional Board staff suspended review of all proposed subsurface disposal system projects in order to direct staff resources to more critical water quality issues. In lieu of reviewing individual projects, staff prepared interim screening procedures for implementation by the appropriate local agencies. The objective of the procedures is to assist the local agencies in identifying those projects with potential for causing degradation of ground water quality. Only those projects would then be referred to the Regional Board staff.~~

~~The determination by Regional Board staff to require project proponents to conduct an investigation of the cumulative impacts of the individual systems has been on a case-by-case basis. Staff considers factors such as the location of proposed project, the number of proposed lots, and the density of the development. However, without written review criteria, staff decisions requiring project proponents to conduct further investigations has been inconsistent~~

Purpose Guidelines for New or Replacement OWTS

The purpose of the guidelines below is to provide guidance to proponents of projects involving new discharges of waste from community or individual ~~sewerage facilities~~ OWTS. However, the Regional Board may exercise discretion and approve exceptions to these guidelines if it is demonstrated that conformance with the above principles will be achieved. The Regional Board recognizes that there are certain actions which are best undertaken by local agencies to minimize the potential water quality problems resulting from new ~~community and individual sewerage systems~~ OWTS. The guidelines are based on the assumption that it is desirable that local agencies

- Prohibit the use of new community and individual ~~sewerage systems~~ OWTS where existing community sewerage collection systems are reasonably available. The determination of whether or not existing systems are reasonably available should be the responsibility of the local agency or agencies having jurisdiction over the project.
- Prohibit the use of new individual ~~disposal systems~~ OWTS for any subdivision of land unless the governing body having jurisdiction determines that the use of individual disposal systems will be in the best public interest.

- Assure that individual ~~disposal systems~~ OWTS are maintained to the satisfaction of the responsible health officer. This could be accomplished through establishment of special maintenance districts, by the amendment of existing ordinances to assure adequate maintenance documented through periodic inspections, or other alternatives as deemed appropriate by the local health officer.
- Consider the cumulative impacts of individual ~~disposal system~~ OWTS discharges as a part of the approval process for development.

Community Sewerage Systems

The Regional Board will regulate all discharges of wastes from community sewerage systems. The Regional Board will require a RWD to be filed for all proposed waste discharges which involve the use of new community sewerage systems. ~~Before the Board will consider the RWD to be complete, the following requirements must be met: The Regional Board strongly prefers that a~~ A public entity ~~must~~ assume legal authority and responsibility for the ownership, operation, and maintenance of the proposed wastewater treatment and disposal system. ~~The RWD must be submitted by the public entity.~~ The RWD must include the following:

- A final Environmental Impact Report or Negative Declaration covering the total project, unless categorically exempt, prepared and approved by the local lead agency pursuant to the California Environmental Quality Act (CEQA) of 1970 (as amended) and Chapter 3, Division 6, Title 14, of the CCR (as amended). In the approval process the Environmental Impact Report or Negative Declaration must be circulated through the State Clearinghouse; and
- Operation, maintenance, revenue and contingency plans for the wastewater treatment and disposal facilities or a commitment by the ~~public entity~~ project proponent to prepare such plans and submit them to the Regional Board at least 60-days prior to the initiation of discharge.

In the absence of a satisfactory RWD, the discharge ~~will be~~ is prohibited.

State OWTS Policy

The purpose of the State Water Quality Control Policy for Siting, Design, and Maintenance of

Onsite Wastewater Treatment Systems⁷ (OWTS Policy) is to allow the continued use of OWTS, while protecting water quality and public health. The State Board adopted the OWTS Policy on June 19, 2012. The OWTS Policy recognizes that responsible local agencies can provide the most effective means to routinely manage OWTS. Therefore, it is the intent of the OWTS Policy to efficiently utilize and improve upon where necessary existing local programs through coordination between the State and local agencies. For this purpose, the OWTS Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements, and establishes the level of performance and protection expected from OWTS.

Waiver of Waste Discharge Requirements for Qualifying OWTS

The OWTS Policy also waives the Water Code requirement that dischargers obtain Waste Discharge Requirements (WDRs) for OWTS that meet requirements specified in the OWTS Policy.

The Policy organizes OWTS into five separate implementation tiers (as outlined below). An OWTS that meets the criteria of one of the five tiers is eligible for the conditional waiver of WDRs, with regulation of the qualifying OWTS deferred to the approved local agency. In addition, to qualify for the waiver, owners of OWTS must comply with conditions specified in Section 12.0 of the OWTS Policy.

Tier 0

This tier applies to existing OWTS that are functioning as designed without surfacing effluent, and not located near surface water bodies known to be impaired for nitrogen or pathogens. These OWTS are automatically included in Tier 0, provided they meet requirements specified in Section 6.0 of the OWTS Policy. No action is required on the part of the owner, except maintaining the OWTS in good operating condition. An OWTS must have a projected flow of 10,000 gallons per day (gpd) or less to be included in Tier 0 of the OWTS Policy.

Tier 1

This tier applies to new and replacement OWTS that meet the siting and design criteria specified in

Sections 7.0 and 8.0 of the OWTS Policy. An OWTS must have a projected flow of 3,500 gpd or less to be included in Tier 1.

Tier 2

This tier applies to new and replacement OWTS operating under an approved Local Agency Management Plan (LAMP). LAMPs allow local agencies to establish jurisdiction specific requirements and alternative design and siting criteria that may differ from those specified in the Tier 1 section of the OWTS Policy, and manage the installation of new and replacement OWTS under the LAMP. The alternative criteria can include local modifications of: system design requirements, siting controls such as system density and setback requirements, additional monitoring and maintenance requirements, design criteria for use of alternative or advanced OWTS, etc. Local agencies must consider the factors listed in Section 9.1 of the Policy in developing their LAMPs. OWTS meeting the requirements of a LAMP need not be regulated under WDRs issued by the Regional Board.

The OWTS Policy identifies the Regional Board designated to review and approve LAMPs for each County in the State, and requires the designated Regional Board to coordinate with other Regional Boards that have overlapping jurisdiction within the County.⁸ San Diego County falls within the jurisdiction of both the San Diego Regional Board (Region 9) and the Colorado River Basin Regional Water Board (Region 7). The OWTS Policy designates the San Diego Regional Board as being responsible for review and approval of the LAMP for San Diego County. After consulting with the Colorado River Basin Regional Board, the Regional Board approved the LAMP for San Diego County on [insert date].— Riverside County falls within the jurisdiction of the San Diego (Region 9), Colorado River Basin (Region 7), and Santa Ana (Region 8) Regional Boards, while Orange County falls within the jurisdiction of the San Diego and Santa Ana Regional Boards. The OWTS Policy designates the Colorado River Basin and the Santa Ana Regional Boards as the lead Regional Water Boards responsible for review and approval of the LAMPs for Riverside and Orange Counties, respectively.

The San Diego Water Board authorizes the Executive Officer to review and administratively approve future modifications to

the San Diego DEH LAMP or decide to schedule an agenda item for further consideration of the San Diego DEH LAMP by the San Diego Water Board.

⁷ The OWTS Policy can be found at http://www.waterboards.ca.gov/water_issues/programs/owts/doc/sowts_policy.pdf

⁸ See Attachment 3 of the OWTS Policy.

Tier 3

This tier applies to existing, new, and replacement OWTS located within 600 feet of surface water bodies identified as impaired for nitrogen or pathogens due to possible contributions from OWTS discharges. The specific impaired water bodies are identified in Attachment 2 of the OWTS Policy. New or replacement OWTS near impaired water bodies must comply with any applicable TMDL or special provisions identified in a LAMP. New or replacement OWTS not located within 600 feet of water bodies listed in the OWTS Policy must meet the standards for supplemental treatment and other requirements specified in Tier 3. The OWTS Policy does not identify any qualifying impaired water bodies in the San Diego Region.

Tier 4

~~GUIDELINES FOR NEW COMMUNITY AND INDIVIDUAL SEWERAGE FACILITIES~~

~~Background~~

~~The Regional Board adopted Guidelines for New Community and Individual Sewerage Facilities (Resolution No. 79-44) on June 25, 1979. By the mid-1980s, the Regional Board recognized the need to update the 1979 guidelines to simplify the regulatory process by providing local agencies with the necessary review criteria for addressing cumulative impacts from individual systems. These projects complying with the criteria would not be directly subject to the Regional Board regulatory process.~~

~~As part of the Clean Water Act section 205(j) Basin Plan update project, the Regional Board contracted a study to review the portion of the 1979 guidelines pertaining to subsurface disposal and to recommend any changes that would result in a more effective and efficient regulatory program. The contractor was directed to conduct file research and literature review regarding the impacts of subsurface disposal on ground water quality and to interview the staff of responsible regulatory agencies in San Diego, Riverside, and Orange Counties to incorporate their concerns and recommendations into a revised set of subsurface disposal guidelines. A report, entitled "Review Of Subsurface Wastewater Disposal Policy, San Diego Regional Water Quality Control Board" discusses phosphates, nitrate contamination, sources of nitrates in the ground water, reasons for septic systems failure, local and regional water table rises, and the implications of regulatory restrictions.~~

This tier applies to any OWTS that require corrective action. OWTS included under Tier 4 are failing systems with:

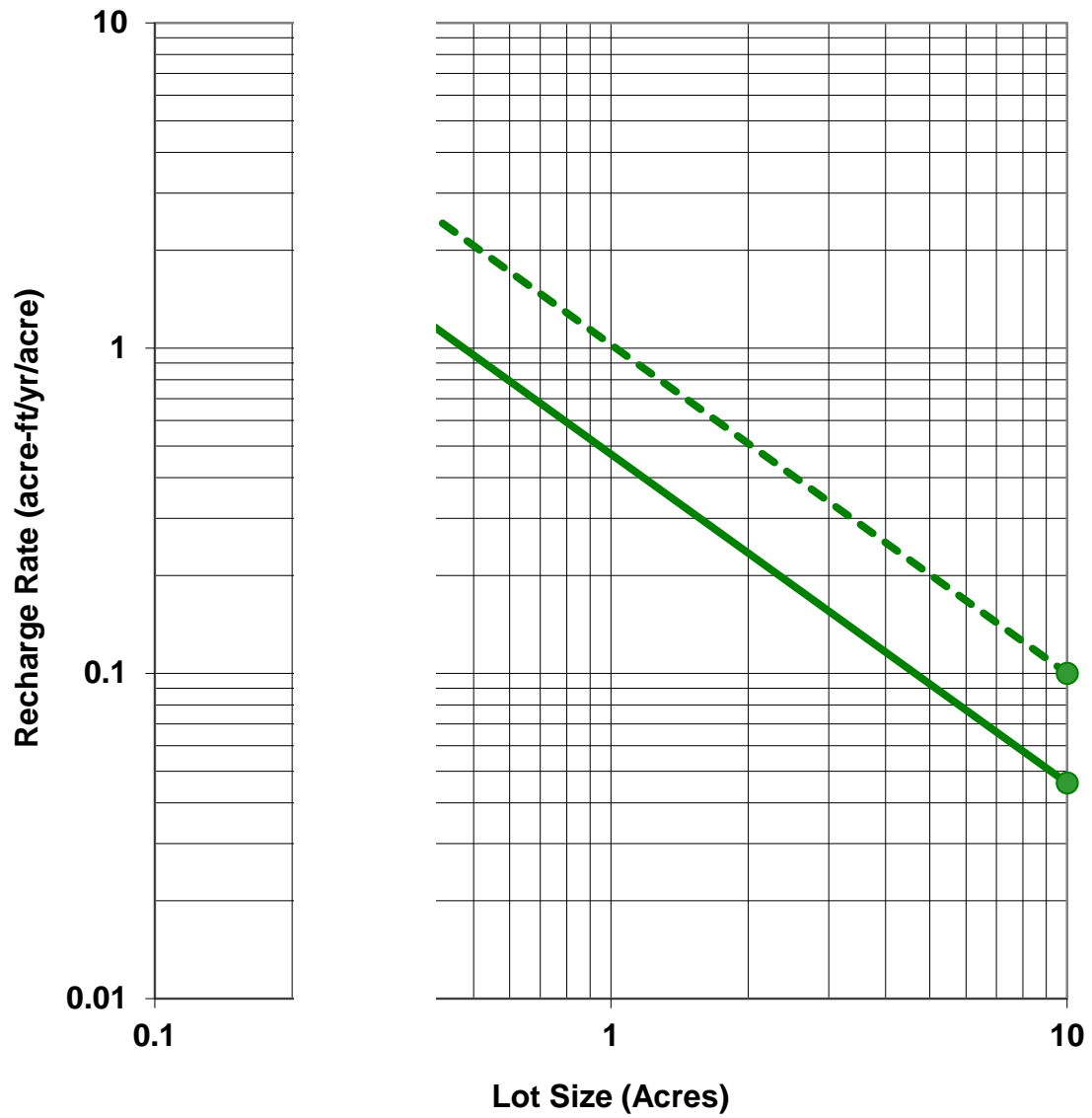
- surfacing effluent, failing septic tank systems or structural failure of septic tank leading to infiltrating ground water or exfiltrating wastewater; and
- any OWTS that has affected or affects surface or ground water to a degree that creates a condition of pollution, makes surface or ground water unfit for drinking or other beneficial uses, or creates a condition of public nuisance.

These OWTS are required to be replaced or repaired to bring them under compliance with the OWTS Policy in a timely manner.

The report recommends that:

- ~~• The Regional Board should delegate the authority for review and approval of all septic systems and seepage pits to appropriate county regulatory agencies, eliminating the duplicative review function of the board staff.~~
- ~~• Effort currently directed toward review of subsurface disposal applications should be redirected to investigation of basin-specific limitations on subsurface disposal. These studies should be undertaken in cooperation with county regulatory agencies.~~
- ~~• The Regional Board should establish guidelines for the county regulatory agencies at the time that authority for review is delegated. These guidelines should:
 - ~~✓ Specify a continuation of existing design criteria for leachline length, spacing, setback, and slope requirements.~~
 - ~~✓ Increase minimum unsaturated soil thickness below the leachlines to 9 feet for soils with good percolation rates, 12 feet for moderate percolation rates, and 14 feet for soils with poor percolation rates for individual systems.~~
 - ~~✓ Require hydrogeological studies in areas of imported domestic water if the minimum lot size is not met, or if significant downslope accumulation of effluent is likely, or if septic systems discharge to a basin with restricted outflow.~~~~

Figure 4-1. Required Recharge Rates to Maintain 10 mg/l N-Nitrate Standard.



- ✓ ~~Restrict septic system densities to those indicated in Figure 4-1 in those areas where ground water is a significant source of drinking water.~~

~~The policy described below update and supersedes Resolution No. 79-44. The policy incorporated current practice and conclusion based upon the above recommendations to improve the efficiency of the review process, to eliminate unnecessary Regional Board regulation, and to improve protection of ground water quality.~~

Principles

~~The following management principles are designed to ensure that the goals of the Basin Plan are implemented:~~

- ~~Sewerage systems must be designed, constructed, and installed so as to be capable of preventing pollution or contamination of the waters of the State or creating nuisance for the duration of the development.~~
- ~~Sewerage systems must be operated, maintained and monitored so as to continually prevent pollution or contamination of the waters of the State and the creation of a nuisance.~~
- ~~The responsibility for both of the above must be clearly and legally assumed by an entity with the financial and legal capability to assure that the system provides protection to the quality of the waters of the State for the duration of the development.~~

Purpose

~~The purpose of the guidelines below is to provide guidance to proponents of projects involving new discharges of wastes from community or individual sewerage facilities. However, the Regional Board may exercise discretion and approve exceptions to these guidelines if it is demonstrated that conformance with the above principles will be achieved. The Regional Board recognizes that there are certain actions which are best undertaken by local governments to minimize the potential water quality problems resulting from new community and individual sewerage systems. The guidelines are based on the assumption that it is desirable that city and county governments:~~

- ~~Prohibit the use of new community and individual sewerage systems where existing community sewerage systems are reasonably available. The determination of whether or not existing systems are reasonably available~~

~~should be the responsibility of the local agency or agencies having jurisdiction over the project.~~

- ~~Prohibit the use of new individual disposal systems for any subdivision of land unless the governing body having jurisdiction determines that the use of individual disposal systems will be in the best public interest.~~
- ~~Assure that individual disposal systems are maintained to the satisfaction of the responsible health officer. This could be accomplished through establishment of special maintenance districts, by the amendment of existing ordinances to assure adequate maintenance documented through periodic inspections, or other alternatives as deemed appropriate by the local health officer.~~
- ~~Consider the cumulative impacts of individual disposal system discharges as a part of the approval process for development.~~

Community Sewerage Systems

~~The Regional Board will regulate all discharges of wastes from community sewerage systems. The Regional Board will require a RWD to be filed for all proposed waste discharges which involve the use of new community sewerage systems. Before the Board will consider the RWD to be complete, the following requirements must be met:~~

- ~~A public entity must assume legal authority and responsibility for the ownership, operation, and maintenance of the proposed wastewater treatment and disposal system. The RWD must be submitted by the public entity.~~
- ~~The RWD must include the following:~~
 - ~~A final Environmental Impact Report or Negative Declaration covering the total project, unless categorically exempt, prepared and approved by the local lead agency pursuant to the California Environmental Quality Act (CEQA) of 1970 (as amended) and Chapter 3, Division 6, Title 14, of the CCR (as amended). In the approval process the Environmental Impact Report or Negative Declaration must be circulated through the State Clearinghouse; and~~
 - ~~Operation, maintenance, revenue and contingency plans for the wastewater treatment and disposal facilities or a commitment by the public entity to prepare such plans and submit~~

them to the Regional Board at least 60 days prior to the initiation of discharge.

In the absence of a satisfactory RWD, the discharge will be prohibited.

Individual Sewerage Systems

Projects Involving Five Family Units or Less – Conventional Septic Tank/Subsurface Disposal

When individual sewerage systems consisting of conventional septic tanks and leach fields or seepage pits would be provided to serve each dwelling for projects of five family units or less, or to serve to dispose domestic waste from commercial or industrial projects with a design flow of equal to or less than 1,200 gallons per day, the Regional Board will defer the authority to regulate the discharge of domestic wastes to the appropriate county health officer.

Projects Involving More Than Five Family Units – Conventional Septic Tank/Subsurface Disposal

The above deferral of authority to the appropriate county health officer to regulate the discharge of domestic wastes will also apply when individual sewerage systems consisting of conventional septic tanks and leach fields or seepage pits would be provided to: (1) serve dwellings involving more than five family units in a single project or (2) dispose of domestic waste from commercial or industrial projects with a design flow of more than 1,200 gallons per day. The deferral will apply if the project proponent demonstrates to the satisfaction of the appropriate county health officers that the following conditions are met:

- The use of new individual subsurface disposal systems for any subdivision of land will be in the best public interest; and
- Individual disposal systems will comply with all existing county design criteria including but not limited to percolation testing, minimum required leachline length, leachline spacing, setback and slope requirements; and
- Individual disposal systems will meet the minimum unsaturated soil thickness between the bottom of leachlines or the bottom of seepage pits and the historic high ground water level. The minimum unsaturated soil thickness is 9 ft for soils with good percolation rates [less than 15 minutes per inch (mpi)], or 12 ft for soils with moderate percolation rates (15 to 40 mpi), or 14 ft for soils with poor percolation

rates (greater than 40 mpi). However, exceptions to the unsaturated soil thickness criteria may be allowed by the appropriate county health officer, based upon knowledge of local site conditions; and

- The cumulative impact from proposed individual disposal system(s) or from new commercial and/or industrial development(s) will not cause adverse impacts to the beneficial uses of ground water.
- If it is determined that the discharge could cause a significant water quality problem, then a RWD must be filed with the Regional Board and waste discharge requirements must be obtained prior to final subdivision map recording.
- For any discharge of industrial wastes a RWD must be filed with the Regional Board and waste discharge requirements must be obtained prior to recording of the final map and/or issuance of a building permit.

Alternative Systems When an ET, or an ETI, or a mound system is proposed to serve a single residential project, Regional Board defers regulation of the discharge to the appropriate county health officers provided that the project proponents demonstrate to the satisfaction of appropriate county health officers that the following conditions are met:

- ET, or ETI, or mound systems will comply with all conditions for conventional subsurface disposal systems as noted above; and
- The design, construction, and installation of an ET or ETI system will comply with the criteria approved by this Regional Board Resolution No. 80-84 and the criteria contained in the State Board, Guidelines for Evapotranspiration Systems dated January 1980. The design, construction, and installation of mound systems will comply with criteria contained in the State Board, Guidelines for Mound Systems dated January 1980; and
- The ET, or ETI, or mound systems will be for domestic waste only; and
- The ET, or ETI, or mound systems will be used for single family dwelling on a single lot which has previously undergone a proper satisfactory CEQA process; and

- ~~• The ET, or ETI, or mound systems will not be used as a waste discharge method for new subdivisions; and~~
- ~~• The ET, or ETI, or mound systems will not be used as a group collection system; and~~
- ~~• The ET, or ETI, or mound systems is considered experimental, and will be monitored for at least three years.~~

~~As the counties develop and adopt standards for alternative systems, the Regional Board may, in the future, defer regulation of additional types of individual sewerage systems to the appropriate county health officer in much the same manner as is now done for conventional septic tank/subsurface disposal systems.~~

Report of Waste Discharge Submission For OWTS not Meeting Waiver Conditions

The Regional Board will review specific proposals ~~not meeting the above criteria for OWTS that do not meet waiver conditions specified in the OWTS Policy or conditions specified in the applicable LAMP conditions~~ at the request of the appropriate ~~county local agency authority~~. For such proposals, a RWD must be filed with the Regional Board and WDRs must be obtained or waived by the Regional Board prior to recordation of the final map and/or issuance of a building permit. Before the Regional Board considers the RWD to be complete, the following technical information must be submitted:

- A hydrogeologic study which will, using accepted ground water hydrologic techniques and practices, assess the probable rise in the water table associated with the project, including effects of ~~septic system~~ **OWTS** recharge, landscape irrigation, and ground water pumpage. The study will additionally address the impact of the projected water table rise or fall on the operation of new and existing septic systems.
- A nitrate study which will, using an acceptable mass balance method, demonstrate that the proposed project will not cause the concentrations of wastewater constituents in ground water to exceed applicable ground water quality objectives, particularly for basin plan objective for nitrate. ~~The study must also show that the project will not cause wastewater constituents in interconnected surface water to exceed applicable surface water quality objectives, particularly for total nitrogen, to be exceeded.~~

In addition to the technical information submitted, the following conditions must be met:

- In most instances a public entity must assume legal authority and responsibility for the operation and maintenance of the proposed individual wastewater treatment and disposal systems;
- In some instances, such as commercial/industrial establishments, or projects involving only a single homesite, or special extenuating circumstances, the public entity condition may be set aside;
- A final Environmental Impact Report or Negative Declaration must be included covering the total project, unless categorically exempt, prepared and approved by the local lead agency pursuant to the California Environmental Quality Act of 1970 (as amended) and Chapter 3, Division 6, Title 14, of the California Administrative Code (as amended). In the approval process the Environmental Impact Report or Negative Declaration must be circulated through the State Clearinghouse;
- Operation, maintenance, revenue, and contingency plans must be submitted for the wastewater treatment and disposal facilities or a commitment must be made by the public entity to prepare such plans and submit them to the Regional Board at least 60-days prior to the initiation of discharge; and
- In the absence of a satisfactory Report of Waste Discharge, the discharge will be prohibited without prejudice.

WATER RECLAMATION AND REUSE

Water reclamation is a process consisting of the following elements:

- Treatment of wastewater to a level of quality suitable for reuse;
- Transportation of reclaimed water to reuse areas; and
- Application of reclaimed water to an actual use.

Reclaimed water use typically falls into the following seven broad categories:

- Agricultural irrigation;

- Landscape irrigation (including highway landscape and golf courses);
- Impoundments for landscape, recreational or wildlife uses, wetland and wildlife enhancement;
- Industrial and Construction processes (e.g., cooling water, process water, washdown water or for dust control);
- Ground water recharge.
- Flushing of toilet and urinals in non-residential buildings; and
- Stream enhancement.

The State of California has a strong interest in promoting the conservation and efficient use of water through water reclamation. The California Constitution, Article X, section 2 provides that:

"...Water resources of the state be put to beneficial use to the fullest extent of which they are capable, and that waste or unreasonable use of water be prevented, and that conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare..."

The State interest in the conservation and efficient use of its waters is further emphasized by Water Code section 13510 which deals specifically with water reclamation. Section 13510 provides that:

"It is hereby declared that the people of the state have a primary interest in the development of facilities to reclaim water containing waste to supplement existing surface water and underground water supplies and to assist in meeting the future water requirements of the state."

In addition, Water Code section 13241 provides that the Regional Board consider the need to develop

and use reclaimed water when establishing water quality objectives.

The State Board adopted the "Policy with Respect to Water Reclamation In California" and the related "Action Plan for Water Reclamation in California" in 1977 (State Board Resolution No. 77-1). The policy directs the State Board and Regional Boards to encourage reclamation and reuse of water, and to promote water reclamation projects which preserve, restore, or enhance instream beneficial uses. The policy also states that the State and Regional Boards recognize the need to protect public health and the environment in the implementation of reclamation projects.

The Porter-Cologne Water Quality Control Act also requires the State ~~DHS-Board DDW~~ to establish statewide reclamation criteria (see Table 4-5) for each type of reclaimed water use to protect public health. Any person proposing to discharge reclaimed water must file a report of waste discharge containing appropriate information related to the discharge with the Regional Board. The Regional Board, after consultation with ~~DHSState Board DDW~~, may adopt waste discharge requirements for the reclaimed water discharge.

When reviewing potential reclamation projects, the Regional Board must also consider potential impacts from reclamation on ground and surface water quality. It is common for the use of reclaimed water to cause an increase in total dissolved solids concentration in the receiving ground waters due to the effects of evapotranspiration. A variety of techniques can be employed to protect the beneficial uses of the receiving waters. Where well controlled irrigation is practiced, nitrate problems in the dry season will be controlled. Vegetative uptake will utilize soluble nitrates which could otherwise migrate into ground water. Demineralization techniques or source control of total dissolved solids may be necessary in some inland areas where ground waters have been or may be degraded. Presence of excessive salts, boron, or sodium could be the basis for rejection of proposals to irrigate cropland with effluent.

Table 4 - 54. Permitted Uses and California Title 22 Health Requirements for Reclaimed Water.

Permitted Use of Reclaimed Water	Summary of Title 22 (sections 60303 et. seq.) Health Requirements
Spray irrigation of food crops	Reclaimed water used for spray irrigation of food crops shall be at all times adequately disinfected, oxidized, coagulated, clarified, filtered wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process, the median number of coliform organisms does not exceed 23 per 100 milliliters (ml) in more than one sample within any 30-day period. The median value shall be determined from the bacteriological results of the last 7-days for which analyses have been completed.
Surface irrigation of food crops	<p>Reclaimed water used for surface irrigation of food crops shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process, the median number of coliform organisms does not exceed 2.2 per 100 ml as determined from the bacteriological results of the last 7-days for which analyses have been completed.</p> <p>Orchards and vineyards may be surface irrigated with reclaimed water that has the quality at least equivalent to that of primary effluent provided that no fruit is harvested that has come in contact with the irrigating water or the ground. Exceptions to the quality requirements for reclaimed water used for irrigation of food crops may be considered by the State Department of Health on an individual basis where the reclaimed water is to be used to irrigate a food crop which must undergo extensive commercial, physical or chemical processing sufficient to destroy pathogenic agents before it is suitable for human consumption.</p>
Irrigation of fodder, fiber and seed crops	Reclaimed water used for the surface or spray irrigation of fodder, fiber, and seed crops shall have a level of quality no less than that of primary effluent.
Irrigation of pasture for milking animals	Reclaimed water used for the irrigation of pasture to which milking cows or goats have access shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 ml, as determined from the bacteriological results of the last 7-days for which analyses have been completed.
Landscape irrigation of golf courses, cemeteries, freeway landscapes and similar areas	Reclaimed water used for the irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure shall be at all times adequately disinfected oxidized wastewater. The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 23 per 100 ml as determined from the bacteriological results of the last 7-days for which analyses have been completed, and the number of coliform organisms does not exceed 240 per 100 ml in any two consecutive samples.
Permitted Use of Reclaimed Water	Summary of Title 22 (sections 60303 et. seq.) Health Requirements

Table 4 - 5-4 (continued). Permitted Uses and California Title 22 Health Requirements for Reclaimed Water.

Permitted Use of Reclaimed Water	Summary of Title 22 (sections 60303 et. seq.) Health Requirements
Irrigation of parks, playgrounds, schoolyards and similar areas	Reclaimed water used for irrigation of parks, playgrounds, schoolyards, and other areas where the public has similar access or exposure shall be at all times adequately disinfected, oxidized, coagulated, clarified, filtered wastewater or a wastewater treated by sequence of unit processes that will assure an equivalent degree of treatment and reliability. The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 2.2 per 100 ml, as determined from the bacteriological results of the last 7-days for which analyses have been completed.
Nonrestricted recreational impoundment (no limitations are imposed on body-contact sport activities)	Reclaimed water used as a source of supply in a nonrestricted recreational impoundment shall be at all times adequately disinfected, oxidized, coagulated, clarified, filtered wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process, the median number of coliform organisms in the effluent does not exceed 23 per 100 ml in more than one sample within any 30 day period. The median value shall be determined from the bacteriological results of the last 7-days for which analyses have been completed.
Restricted recreation impoundment (recreation is limited to fishing, boating, and other non-body-contact water recreation activities)	Reclaimed water used as a source of supply in a restricted recreational impoundment shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 ml, as determined from the bacteriological results of the last 7-days for which analyses have been completed.
Landscape impoundment (aesthetic enjoyment or other function but no body-contact is allowed)	Reclaimed water used as a source of supply in a landscape impoundment shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 ml, as determined from the bacteriological results of the last 7-days for which analyses have been completed.
Ground water recharge of domestic water supply aquifers	Recharge water requirements are made on a case-by-case basis to ensure that the water is of such quality that fully protects public health at all times. Factors considered include treatment provided, effluent quality and quantity, spreading operations, soil characteristics, hydrogeology, residence time, receiving water quality and distance to withdrawal.
Other uses (toilet flush, industrial cooling water, process water, seawater intrusion barrier)	User must demonstrate that methods of treatment and reliability features will assure an equal degree of treatment and reliability.

WATER RECLAMATION PROJECTS IN THE SAN DIEGO REGION

The water supply in the San Diego Region is largely dependent upon water imported from northern California and the Colorado River. Future increases from these sources may be limited due to environmental concerns, contractual agreements, and over all capital costs. In light of the limited possibilities for future water sources, the need to develop water supply alternatives is important. For many water uses, reclaimed water is a viable alternative water supply.

The status of water reclamation projects in the San Diego Region during March 1993 is shown in Table 4-6. For each water reclamation agency and/or facility in the San Diego Region, the table shows the permitted flow in MGD, the average effluent flow (in MGD), the average effluent flow reused (in MGD), the annual volume reused in million of gallons (MG) and acre-feet (AC-FT), the treatment process and disposal method, the type of use for the reclaimed water, the reclaimed water user and the status of the project. In the San Diego Region, a total of about 175 MGD of reclaimed water flow is permitted. About 16 MGD is reused from an average effluent flow of about 79 MGD. The annual volume reused is about 5,859 MG (18,597 AC-FT).

REGIONAL BOARD ACTION PLAN ON WATER RECLAMATION

The Regional Board supports water reclamation and reuse to the maximum extent feasible to help meet the growing water needs of the Region. It has long been a policy of the Regional Board to encourage and promote water reclamation while taking into consideration the need to protect beneficial uses of surface and ground waters and protect the public health.

On March 24, 1986 the Regional Board adopted Resolution No. 86-06 which amended the Basin Plan to include an action plan for water reclamation. The policy described below updates and supercedes Resolution No. 86-06:

- (1) The Regional Board will consider special amendments to the Basin Plan to encourage water reclamation.
- (2) The Regional Board will consider comprehensive water quality monitoring programs for confirmation of original hydrogeological predictions, and an accurate

measure of adverse ground water quality effects. These monitoring programs will be considered where water reclamation is not expected to result in adverse ground water quality impacts, and where ground water quality impacts are very difficult to predict.

- (3) The Regional Board will consider projects involving stream and lagoon replenishment with reclaimed water where, as a minimum, a water quality management plan would be implemented and conformance with the Department of Health Services wastewater reclamation criteria for nonrestricted recreational use would be achieved.
- (4) The Regional Board will encourage use of ephemeral streams, that are not used for domestic water supply, for the conveyance of reclaimed water for beneficial uses during periods of need.
- (5) The Regional Board will consider the possibilities for the buyout of a beneficial use that is only minimally realized, and that if protected, would stand in the way of a water reclamation project.
- (6) The Regional Board will continue efforts to seek the most recent and accurate environmental and technical information for the purpose of reviewing Basin Plan standards pertaining to the discharge of reclaimed water.
- (7) The Regional Board will require all ocean and inland dischargers, having the potential to produce reclaimed water, to develop water reclamation plans.
- (8) The Regional Board will encourage economic incentives for using reclaimed water, such as rebates by the San Diego County Water Authority and the Metropolitan Water District of Southern California to water suppliers engaged in water reclamation.

Table 4-65. Water Reclamation Projects as of March 1993.

Name of Agency/ Facility	Hydro- logic	Permit Flow MGD	Average Effluent Flow		Annual Volume Reused		Treatment Process and Disposal	Type of Use	Reclaimed Water User	Status
	Unit		MGD	Reused MGD	MG	AC-FT				
ORANGE COUNTY										
Joplin Youth Center	1.20	0.0075	0.0067	0.0067	2.45	7.50	AS, PB	Landscape Irrigation, Ground Water Recharge		Operating
San Clemente, City of San Clemente WRP	1.20 1.30	7.00	3.996	0.610	222.65	683.28	AS, PB, CH, SF, OF	Golf Course Irrigation, Construction	Municipal GC, Arvida Co, Talega, Pacific GC	Operating
SOUTH ORANGE COUNTY RECLAMATION AUTHORITY SERVICE AREA										
El Toro WD	1.13	5.50	0.000	0.000	0.00	0.00	AS, OF	Landscape Irrigation		Proposed
Los Alisos WD	1.13	5.50	0.000	0.000	0.00	0.00	AS, OF	Landscape Irrigation		Proposed
Moulton Niguel WD Plant 3A STP	1.20	2.40	0.484	0.484	176.66	542.15	AS, CH	Golf Course & Landscape Irrigation	Mission Viejo Country Club	Operating
Laguna Niguel (AWMA/MNWD) Joint Regional WRF	1.13 1.14	12.00	5.191	0.278	100.67	308.93	AS, F, CL, OF	Landscape Irrigation	El Niguel Country Club	Operating
Santa Margarita WD Oso Creek STP	1.13 1.20	3.00	1.693	1.693	617.95	1896.39	AT, F, CH, Of	Landscape Irrigation	Oso Valley Asn. CALTRANS	Operating
Nichols Institute	1.20	0.04	0.032	0.025	9.13	28.00		Property landscaping	Nichols Inst.	Operating
Chiquita WRF	1.20 1.30	3.50	2.103	0.016	5.92	18.18	CH,F	Nursery, Construction, Dust Control	SeaTree Nursery Los Flores Dev. Desecha Landfill	Operating
South Coast County WD	1.12 1.13 1.14	2.61	0.738	0.738	269.19	826.10	AS, F, CH, OF	Irrigation of parks, greenbelt, golf course	AVCO Community De Ben Brown GC Orange County Parks	Operating
Trabuco Canyon WD Trabuco WRP	1.13 1.20	0.25	0.459	0.561	204.77	628.40	OD, F, CH, PB	Golf Course Irrigation	Dove Canyon GC	Operating
RIVERSIDE COUNTY										
Eastern Municipal WD Rancho Calif. STP	2.51	5.00	4.800	1.210	441.65	1355.4	AS, PB	Irrigation Sod Farm	Ralph Daily Sod Farm	Operating
Rancho California WD Joaquin Ranch STP	2.31	0.60	0.575	0.376	137.24	421.2	OD, F, CH, PB	Golf Course Irrigation	Bear Creek Golf Course	Operating
Santa Rosa SBR WRF	2.51	1.00	0.345	0.345	125.93	386.4	F, CH	Ground Water Recharge		Operating
<p>TREATMENT PROCESS: AQ=aquaculture, AS=activated sludge, CH=chlorination, EA=extended aeration, F=filtration, MS=microscreen, OD=oxidation ditch, OF=ocean outfall, OP=oxidation pond, PB=percolation pond or bed, PS=primary sedimentation, RBC=rotating biological contactor, RO=reverse osmosis, TF=trickling filter</p>										

Table 4-6-5 (continued). Water Reclamation Projects as of March 1993

Name of Agency/ Facility	Hydro- logic Unit	Permit Flow MGD	Average Effluent Flow		Annual Volume Reused		Treatment Process and Disposal	Type of Use	Reclaimed Water User	Status
			MGD	Reused MGD	MG	AC- FT				
SAN DIEGO COUNTY										
Buena Sanitation Dist. Shadow Ridge WRP	4.32	1.10	0.809	0.062	22.63	69.4	MS, RBC, F, RO, CH, OF	Irrigation	Shadow Ridge Golf Course	Operating
Encina	4.40	22.50	19.000	0.001	0.37	1.1	AS, CH, OP	Landscape Irrigation	Caltrans	Operating
Escondido WRP	4.52 5.21	5.00	0.003	0.003	1.10	3.4	AS, CH	Internal Use, Landscape Irrigation, Golf Course	Escondido San Marcos	Operating
Fairbanks Ranch WRP	5.12	0.28	0.180	0.180	65.70	201.6	EA, PB	Ground Water Recharge		Operating
Fallbrook WD Plants 1 & 2	2.13	3.10	1.720	0.160	58.40	179.2	PS, EA, CH, OF	Landscape Irrigation (I-5 Freeway)	Caltrans Nurseries	Operating
4-S Ranch 4-S Ranch WRP	9.31	0.60	0.062	0.038	13.69	42.0	CH	Compaction Irrigation	Construction Pasture	Operating
Leucadia Water Dist. F.R. Gafner WRF	4.51	0.75	0.000	0.000	0.00	0.0	TF, PS, CH, OF	Aviara and La Costa Country Club Irrigation	La Costa & Aviara Country Clubs	Operating
Oceanside, City of N. San Luis Rey STP	3.12	10.50	8.700	0.020	7.30	22.4	AS, CL, OF, PB	Golf Course Irrigation, Ground Water Recharge	Oceanside Golf Course	Operating
La Salina	4.10	0.50	0.000	0.000	0.00	0.00	EA, AS, CH	Landscape Irrigation	Oceanside	Operating
Otay Municipal WD Ralph W Chapman WRF	9.21	1.30	0.900	0.900	328.50	1008.1	EA, F, RO, CH, OF	Landscape Irrigation	Eastlake Development	Operating
Otay Estates Hidden Valley Estates	9.11	0.15	0.000	0.000	0.00	0.0	AS, CH	Landscape Irrigation		Operating
Padre Dam Municipal WD Water Reclamation PI	7.12	1.00	0.521	0.521	190.17	583.6	AS, PS, OP, CH, OF	Recreational Lakes & Park Irrigation	Santee Lakes	Operating
Pauma Valley	4.63	0.00	0.000	0.000	0.00	0.0	EA, CH	Ground Water Recharge		Proposed
Ramona Municipal WD Santa Maria WWTP	5.41	1.00	0.600	0.600	219.00	672.1	EA, PB	Irrigation, Pasture Ground Water Recharge	Ramona WD site	Operating
San Vicente STP	7.23	0.60	0.541	0.541	197.47	606.0	OD, CH, F, RO, PB	Avocado Grove Irrig. Ground Water Recharge	Solk Ranch	Operating
Rancho Santa Fe	4.61	0.45	0.220	0.220	80.30	246.4	AS, EA, CH, PB	Golf Course Irrigation	Rancho Santa Fe Golf Course	Operating
San Diego, County of Descanso STP	9.31	0.04	0.026	0.026	9.56	29.3	AS, PB	Landscape Irrigation	Descanso Facil.	Operating
Julian	7.43	0.04	0.035	0.035	12.78	39.20	OP	Irrigation (cattle feed)		Operating
Mount Woodson SD	5.11	0.08	0.000	0.000	0.00	0.0	CH	Irrigation	Golf Course	Operating
Rancho Cielo SD	5.11	0.20	0.000	0.000	0.00	0.0		Landscape Irrigation		Operating
Whispering Palms CSD	5.11	0.40	0.175	0.175	63.88	196.0	EA, CH, PB	Ground Water Recharge	Del Rayo Prop.	Operating
San Diego, City of Water Utilities Dept San Pasqual WAP STP	5.31	1.00	0.0190	0.0190	6.94	21.3	AS, CH, PB	Irrigation & Animal Stock Watering	Wild Animal Park	Operating

TREATMENT PROCESS: AQ=aquaculture, AS=activated sludge, CH=chlorination, EA=extended aeration, F=filtration, MS=microscreen, OD=oxidation ditch, OF=ocean outfall, OP=oxidation pond, PB=percolation pond or bed, PS=primary sedimentation, RBC=rotating biological contactor, RO=reverse osmosis, TF=trickling filter

Table 4-5 (continued). Water Reclamation Projects as of March 1993

Name of Agency/ Facility	Hydro- logic	Permit Flow MGD	Average Effluent Flow		Annual Volume Reused		Treatment Process and Disposal	Type of Use	Reclaimed Water User	Status
	Unit		MGD	Reused MGD	MG	AC- FT				
SAN DIEGO COUNTY CONTINUED										
Mission Valley Pilot Aquaculture Project	7.11	1.00	0.026	0.025	9.13	28.0	AQ, QF	Freeway Landscaping (I-15 & I-8)	Caltrans	Operating
North City	6.10	30.00	0.000	0.000	0.00	0.0		Landscape Irrigation	Caltrans	Operating
San Elijo JPA	4.51	3.68	0.000	0.000	0.00	0.0	CH, AS	Landscape Irrigation	Encinitas, Del Mar	Operating
US Marine Corps Base, Camp Pendleton Plant No. 1	2.13	1.50	0.429	0.687	247.54	759.7	TF, CH, PB	Ground Water Recharge	Camp Pendleton	Operating
Plant No. 2	2.11	0.92	0.309	0.694	253.13	776.8	TF, CH, PB	Golf Course Irrigation	Camp Pendleton	Operating
Plant No. 3	2.12	1.10	0.492	0.753	274.66	842.9	TF, CH, PB	Ground Water Recharge	Camp Pendleton	Operating
Plant No. 8	1.51	0.59	0.074	0.296	107.86	331.0	TF, CH, PB	Ground Water Recharge	Camp Pendleton	Operating
Plant No. 9	1.52	1.10	0.142	0.357	130.34	400.0	TF, CH, PB	Ground Water Recharge	Camp Pendleton	Operating
Plant No. 10	1.51	0.85	0.325	0.378	138.08	423.7	TF, CH, PB	Ground Water Recharge	Camp Pendleton	Operating
Plant No. 11	1.51	0.85	0.836	1.088	397.01	1218.4	TF, CH, PB	Ground Water Recharge	Camp Pendleton	Operating
Plant No.12	1.40	0.85	0.142	0.420	153.37	470.7	TF, CH, PB	Ground Water Recharge	Camp Pendleton	Operating
Plant No. 13	2.11	2.50	1.397	1.225	447.16	1372.3	TF, CH, PB	Ground Water Recharge	Camp Pendleton	Operating
Plant No. 16	1.53	0.03	0.008	0.008	2.74	8.4	EA, PB	Ground Water Recharge	Camp Pendleton	Operating
Vallecitos WD Meadowlark WRP	4.51	2.00	0.995	0.525	191.63	588.1	MS, RBC, F, CH, OF	Golf Course Irrigation	La Costa GC Carlsbad City	Operating
Valley Center MWD Lower Moosa Canyon WRP	3.13	0.50	0.250	0.250	91.25	280.0	AS, CH, PB	Golf Course Irrigation Ground Water Recharge	Circle R GC Valley Center MWD	Operating
TREATMENT PROCESS: AQ=aquaculture, AS=activated sludge, CH=chlorination, EA=extended aeration, F=filtration, MS=microscreen, OD=oxidation ditch, OF=ocean outfall, OP=oxidation pond, PB=percolation pond or bed, PS=primary sedimentation, RBC=rotating biological contactor, RO=reverse osmosis, TF=trickling filter										

Summary of San Diego Region Water Reclamation Projects as of March 1993

COUNTY SUBTOTALS	PERMIT FLOW	AVERAGE EFFLUENT FLOW		ANNUAL VOLUME REUSED	
	(MGD)	GENERATED (MGD)	REUSED (MGD)	(MG)	(AC-FT)
Orange	41.81	14.70	4.41	1,609.37	4,938.94
Riverside	35.20	25.532	1.997	728.91	2,236.9
San Diego	98.05	38.94	10.20	3,721.65	11,421.24
REGION TOTALS	175.06	79.171	16.603	6,059.9	18,597

- (9) The Regional Board will seek funding for studies to evaluate the potential of water reclamation in various areas of the Region including streams and coastal lagoons.
- (10) The Regional Board will take appropriate actions, recommend legislation, and recommend actions by other planning agencies (county, federal, etc.) in the areas of (1) planning, (2) project funding, (3) regulation and enforcement, (4) research and demonstration, and (5) public involvement and information.
- (11) The Regional Board will encourage and support measures which conserve the water resources of the San Diego Region.
- (12) The Regional Board will encourage other agencies to assist in implementing this policy.
- (13) As mitigation against potential nuisance odors and health hazards resulting from reclaimed water use, the Regional Board will continue to adopt and enforce waste discharge requirements containing prohibitions against nuisance odors and implementing the State [Board DDWDHS](#) Wastewater Reclamation Criteria.
- (14) The Regional Board will prepare Basin Plan amendments necessary for implementation of water reclamation projects in compliance with state policy for water quality control and, to the extent surface waters will be affected, with Environmental Protection Agency water quality standards regulations. Site specific environmental impacts will be evaluated in conformance with the California Environmental Quality Act (CEQA) for specific Basin Plan amendments.

FACTORING WATER SUPPLY CONSIDERATIONS INTO THE REGIONAL BOARD REGULATION OF WATER RECLAMATION PROJECTS

Conventional reclamation facilities are not designed to reduce mineral constituents. Consequently, the mineral effluent quality is dependent on the composition of the water supply plus the mineral pickup during its use. Historically, water supply TDS concentrations have varied significantly. For example, concentrations of TDS of the blended water stored in Lake Skinner ranged from below

400 milligrams per liter (mg/l) to above 700 mg/l between 1985 and 1995.

Residential wastewater discharges will typically be 250 to 300 mg/l higher in TDS than their water supply source. Self-regenerating water softeners, brine from industrial dischargers, and ground water infiltration can further increase TDS concentrations in wastewater effluent. Many wastewater management agencies within the region are implementing programs to minimize the incremental pickup of minerals from these sources. These programs have had varying degrees of success.

Effective water conservation measures that are being implemented within the region may result in higher mineral and other constituent concentrations in wastewater effluent. Although the volume of wastewater is reduced by water conservation, the mineral and organic loading from its use remains nearly constant. As a result, the strength of the wastewater influent becomes stronger. In some cases, the characteristics of the wastewater influent may range briefly above the design parameters of the treatment plant.

In recognition of the variables in wastewater quality that are beyond the control of the discharger, the Regional Board authorizes the Executive Officer to suspend formal enforcement action, when a discharger submits an initial technical report with subsequent quarterly updates, that demonstrate to the satisfaction of the Executive Officer, compliance with the following conditions:

- 1. The discharge is not subject to regulation by means of a NPDES Permit; and
- 2. The enforcement action is only for violations of discharge specifications for mineral constituents, total suspended solids (TSS), biological oxygen demand (BOD) or carbonaceous biological oxygen demand (CBOD); and
- 3. The effluent violations are due solely to changes in the quality of the imported water supply and/or to water conservation measures being implemented within the service area tributary to the treatment plant; and
- 4. The discharge does not result in a mass loading of TSS, BOD and CBOD that exceeds the loading prior to implementation of water conservation measures; and
- 5. The discharge will not cause Basin Plan water quality objectives to be exceeded, in the long term; and

6. The discharge will not cause a violation of any applicable section from Title 22 of the CCR or any requirement specified by either the State ~~DHS-Board DDW~~ or the appropriate county health officer for the protection of public health; and
7. The discharge does not contain a concentration of TDS exceeding 1,500 mg/l, or the concentration in the water supply plus 500 mg/l, whichever is less, with comparable adjustments for other mineral constituents; and
8. The discharger implements a program to identify major sources of the mineral constituents of concern in the discharge, including but not limited to water softener regeneration brine; and to determine the average contribution of each major source and the best available options for reducing levels in the discharge; and to identify any negative effects on the potential for water reclamation caused by the failure to control the constituents of concern in the discharge. The program should include a time schedule to reduce mineral constituents in the discharge as necessary to assure that the potential for water reclamation will be realized to the maximum extent practicable.

threat of eutrophication as a result of the addition of nitrogen and/or phosphorus is reduced as a consequence of one or more of the following factors:

- Waters of the coastal lagoon are highly laden with natural silts or colors which reduce the penetration of sunlight needed for photosynthesis;
- The coastal lagoon is characterized by morphometric features of steep banks, great depths, and substantial flows which have contributed to a history of no plant problems;
- The coastal lagoon is managed primarily for waterfowl or other wildlife;
- An identified element other than nitrogen or phosphorus is limiting to plant growth in the coastal lagoon, and the level and nature of the limiting element would not be expected to increase to an extent that would influence eutrophication; or
- Control of nitrogen and/or phosphorus in the coastal lagoon cannot be sufficiently effective under present technology to make phosphorus or nitrogen the limiting nutrient.

RECLAIMED WATER CONFORMANCE WITH WATER QUALITY OBJECTIVES

The Regional Board has established various policies concerning the compliance of reclaimed water discharges with applicable Basin Plan water quality objectives. These policies are described below:

DISCHARGES TO COASTAL LAGOONS FROM PILOT WATER RECLAMATION PROJECTS

The Regional Board may grant an exception to the "Biostimulatory Substances" water quality objective described in Chapter 3 to provide for discharges to coastal lagoons from pilot water reclamation projects. The project proponent must demonstrate that the pilot water reclamation project is consistent with the conditions described in the Principles of the State Water Resources Control Board's Policy and Action Plan for Water Reclamation in California. The Policy and Action Plan for Water Reclamation in California was adopted by the State Board in January 1977 and is summarized below. In addition, the proponent must demonstrate that the

The Principles of the Policy and Action Plan for Water Reclamation in California provide, in part, that water reclamation projects shall be encouraged which do not adversely impact vested water rights or unreasonably impair instream beneficial uses or place an unreasonable burden on present water supply systems, and which meet the following additional conditions:

- Beneficial use will be made of wastewaters that would otherwise be discharged to marine or brackish receiving waters or evaporation ponds;
- Reclaimed water will replace or supplement the use of fresh water or better quality water; or
- Reclaimed water will be used to preserve, restore, or enhance instream beneficial uses which include, but are not limited to, fish, wildlife, recreation, and aesthetics associated with any surface water or wetlands.

Exceptions to the numerical water quality objectives will be made only when a pilot reclamation project meets the following criteria:

- Need for the reclaimed water is demonstrated;

- Alternative disposal facilities are available in the event discharge to a coastal lagoon proves unfeasible;
- Conformance with the State Board's Water Quality Control Policy for the Enclosed Bays and Estuaries of California is demonstrated;
- Data will be generated that will be useful and timely for Regional Board review of water quality objectives for nutrients; and
- The project will include a lagoon management plan addressing the proposed methods of identifying and eliminating any pollution, contamination, or nuisance problems resulting from the proposed discharge and clearly identifying management responsibilities and capabilities.

DISCHARGES TO INLAND SURFACE WATERS

Regional Board Resolutions Nos. 90-53 and 91-23 established an alternate method of conformance with the biostimulatory substances water quality objectives for portions of the San Diego River and Santa Margarita River. The Policy presented below supersedes Resolutions Nos. 90-53 and 91-23 and is applicable to all inland surface waters of the San Diego Region at a point downstream of lakes or reservoirs used for municipal water supply.

The Regional Board has developed an alternate method of showing compliance with the biostimulatory substances water quality objective contained in Chapter 3 to:

- Promote water reclamation;
- Enhance opportunities for reclaimed water discharges to inland surface waters; and
- Protect and enhance existing inland surface water beneficial uses through the greater use of reclaimed water.

The alternate method of compliance described below is applicable to reclaimed water discharges to inland surface waters at a point downstream of lakes or reservoirs used for municipal water supply. The alternate method of compliance is meant to encourage reclaimed water discharges into inland surface waters without degradation of the ambient water quality or adverse effects on beneficial uses.

Compliance Methods

The Regional Board will establish appropriate effluent limitations for nitrogen and phosphorus in waste discharge requirements for discharges of reclaimed water to surface waters using one of the following methodologies:

- The Regional Board may use the goal for phosphorus concentration in flowing water contained in the Biostimulatory Substances objective as guidance in establishing appropriate effluent limitations; or
- Alternatively, the Regional Board may determine compliance with the narrative objective based upon the following four factors:
 - ✓ measurement of ambient concentrations of nitrogen and phosphorus;
 - ✓ the dissolved oxygen requirements of downstream beneficial uses;
 - ✓ use of best available technology (BAT) economically feasible for the removal of nutrients; and
 - ✓ the development and implementation of a watercourse monitoring and management plan.

Best available technology for the removal of nutrients includes biological and chemical removal. The extent to which the Regional Board may require additional removal of nutrients through chemical addition processes will be based upon an evaluation of the economic feasibility of this additional treatment in concert with an evaluation of the effectiveness of the watercourse monitoring management plan.

The watercourse monitoring and management plan shall include:

- A comprehensive program for chemical monitoring in receiving waters and effluent that will generate adequate data on ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, organic nitrogen, total phosphate, ortho phosphate, dissolved oxygen (including vertical and diurnal dissolved oxygen profiles), pH, turbidity, biochemical oxygen demand (BOD) and other appropriate constituents and properties which may contribute to, or result from, nutrient related problems and impact beneficial uses.

- A comprehensive program for physical and biological monitoring in the receiving waters that will generate adequate data on chlorophyll 'a', corrected chlorophyll 'a', pheophyton 'a'; temperature (including diurnal and vertical temperature profiles); acute and chronic toxicity; the diversity and numbers of microinvertebrates, macroinvertebrates, and fish; the dynamics of the aquatic flora (macroalgae, phytoplankton, and emergent vegetation) and the related dissolved oxygen regime; substrate composition; frequency of nuisance conditions; flow rate; and other appropriate constituents and properties which may contribute to nutrient related problems and impact beneficial uses.
- A comprehensive program for physical and biological monitoring of the effluent that will generate adequate data on flow, temperature, chronic and acute toxicity, and other appropriate constituents which may contribute to nutrient related problems and impact beneficial uses.
- A procedure for evaluating the data collected under items (1), (2), and (3) above and determining the potential for nutrient related problems that may impact beneficial uses.
- Development and implementation of preventive and corrective actions that will ensure that a discharge containing nutrients will not adversely impact beneficial uses. These preventative and corrective actions may include, but are not limited to, the following:
 - ✓ Achievement of more stringent effluent limits for nutrient constituents discharged to the watercourse, through additional chemical treatment methods at the treatment facility, to further reduce nutrient loading to the river,
 - ✓ Maintenance of minimum reclaimed water flows discharged to the watercourse to prevent stagnant areas subject to nutrient related problems and to maintain the aquatic and riparian habitat beneficial uses that have been enhanced and/or created by such a discharge,
 - ✓ Effective measures for the instream chemical treatment of surface waters to prevent nutrient and stagnant water related nuisance problems that can adversely impact aquatic habitat beneficial uses, where this instream treatment will not adversely impact beneficial uses,

- ✓ Effective measures for the physical management of the watercourse channel and vegetation,
- ✓ Effective source control measures to reduce the amount of nutrient constituents in the reclaimed water, and
- ✓ Other measures deemed appropriate and necessary by the Regional Board to ensure compliance with the Basin Plan narrative objective for nutrients and for the protection of beneficial uses.

Additional Mitigation

As mitigation against adverse impacts of nuisance odors and health hazards resulting from use of reclaimed water, the Regional Board will continue to adopt and enforce waste discharge requirements containing prohibitions against creation of nuisance odors and implementing the State [Board DDWDHS's](#) Water Reclamation Criteria.

Additionally, as mitigation measures against degradation of ground and surface water quality resulting from an inland reclaimed water discharge, the Regional Board will require well head treatment or treatment at the point of use, or other appropriate measures acceptable to the Board, adequate to maintain the existing quality of ground and surface waters and the beneficial uses for all ground and surface waters adversely impacted by a discharge. The Regional Board will require monitoring of all ground water wells and legal direct diversions of surface water prior to permitting a discharge in order to establish the baseline quality that must be maintained.

As mitigation against any adverse effects to instream or downstream surface or ground water quality and the environment resulting from the discharge of reclaimed water, the Regional Board will require the discharger to establish and implement a comprehensive river monitoring and management program. The implementation of the watercourse monitoring and management plan will often require close coordination between many different public and private entities. The Regional Board shall recognize an agency to implement the watercourse monitoring and management plan and such recognition shall be made part of the provisions of appropriate waste discharge requirements for the discharge.

The watercourse monitoring and management plan, and all the associated requirements, shall apply to all downstream waters, including rivers, lagoons, estuaries, and bays, which may be impacted by the

reclaimed water discharge. The Regional Board will regulate the volume of reclaimed water discharged into all inland surface waters to those levels which do not significantly and adversely alter the salinity regimes of downstream lagoons, estuaries, or bays. This regulation of flows will include a prohibition of fresh water flows that could result in the conversion of a lagoon, estuary, or bay from a saline environment to a fresh water environment. Salt marsh habitats are to be considered an integral part of the lagoon, estuary, or bay to which they are associated, and therefore shall be fully protected from conversion.

Implementation of Ground Water Quality Objectives for Reclaimed Water Discharges

In order to facilitate water reclamation in the Region, the Regional Board, adopted Resolution No. 90-61 on November 5, 1990. Resolution No. 90-61 established a methodology for determining reclaimed water effluent limits. The policy described below updates and supersedes Resolution No. 90-61.

The Regional Board shall regulate discharges of reclaimed water by establishing effluent limitations designed to protect beneficial uses and ensure compliance with State Board Resolution No. 68-16. Use of adequately treated reclaimed water for irrigation or ground water recharge shall be encouraged in basins where reuse is clearly beneficial. Regulation of discharges of reclaimed water, where the reclaimed water displaces the use of imported water, or ground water having a quality exceeding the ground water quality objective, shall be in the following manner:

- For discharges upgradient of municipal water supply reservoirs the Regional Board shall adopt numerical effluent limitations for constituents at levels no lower than the quality of the basin's water supply but no higher than the Basin Plan ground water quality objective.

In ground water basins not upgradient of municipal water supply reservoirs the Regional Board shall adopt numerical effluent limitations for constituents at levels no lower than the quality of the basin's water supply concentration plus an incremental increase equal to the typical incremental increase added to the water supply as a result of domestic use. The effluent limitations shall be no higher than the Basin Plan ground water quality objective.

- For discharges where the discharger has demonstrated sufficient assimilative capacity exists and ground water quality objectives will not be exceeded, the Regional Board may

consider adoption of numerical effluent limitations for constituents based on the discharge quality and assimilative capacity analysis results.

- The Regional Board shall also require the implementation of effective salinity source control measures to ensure a reclaimed water quality that is suitable for long-term agricultural and landscape irrigation.

WATER RECLAMATION UNDER RESOLUTION NO. 81-16

On March 23, 1981 the Regional Board adopted Resolution No. 81-16 which modified the water quality standards by relaxing the ground water objectives and modifying the beneficial use designations for portions of the Aliso Hydrologic Subarea (HSA) 1.13, Carlsbad HSA 4.21, Agua Hedionda HSA 4.31, Batiquitos HSA 4.51, and Telegraph HSA 9.11. These areas are described in Table 3-3. The terms and conditions of Resolution No. 81-16 are incorporated in this Basin Plan; accordingly Resolution No. 81-16 is superseded. The use of reclaimed water in these areas is subject to the following provisions:

- Notwithstanding the water quality objectives, the Regional Board will regulate waste discharges in the affected portions of Hydrologic Subareas 4.21 and 4.31 in a manner that will protect the waters produced by the existing operating wells. A presently existing ground water use will be considered terminated when the well has been abandoned pursuant to County of San Diego Water Well Standards.
- In applying the modified standards, the Regional Board will condition waste discharge requirements for discharges of domestic and municipal wastewater to require that the wastewater be reclaimed and reused in a manner that will displace the need for approximately equal volumes of imported potable water.

WATER RECLAMATION AS AN ALTERNATIVE TO OCEAN DISPOSAL

The State Board in Order No. WQ 84-7 concluded that water reclamation should be carefully considered by persons proposing to discharge substantial quantities of once-used wastewater to the ocean particularly in a water short area where water is imported. Order No. WQ 84-7 directs the regional boards to require persons applying for permits to discharge once-used wastewater to the

ocean in water-short areas to justify as part of each report of waste discharge why the wastewater is not being reclaimed.

The San Diego Region water supply is primarily imported water and the Region is clearly a water short area. Pursuant to State Board Order No. 84-7, the Regional Board will require persons proposing a discharge of once-used wastewater into the ocean to:

- Carefully analyze as an alternative, or partial alternative, the feasibility of reclaiming the wastewater for a beneficial use in lieu of ocean disposal.
- Submit, with the report of waste discharge in application for waste discharge requirements, sufficient information to justify why any wastewater proposed for discharge to the ocean after a single use is not being reclaimed for a beneficial use.

Reports of waste discharge which do not contain the water reclamation feasibility analysis described above, to the satisfaction of the Regional Board Executive Officer, will be considered incomplete and the Regional Board will not issue waste discharge requirements for the proposed discharge.

RECLAIMED WATER STORAGE REQUIREMENTS

During the winter season, wet weather, and other periods when there is little or no demand, treatment plants continue to operate at normal flows and the excess treated effluent must either be: (1) discharged to storage facilities until such time as the irrigation demand requires the use of the stored water; (2) discharged through a fail-safe land outfall connection to an ocean outfall under the terms of an NPDES permit; or (3) discharged to inland surface waters for ground water recharge and/or stream replenishment under the terms of an NPDES permit. Theoretical water balance calculations for disposal of reclaimed water at golf courses and other reuse sites in the Region indicate that storage facilities should be sized for 84-days of storage. (1975 Comprehensive Water Quality Control Plan Report, Page II-16-32). In situations where reclaimed water storage ponds are necessary, the Regional Board will require reclaimed water producers to:

- Provide 84-days of storage capacity; or

Provide storage capacity based upon water balance calculation procedures such as described in:

- USEPA. 1981. Process Design Manual for Land Treatment of Municipal Wastewater. Center for Environmental Research Information. Cincinnati, OH. EPA 625/1-81-013 (COE EM1110-1-501).

INDUSTRIAL WASTE

PRETREATMENT PROGRAM FOR INDUSTRIES

It is generally recognized that the discharge of industrial pollutants can be controlled most economically at their source. This is particularly true for industries discharging waste to municipal wastewater treatment plants (commonly called "POTWs" for "publicly owned treatment works"). On that basis USEPA has developed pretreatment requirements (40 CFR 403) for many industries and has developed minimum standards for POTW pretreatment programs. A POTW is required to implement a pretreatment program as a condition of its NPDES permit if its design flow is greater than five MGD or there are significant industrial users discharging to the POTW. POTWs with design flows less than 5 MGD may also be required to establish a pretreatment program if nondomestic waste causes upsets, sludge contamination, or violations of NPDES permit conditions, or if industrial users are subject to national pretreatment standards.

The goal of the USEPA's National Pretreatment Program is to protect municipal treatment plants and the environment from the adverse impact that may occur when hazardous or toxic wastes are discharged into a sewer system. This protection is achieved mainly by regulating nondomestic users of POTWs that discharge toxic wastes or unusually strong conventional wastes. Local pretreatment programs are required to fulfill the following objectives:

- Prevent the introduction of pollutants into POTWs which will interfere with the operation of a POTW, including interference with its use or disposal of municipal sludge;
- Prevent the introduction of pollutants into POTWs which will pass through the treatment works or otherwise be incompatible with such works;
- Improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges; and

- Prevent exposure of POTW personnel from chemical hazards and poisonous gases.

The general pretreatment regulations establish industrial pretreatment standards to control industrial pollutant discharges into wastewater collection systems and treatment plants. The discharge standards apply to all industrial and commercial establishments discharging waste to wastewater collection systems tributary to POTWs. The standards prohibit the discharge of pollutants that may damage the POTW's facilities, disrupt operations or expose workers to hazards. Categorical pretreatment standards are numerical effluent limits which apply to industrial and commercial discharges in 25 specific industrial categories determined to be the most significant sources of toxic pollutants. All firms regulated by a particular pretreatment standard are required to comply with these standards. One hundred and twenty-six toxic pollutants are regulated in the 25 categorical standards. Prohibited discharges into POTW plants, besides toxic substances, include:

- Substances that create a fire or explosion hazard in the plant or sewer system;
- Discharges that are corrosive (have a pH < 5.0);
- Discharges that obstruct flow in the sewer system or interfere with plant operation;
- Discharges that upset the treatment process or cause a violation of the POTW's permit;
- Discharges that increase the temperature of the wastewater entering the treatment plant to above 104° F (40° C);
- Oil based products in amounts that will cause interference or pass through;
- Substances which cause toxic gases, vapors or fumes in a quantity which may cause worker health or safety problem(s); and
- Trucked or hauled pollutants, except at discharge points designated by the POTW.

Municipalities are required to use and enforce these standards as well as locally developed standards, to control nondomestic users discharging to their wastewater collection and treatment systems. The federal regulations require all states that administer NPDES programs to POTW operators to develop local pretreatment programs. The California pretreatment program includes the same general elements which parallel the pretreatment

compliance schedule activities specified in most POTWs' NPDES permits. Pretreatment programs are required to contain the following elements:

- Identification and evaluation of the nondomestic discharges to a treatment system.
- The POTW must operate under a legal authority that will enable it to apply and enforce the requirements of pretreatment regulations and other state and local rules needed to control nondomestic discharges.
- The POTW must establish local industrial effluent limits to protect treatment plant operation, receiving water quality and sludge quality.
- The POTW must develop procedures for monitoring its industrial users to determine compliance and non-compliance.
- The POTW must develop administrative procedures to implement its pretreatment program.
- The POTW must have sufficient resources (funds, equipment, personnel) to operate an effective and ongoing program.

STEAM ELECTRIC POWER PLANTS

The Region has five steam electric power plants, four are operated by San Diego Gas and Electric Company (SDG&E) and one by Southern California Edison (SCE). Each of the SDG&E plants has one cooling water intake and one outfall structure. A separate NPDES permit has been issued for each SDG&E plant. The SCE plant, called the San Onofre Nuclear Generation Station (SONGS) has three power generating units, each with its own cooling water intake and outfall structure, and a separate NPDES permit has been issued for each of the three power generating units. All of these plants obtain cooling water from the ocean or San Diego Bay.

The SDG&E power plants are conventional fossil-fuel burning electrical generating facilities. The SDG&E plants are located in San Diego County, three of them are adjacent to San Diego Bay and one is adjacent to the Pacific Ocean. The San Onofre Nuclear Generating Station is located adjacent to the Pacific Ocean in northern San Diego County and consists of three nuclear fueled electrical generating units.

The cooling water discharges from the power plants are regulated under the provisions of the Thermal Plan, which incorporates provisions of Section 316(a) of the Clean Water Act. All of the plants employ a once-through cooling water system. Seawater is pumped into the facility and used to cool the condensers, which results in an increase in the cooling water temperature of approximately 20 degrees Fahrenheit above the ambient seawater temperature. The cooling water is then discharged to marine waters, where the heat accumulated in the cooling water is dissipated.

The power plant NPDES permits establish effluent limitations for the discharge of cooling water and other wastes generated at the facilities. The effluent limitations are based upon applicable state water quality objectives and USEPA effluent guidelines and standards for steam electric power plants contained in 40 CFR 423. Each facility has a unique arrangement and thus a unique set of waste streams. Other wastewater discharges regulated by power plant NPDES permits, in addition to the cooling water discharge, include boiler blowdown, evaporator blowdown, floor drain discharges, chemical cleaning wastes and boiler wash.

Each power plant is required under the terms and conditions of its NPDES permit to comply with federal Clean Water Act sections 316(a) and (b). Section 316(a) addresses the control of the thermal component of a discharge and its effects on fish population and wildlife. Section 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best available technology for minimizing adverse impacts to the environment.

SUBSURFACE DISPOSAL FROM CAMPGROUNDS AND RECREATIONAL VEHICLE PARKS

Since the early 1970's, the Regional Board has been issuing waste discharge requirements to campgrounds and/or recreational vehicle (RV) parks that discharge wastewater to subsurface disposal systems. Chemical preservatives in RV holding tanks increase the threat to ground water quality from these facilities. At one time, the WDRs specified that wastes other than domestic sewage shall be excluded from the discharge. Consequently, the requirements prohibited the discharge of water softener regeneration brine and RV holding tank waste to the septic tank and leach line systems and required the discharger to provide impervious storage tanks for RV holding tank wastes. In order to comply with the WDRs adopted by the Regional Board prior to 1978, the RV

campground managers required RVs to empty their holding tank wastes into the campground's dump station if the RV would be provided with sewer hookups. WDRs adopted after 1978 do not require the installation of impervious holding tanks at RV parks nor are RVs required to dispose of RV holding tank wastes to impervious tanks. Currently, most campgrounds and/or RV parks in the Region do not have impervious storage tanks for RV holding tank wastes.

In 1978, the Regional Board adopted Resolution No. 78-24, suspending all ground water monitoring requirements at the campgrounds until such time as a study by the State Board on RV waste disposal was completed and reviewed by the Regional Board staff. In June 1980, the Sanitary Engineering Research Laboratory at University of California, Berkeley published a report for the State Board entitled, "*Recreational Vehicle Waste Disposal in Roadside Rest Septic Tank Systems*". This report however, did not address the requirements for ground water monitoring.

~~The Regional Board "Waiver Policy" described earlier in this Chapter provides for waivers of WDR adoption for campgrounds where no facilities are provided for recreational vehicles to connect to the campground sewerage system. Consequently, the Regional Board has deferred to the county health departments regulation of campgrounds and/or RV parks that do not provide sewer connections for recreational vehicles. The policy also waives WDRs for residential, commercial, industrial, and individual subsurface disposal systems subject to the conditions set forth in the Guidelines for New Community and Individual Sewerage Facilities described earlier in this Chapter.~~

A common problem with community systems is that individual property owners and homeowners associations often deny responsibility for system failure and necessary repairs. Additional problems result when private entities operate community systems and do not have sufficient funds available to correct problems. Consequently, prior to approval of projects proposing community subsurface disposal systems, the Regional Board requires as part of the Report of Waste Discharge, documentation from the proponent that demonstrates that adequate funding is available to operate and maintain the disposal systems.

VESSELS (RECREATIONAL, COMMERCIAL, AND NAVAL) AND MARINAS

Vessels of all types and sizes including recreational, commercial, and Naval craft, and the marinas (or other facilities) in which they berth can have serious impacts on water quality. This section will describe the most important waste categories, pollutants, and other water quality problems associated with vessels and marinas. A description of BMPs and applicable regulations is also included. Although presented below, it should be noted that vessels and marinas are typically considered a nonpoint source category.



San Diego Bay sailboat

VESSELS AND MARINAS IN THE SAN DIEGO REGION

There are approximately 8,400 boat slips in San Diego Bay, 2,400 in Mission Bay, over 1,000 in Oceanside Harbor, and over 1,500 in Dana Point Harbor. In

addition to boats with assigned slips, there are several hundred additional boats moored at a variety of "free" anchorages. In San Diego Bay, the San Diego Unified Port District has organized two of its free anchorages into formal anchorages which have shoreside showers, rest rooms, and docking facilities. Boat owners are required to pay fees for these services. In 1986, the San Diego Unified Port District was granted permission by the Coast Guard to establish additional formal anchorages in San Diego Bay. Because of the reluctance of some boat owners to pay fees for mooring in the bay, many have elected to move their boats to new free anchorages. Such anchorages can be especially important sources of human pathogens from vessel sewage releases. In addition to the vessels normally maintained in the water, there are several thousand additional "trailer" boats using San Diego's boat harbors. In total, approximately 55,000 vessels are registered in San Diego County.

NAVY VESSELS IN THE SAN DIEGO REGION

Home port to approximately one hundred US Navy vessels, San Diego Bay is one of the largest Naval ports on the west coast of the United States. As described above, Navy vessels are responsible for the same types of water quality impacts as other vessels. They are also subject to the same regulations and requirements as other vessels except that discharges from Naval vessels under

certain circumstances are not subject to NPDES permits. A description of this exclusion (as found in Title 40, CFR, Part 122.3) was discussed earlier in this Chapter.

If enforcement action is necessary, operators of Naval vessels are subject to all of the same enforcement mechanisms outlined previously in this Chapter with one exception; the Navy is not subject to Administrative Civil Liability.

VESSEL WASTES

The most significant waste categories associated with vessels include:

- hull maintenance related wastes;
- sewage;
- marine engine related wastes; and
- trash.

Of these categories, hull maintenance related wastes, and particularly antifouling paint, is believed to pose the greatest potential threat to water quality. This is because of its high degree of toxicity. Antifouling paint, which is applied to vessel hulls, is specifically designed to prevent the growth and attachment of marine organisms by continuously releasing toxic substances into the surrounding water. Cuprous oxide and tributyltin fluoride or tributyltin oxide are the principal toxicants in copper-based and organotin-based paints, respectively. Although the use of TBT is now significantly limited, leaching pollutants from antifouling paints remains a widespread and serious concern especially in areas of high vessel density and low hydrologic flushing.

Antifouling paint may pose an even greater water quality threat during and after its removal from vessel hulls since the pollutants in the paint chip wastes may continue to leach into receiving waters. In most cases, because paint removal activities on ships are conducted in ship repair yards, responsibility for the paint chip wastes is transferred from the vessel owner to the shipyard. (See shipyards and boatyards discussion). The same is generally true for recreational craft serviced at boatyards. However small craft can also obtain some hull maintenance services directly in the water by underwater hull cleaners. In addition to paint, other examples of hull maintenance wastes include strippers, cleaners, and cathodic protection products. Although a variety of pollutants can be released during hull maintenance activities, metals are the pollutants of greatest concern.

Sewage is often intentionally discharged directly into receiving waters due to the lack of pumpout stations, inconvenience or inoperation of pumpout

stations, or the irresponsibility or ignorance of vessel operators. Human pathogens present in sewage include a variety of fecal bacteria and viruses. Today sewage discharges in recreational marinas are believed to be more significant than at Naval berthing areas. This is because all US Navy vessels are currently equipped to connect to pumpout facilities while in port.

Marine engine related wastes such as fuels, oils, lubricants, antifreeze, solvents, and polluted bilge water are commonly released from vessels into receiving waters. The pollutants of greatest concern for marine engine wastes are metals and petroleum hydrocarbons. PAHs are a particular concern because they tend to accumulate and persist in aquatic sediments for years, poisoning benthic organisms. Garbage and trash are also discharged from vessels.

Each of the above waste categories can be, and frequently are, washed, spilled, scraped, dumped, and pumped directly into receiving waters. As a result, each of the wastes can take a major toll on water quality and beneficial uses. The marine habitat and shellfish harvesting beneficial uses are particularly sensitive to vessel wastes.

Furthermore each of the waste categories is relevant to all vessel types and sizes including recreational boats as well as commercial and Naval ships. However, because of a ship's greater size and corresponding greater magnitude, variety, and toxicity of wastes generated, ships (particularly Navy ships) are generally believed to pose a greater threat to water quality than boats. For example, Navy vessels are typically drydocked for hull maintenance only once every five or more years and spend more time in port or at anchor than underway. Fouling organisms attach more readily when a ship is stationary. For these reasons, Navy coating systems are required to be effective for longer periods of time than those applied to commercial and recreational vessels. Accordingly, Navy vessels are blasted to "white metal" meaning all paint is removed to bare metal and the surface is abraded in preparation for adherence of a complete new coating system. Additionally antifouling paints used on Navy vessels contain higher levels of toxicants than those used on commercial and recreational vessels.

Nevertheless, there is a formidable set of water quality impacts associated with small craft and small craft marinas as described below.

MARINAS

Marinas and other boat berthing facilities typically have high boat densities and low hydrologic flushing. As a consequence of these characteristics, the following significant water quality problems often result within marinas:

- increased pollutants in the water column;
- decreased dissolved oxygen in the water column;
- increased pollutants in aquatic sediment;
- increased toxicity in the water column and sediments;



Oceanside Harbor
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- increased pollutants in the tissues of aquatic organisms; and
- physical alteration or destruction of aquatic habitat.

The physical disruption, or destruction of wetlands, sediment, and other aquatic habitat is an especially troublesome impact. It is a result of both the original construction of the marina, ramps, and related facilities, as well as their ongoing use, operation, and maintenance.

Although most of the water quality problems listed above arise from the direct discharge of wastes by vessels, pollutants can also be transported into marina waters by way of storm water runoff from parking lots, docks, and other impervious surfaces.

CZARA(G) GUIDANCE FOR MARINAS

Most of the impacts listed above can be mitigated by utilizing best possible siting and design criteria for each marina. Construction and operation and maintenance practices are also crucial to protecting water quality. Recognizing the importance of this, USEPA developed fifteen specific management measures (BMPs) to protect coastal waters from nonpoint pollution from marinas and recreational boating.

The management measures for marinas which are grouped into two broad headings, (1) siting and design; and (2) operation and maintenance, were developed pursuant to section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 and are incorporated into the (g) guidance. As with all nonpoint source pollution protection measures, the key to protecting water quality in marinas is pollution prevention.

REGULATION OF VESSELS AND MARINAS

Management measures related to preventing pollutants, such as sewage, fuel and oil leaks, toxics, fish wastes, and hull scrapings from entering coastal waters are primarily the responsibility of the Regional Board. The Regional Board prohibits the discharge of these wastes through a variety of Basin Plan discharge prohibitions. The Board also encourages and participates in public education/awareness campaigns. The Harbors and Navigation Code section 151 prohibits the intentional or negligent discharge of oil to the waters of the state. Penal Code section 374(e) as amended in 1970 provides that any person who litters or places waste matter into any bay, lagoon, channel, river, creek, slough, canal or reservoir or body of water is guilty of a misdemeanor.

Local governments have significant authority to carry out these CZARA management measures through their zoning ordinances, and by using their police, fire, or building departments to ensure implementation.

The California Department of Pesticide Regulation regulates the application of antifouling paints. Regulations for organotin-based paints have been established which limit the TBT release rate, require application by certified commercial applicators, and allow application only on vessels at least 25 meters in length and/or aluminum hulls and parts. As described earlier, tributyltin fluoride or tributyltin oxide are the principal toxicants in organotin-based paints.

The Health and Safety Code section 4425 prohibits a vessel with a toilet from operating upon the waters of any lake, reservoir, or fresh water impoundment of this State unless the toilet is designed so that no human sewage can be discharged in such waters. This code section does not apply to rivers, estuaries or saltwater areas of California. Section 312 of the Clean Water Act provides that marine sanitation devices on board new or existing vessels must be designed to prevent the discharge of untreated or inadequately treated sewage into or upon the navigable waters of the United States (see discussion below on "No Discharge Zone"). The Marine Sanitation (section 775) of the Harbors and Navigation Code declares that every vessel terminal shall be equipped with vessel pumpout facilities for the transfer and disposal of sewage from marine sanitation devices in order to protect water quality.

NO DISCHARGE ZONE

Division 7 of the Water Code authorizes the Regional Board to regulate any discharge of waste, including sewage, to waters of the state. The federal Clean Water Act however partially preempts the state's authority to regulate vessel sewage discharges. Section 312 of the Clean Water Act provides that no state or local entity may adopt or enforce any laws regarding the design, manufacture, installation or use of marine sanitation devices (MSDs). Instead, USEPA must adopt federal standards of performance for MSDs which must be enforced and implemented through regulations adopted by the United States Coast Guard (USCG).

Marine sanitation devices either retain sewage or discharge treated sewage. If sewage is discharged, the effluent must meet USCG specified effluent standards described in 33 CFR 159, Coast Guard Regulations on Marine Sanitation Devices. Types I and II MSDs are flow-through systems which treat and discharge sewage. Type I MSDs produce an effluent having a fecal coliform bacteria count not greater than 1,000 per 100 ml and no visible floating solids. Type II MSDs produce an effluent having a fecal coliform bacteria count not greater than 200 per 100 ml and suspended solids not greater than 150 mg/l. Type III MSDs are holding tanks only and prevent the overboard discharge of treated or untreated sewage.

There is one significant exception to the federal preemption of a state's regulation of vessel sewage discharges. Clean Water Act section 312 (f) allows states to completely prohibit vessel sewage discharges into waters requiring greater water quality protection, provided that USEPA determines

that adequate vessel sewage pumpout facilities are available for these waters.

In 1976 the State of California petitioned USEPA, pursuant to section 312 (f)(3) of the Clean Water Act, for a determination that adequate pump-out facilities were reasonably available for that portion of San Diego Bay that is less than 30 feet deep at MLLW; and for all of Mission Bay, Oceanside Harbor, and Dana Point Harbor (41 Federal Register 21516 May 26, 1976). On August 6, 1976, USEPA made the requested determination (41 Federal Register 34453 August 6, 1976).

As a result, the discharge of all sewage, treated or untreated, from all vessels is completely prohibited in all portions of Mission Bay, Oceanside Harbor, and Dana Point Harbor (regardless of vessel size or water depth). Mission Bay, Oceanside Harbor, and Dana Point Harbor are, in their entirety, "No Discharge Zones". (Note that this prohibition includes discharges from a properly functioning USCG certified MSD).

The discharge of all sewage, treated or untreated, from all vessels is completely prohibited in all portions of San Diego Bay that are less than 30 feet deep at MLLW. The No Discharge Zone in San Diego Bay is defined as all portions of the bay having a depth of less than 30 feet MLLW. In the absence of the no discharge zone (i.e., in those portions of San Diego Bay having a depth of 30 feet or greater), discharge of treated sewage through a properly functioning USCG certified Type I or II marine sanitation device is allowed. (USCG certification provides that the specified effluent limitations will be met). The discharge of untreated sewage from a Type III holding tank is not allowed under any condition in any portion of San Diego Bay (regardless of depth).

Because of dilution and circulation in San Diego Bay, it is assumed that the discharge of treated sewage into waters deeper than 30 feet from a properly functioning USCG certified Type I or II MSD will not degrade the bay's beneficial uses. Additionally, with the exception of a few recent uses (such as jet skiing and sail boarding), the REC I designated beneficial use occurs in shallow waters (i.e., in waters less than 30 feet). This supports the need for a complete prohibition in such shallow waters.

Furthermore, as a practical matter, it is not possible to regulate sewage discharges from all vessels in San Diego Bay. For example, some foreign vessels may not be equipped to use the existing pump-out facilities. Since the no discharge designation is conditioned upon the existence of adequate pump-

out facilities, it was necessary to make an allowance in the prohibition for such vessels. These vessels require berthing accommodations outside of the designated area. (All US Navy vessels are equipped to connect to pump-out barges or pier-side sewage facilities).

Most small pleasure craft are equipped with either a Type I or II flow-through treatment device or a Type III holding tank, but rarely both. Those vessels equipped with only a flow-through treatment device must secure their device while in a No Discharge Zone in order to prevent overboard sewage discharges. Those vessels equipped with only a holding tank are required to utilize pump-out facilities at all times and may not discharge into any portion of any bay. In other words, a vessel in San Diego Bay with a holding tank may not move into water greater than 30 feet and discharge sewage from its holding tank.

A study of the levels of coliform and Enterococcus bacteria caused by vessel discharges is needed to allow the Regional Board to make decisions based on measured levels. The Regional Board could then advise the county health officer, the Port District, and the Coast Guard so appropriate actions could be taken to abate the effects of sewage discharges from vessels.

SHIPYARDS

This section contains a general discussion of shipyards, their threat to water quality, and regulatory complexity. A discussion specific to San Diego Bay shipyards is included near the end of this section.

Shipyards activities may result in the discharge of wastes to receiving waters. The presence of elevated concentrations of pollutants, primarily heavy metals, in the sediment adjacent to shipyards nationwide is well documented in the literature (see references). Although there are numerous other potential threats, the single most significant threat to water quality posed by shipyards is the potential discharge of abrasive blast waste to receiving waters.

SHIPYARD THREAT TO WATER QUALITY

From the perspective of protecting beneficial uses, a discharger's threat to water quality is critically important and plays a role in virtually all regulatory decisions. By definition, the basis of a discharger's threat to water quality is the effect the discharger would have on the receiving water if discharges

occurred in violation of its NPDES permit. In other words, a discharger's threat to water quality is its potential for degrading water quality. The following six characteristics are relevant in evaluating a shipyard's threat to water quality: (1) primary activities; (2) facilities; (3) industrial processes; (4) materials used; (5) wastes generated; and (6) waste discharges to receiving waters (actual and potential). A discussion of each follows.

PRIMARY ACTIVITIES AT SHIPYARDS

The shipbuilding and repair industry is engaged in the construction, conversion, alteration, repair, and maintenance of all types of military and commercial ships and vessels. Shipbuilding and repair encompasses a large number and variety of activities and industrial processes including, but not limited to, formation and assembly of steel hulls; application of paint (coating) systems; installation and repair of a large variety of mechanical, electrical, and hydraulic systems and equipment; repair of damaged vessels; removal and replacement of expended or failed paint (coating) systems; and provision of entire utility/support systems to ships (and crew) during repair.

The list of occupations required to conduct these activities is also extensive, including sandblasters, painters, shipfitters, machinists, metalsmiths, welders/burners, blacksmiths, boilermakers, chemists, carpenters, coppersmiths, electricians, electronic technicians, joiners and patternmakers, laborers, riggers, pipefitters, and foundrymen. Not all occupations are present at all shipyards.

SHIPYARD FACILITIES

There are four major types of building/repair facilities at shipyards, which together with cranes, enable ships to be assembled, launched, or repaired. These facilities are graving docks/shipbuilding ways, floating drydocks, marine railways, and berths/piers. With the exception of berths and piers, the basic purpose of each facility is to separate the vessel from the bay and provide access to parts of the ship normally underwater.

Each facility type presents its own unique set of environmental concerns. Depending on size and capabilities, a single shipyard will generally have a combination of two or more of these facilities.

In addition to these facilities, shipyards must also conduct the wide range of support or complementary activities previously described. Many of these activities require their own facility, space, or shop; for example concrete platens (for steel fabrication), machine shop, pipe shop,

electroplating shop, weld shop, sheet metal shop, electrical shop, coppersmith shop, blacksmith shop, carpentry shop, and boiler shop, etc. Not all facilities are present at all shipyards.

SHIPYARD INDUSTRIAL PROCESSES

The primary activities described above involve a multitude of industrial processes, many of which must be conducted over water or very close to the waterfront. Because they typically represent the greatest threat to water quality, the following discussion will focus primarily on the industrial processes conducted inside graving docks or floating drydocks.

Surface Preparation and Paint Removal:

Methods of surface preparation and paint removal include dry abrasive blasting, wet abrasive or slurry blasting, hydroblasting, and chemical paint stripping. Each paint removal method has a unique purpose and poses its own set of water quality risks.

Dry abrasive blasting is the preferred method of preparing steel surfaces for application of a new paint (coating) system for saltwater immersion. It is used for most exterior hull work and virtually all interior tank work (e.g., fuel, bilge, ballast tanks etc). Dry abrasive blasting is the process in which blasting abrasive is conveyed in a medium of high pressure air, through a nozzle at velocities up to 450 feet per second resulting in very large quantities of solid waste and airborne particulates (dust). Although the most efficient of the paint removal methods, dry blasting produces the largest quantity of airborne particulates.

Wet abrasive or slurry blasting is the process in which water replaces air as the abrasive propellant. The use of water significantly reduces airborne particulate emissions but generates large quantities of wet residue and wastewater.

Hydroblasting is a process in which water under very high pressure is used instead of abrasive. Hydroblasting produces large amounts of wastewater and is primarily used at shipyards to remove marine growth, not to remove existing coatings. Chemical paint stripping is uncommon in drydocks and used primarily for removable parts.

Paint (coating) Application: After preparation, surfaces are painted. Most painting occurring in a drydock involves the ship hull and internal tanks. Painting is also conducted in other locations throughout a shipyard including piers and berths. Paint application is accomplished by way of air or airless spraying equipment.

Tank Cleaning: Tank cleaning operations utilize steam to remove dirt and sludge from internal tanks, particularly fuel tanks and bilges. Detergents, cleaners, and hot water may be injected into the steam supply hoses. Wastewater is generated.

Other Industrial Processes (graving docks/drydocks): Other industrial processes conducted inside graving docks or floating drydocks include mechanical repair, maintenance, installation; structural repair, alteration, assembly; and integrity/ hydrostatic testing. Hydrostatic or strength testing (flushing) is conducted on hull, tanks, or pipe repairs and on new systems during ship construction phases. Hydrostatic testing generates significant water flow.

Other Industrial Processes (elsewhere): Numerous other industrial processes take place at numerous other locations throughout a typical shipyard, including activities at a variety of repair and specialty shops. Examples include paint equipment cleaning; engine repair/ maintenance/ installation; pipe fitting; steel fabrication and machining; electrical repair/ maintenance/ installation; hydraulic repair/ maintenance/ installation; tank emptying; fueling; pattern making; shipfitting; boiler cleaning; carpentry; refurbishing/ modernization/ cleaning; air conditioning/ refrigeration repair; sheet metal fabrication; fiberglass repair; electroplating/ metal finishing; blacksmithing; zinc primer application; printing; and photo processing. As a result of these processes, an assortment of wastes are generated, many of which are hazardous.

MATERIALS USED AT SHIPYARDS

Materials commonly used at shipyards are described below beginning with those utilized during graving dock or floating drydock operations.

Abrasive Grit: Abrasive grit is typically slag from the smelting of copper ore and consists principally of iron. Trace elements such as copper, zinc and titanium may also be present in the slag. Sand, cast iron, or steel shot are also used as abrasives. Very large amounts of abrasive are needed to remove paint to bare metal. For example, removing paint from a 15,000 square foot hull can take up to 6-days and consume 87 tons of grit. Grit is needed in all dry and wet (slurry) abrasive blasting.



Fresh Paints: Fresh paints contain copper, zinc, chromium, and lead (all priority pollutants) as well as numerous hydrocarbons. The two major types of

paints used on ship hulls are anticorrosive paints and antifouling paints. Anticorrosive paint (primers) include vinyl, vinyl-lead, or epoxy based coatings. Others contain zinc chromate and lead oxide. (Although newer paint formulations no longer include chromium and lead, such constituents may be present in shipyard wastes due to the removal of older coating systems).

Antifouling paints are designed to prevent growth and attachment of marine organisms by continuously releasing toxic substances into the water. Cuprous oxide and tributyltin fluoride or tributyltin oxide are the principal toxicants in copper-based and organotin-based paints, respectively.

Other Materials: Other materials used include oils (engine, cutting, and hydraulic); lubricants, grease; fuels; weld rod; detergents, cleaners; rust inhibitors; paint thinners; hydrocarbon and chlorinated solvents; degreasers; acids; caustics; resins; adhesives/ cement/ sealants; cyanide; zinc (e.g., zinc dust); chlorine; and mercury.

WASTES GENERATED AT SHIPYARDS

The major categories of wastes commonly generated by shipyard industrial processes are discussed below. Wastes resulting from graving or floating drydock operations are presented first.

Abrasive Blast Waste: Abrasive blast waste, consisting of spent grit, spent paint, marine organisms, and rust is generated in very large quantities during all dry or wet abrasive blasting procedures. The constituent of greatest concern with regard to toxicity is the spent paint, particularly the copper and tributyltin antifouling components, which are designed to be toxic and designed to continuously leach into the water column. Other priority pollutants in paint include zinc, chromium, and lead. Although the grit itself is not highly toxic, it is a major component in the large solid waste load and is settleable. As a result, its deposition can degrade the benthic community and increase the need for dredging. Abrasive blast waste can be conveyed by water flows, become airborne (especially during dry blasting), or fall directly into receiving waters. Wet abrasive blasting of a Naval DDG class destroyer (437-536 feet long; 47-67 feet wide; 15-20 feet draft) can generate up to 180 tons of solid wet abrasive waste.

Paint Losses: Paint losses, or paint which ends up somewhere other than its intended location (e.g., drydock floor, bay, worker's clothing), results from spills, drips, and overspray. Typical overspray losses are estimated at approximately 5% for air spraying and 1-2% for airless spraying.

Bilge Waste/Other Oily Wastewater: This is generated during tank emptying, leakages, and cleaning operations (bilge, ballast, fuel tanks). In addition to petroleum products (fuel, oil), tank washwater may also contain detergents or cleaners (nitrogen and phosphorus compounds) and can be generated in large quantities.

Blast Wastewater: Wet abrasive (slurry) blasting and hydroblasting generates large quantities of wastewater. Wet abrasive blasting of a Naval DDG class destroyer can generate up to 500,000 gallons of contaminated water. In addition to suspended and settleable solids (spent abrasive, paint, rust, and marine organisms) and water, blast wastewater may also contain rust inhibitors such as diammonium phosphate and sodium nitrite.

Other Wastes: These include oils (engine, cutting, and hydraulic); lubricants, grease; fuels; waste paints/ sludge/ solvents/ thinners; construction/ repair wastes and trash; asbestos (from ship refurbishing/ modernization); sewage (black and grey water from vessels or docks); boiler blowdown, condensate, discard; spent hydrocarbon or chlorinated solvents; electroplating/ metal finishing wastes; acid wastes; caustic wastes; and aqueous wastes (with and without metals).

SHIPYARD WASTE DISCHARGES TO RECEIVING WATERS

Actual and potential waste discharges to receiving waters from typical shipyard operations are discussed below. Most are either the direct result of an industrial process (drydock, marine railway, or berth operations) or, more commonly, the result of water coming into contact with wastes, typically spent abrasive blast waste. There are numerous sources of water at a shipyard including: industrial processes; building or repair facilities (e.g., drydock); vessels under repair (e.g., cooling water); bay water (e.g., due to tidal influence or wave action); storm water; or other sources.

Actual and potential waste discharges to receiving waters include: floating drydock deballasting (tanks); floating drydock submergence/ emergence (platform); floating drydock operations; graving dock dewatering; gate leakage; hydrostatic relief flows; shipbuilding ways dewatering/ gate leakage/ relief flows; marine railway operations; berth and pier operations; storm water; integrity/ hydrostatic testing discharge (new vessels); boiler and cogeneration feedwater; fire protection system discharge; cooling water; and miscellaneous water flows.

SHIPYARD COMPLEXITY

From a regulatory and environmental control standpoint, shipyards present a unique and difficult problem. Traditional NPDES dischargers generate or intake wastewater, treat it to specified effluent limits, and discharge treated effluent, often by way of a single pipe. Unlike traditional dischargers, shipyards are significantly more complex in all respects: numerous and diverse industrial processes; numerous discharge mechanisms, waste streams, and discharge points; and Best Management Practices Plan based permits. Each is discussed below.

Numerous and Diverse Industrial Processes

As described previously, shipyards conduct a large number and broad range of industrial processes which require a wide range of facilities and substantial workforce.

Numerous Discharge Mechanisms, Waste Streams, and Discharge Points

Shipyards are complex to regulate because they have numerous discharge mechanisms, discharge points, and waste streams. A less complex discharger will typically have a single or small number of each. A discussion of abrasive blast waste with respect to discharge mechanisms, discharge points, and waste streams follows. Abrasive blast waste is discharged primarily as a result of graving dock flooding, drydock immersion, drainage, or runoff. In other words, at shipyards, the principle mechanism by which wastes are conveyed to receiving waters is via the contact of wastes with water, both of which occur in large quantities. For this reason, storm water and storm drain inlets are of particular concern at shipyards. Abrasive blast waste can also become subject to tidal or wave action. Airborne releases represent another important discharge mechanism. Because abrasive blast waste is generated in part as airborne particulates, such releases to receiving waters pose a significant threat to water quality. Furthermore, and because of their proximity to receiving waters, a third discharge mechanism exists at shipyards. Direct discharges from shipyards occur when wastes are allowed to fall directly into receiving waters (off the end drydock, edge of pier, between gratings, etc).

In summary, because abrasive blast waste can be washed, hosed, pushed, blown, become subject to tidal/wave action, and be directly or otherwise discharged, the potential for abrasive blast waste from shipyards to enter receiving waters is great. In

addition to multiple discharge mechanisms, numerous waste streams, and discharge points also exist at shipyards. The discharges described above can potentially enter receiving waters from numerous shipyard worksites including graving docks, drydocks, marine railways, piers, repair/specialty shops, as well as via storm drains and sheet flow runoff.

Best Management Practices Based Permits

Unlike traditional NPDES discharges which are regulated by numerical effluent limits, the control of waste discharges from shipyards is accomplished by the implementation of BMP plans. The purpose of a BMP plan is to prevent, reduce, or eliminate the spillage or illicit discharge of pollutants into receiving waters and can include any number of preventive controls or measures. Due to the types of activities and multiple discharge pathways, numerical effluent limitations are not practical at shipyards. The evaluation of the effectiveness of BMP Plans from a regulatory standpoint is more complicated and resource intensive than comparison of end-of-pipe monitoring results to numerical effluent limitations.

LONG-TERM EFFECTS OF SHIPYARD DISCHARGES ON WATER QUALITY AND BENEFICIAL USES

Unlike short lived pollutants (e.g., BOD and bacteria) the type of pollutants present in shipyard discharges are typically long-lasting. Shipyard pollutants, such as heavy metals and PAHs are persistent in the marine environment, in part, because they can become attached to sediment particles and can accumulate to high concentrations in both sediments and in marine organisms. Once incorporated into sediment and tissues, these pollutants are very difficult to remove and may recycle in the marine system indefinitely. Because sediment cleanup projects are difficult, expensive, and lengthy, contaminated sediment can remain in place, adversely affecting beneficial uses and water quality, for many years.

SAN DIEGO BAY SHIPYARDS

The following discussion is specific to San Diego Bay shipyards.

NPDES Permits

There are currently four commercial shipyards in the San Diego Region, all of which are located adjacent to San Diego Bay. All of the shipyards are currently regulated under individual NPDES permits

which are BMP based, rather than based on effluent limits. The shipyard permits also include standard receiving water limitations and discharge prohibitions. Additionally, all of the shipyards are also subject to the statewide General Industrial Storm Water Permit.

Threat to Water Quality and Best Management Practices

Although the discussion above was intended as a general description of the shipyard industry as a whole, the majority of the information is applicable to the San Diego Bay shipyards. One notable exception is that wet abrasive or slurry blasting and chemical paint stripping are currently not conducted at San Diego Bay shipyards.

By definition a discharger's threat to water quality is its potential to cause damage to water quality and beneficial uses under worst case conditions, i.e., assuming all BMPs and treatment measures fail. For this reason, the general shipyard discussion on threat to water quality focuses on potential risks rather than on BMPs. As described, a shipyard's potential risks to water quality are significant in many respects. BMPs are specifically designed to reduce those risks and are therefore extremely important for shipyards. Hence, the second reason to focus on potential risks is to emphasize the need for effective BMPs at shipyards.

San Diego shipyards report strict adherence to a large number of BMPs to control water and airborne wastes during a variety of industrial processes. Such BMPs include physical and procedural controls. Physical controls isolate runoff pathways from contact with abrasive blast wastes through the use of shrouding, sealing of drains, and diversion of sump discharge pathways. Procedural control methods include dock sweeping and elimination of sources of runoff during blasting operations. The shipyards also report the effective management of their wastes including treatment, recycling, and disposal in compliance with the San Diego County Hazardous Materials Management Division, their San Diego Metropolitan Industrial Waste Program permits, and the San Diego County Air Pollution Control District.

Contaminated San Diego Bay Sediment and Mussels

Regional Board staff has reviewed the results of sediment samples collected adjacent to the shipyards in San Diego Bay. Elevated concentrations of copper, tributyltin, and zinc exist in these sediments. Copper, tributyltin and zinc are contained in both the materials used by San Diego

Bay shipyards as well as in the wastes which they generate. Furthermore elevated concentrations of copper, tributyltin, and zinc have also been measured in the tissues of mussels collected from stations located adjacent to San Diego Bay shipyards.

Although this data may suggest that the BMPs employed by San Diego Bay shipyards are not effective, it may also represent historical discharges which occurred at a time when BMPs were not carefully implemented. Regional Board staff plans to investigate the matter further. The existence of contaminated sediment adjacent to the shipyards serves to further underscore the importance of shipyard BMPs.

SHIPYARDS – GENERAL CONCLUSIONS

In summary, shipyards typically pose a significant threat to water quality for the following reasons. Relative to other regulated dischargers, shipyards conduct a large number and wide variety of activities and industrial processes. The conduct of these industrial processes requires numerous physical facilities and a large number, amount, and variety of materials. As a result, a large number, amount, and variety of wastes are generated and are, or may be, discharged to receiving waters. Shipyard discharges have the potential to cause the long-term loss of a designated beneficial use in receiving waters.

From a regulatory perspective, shipyards are complex. Toxic pollutants are, or could be, present in wastes discharged to receiving waters from shipyards. They have numerous discharge points and are regulated by permits which do not contain numeric effluent limits. Shipyards are typically "major" NPDES dischargers and require a high level of regulatory effort.

In conclusion, because shipyards pose a significant threat to water quality and are complex to regulate, the BMPs which they employ (to reduce or eliminate the discharge of wastes to receiving waters) are extremely important. It is critical that shipyard BMPs are effective and diligently implemented.

BOATYARDS

There are currently 12 boat building and boat repair facilities (commonly called boatyards) adjacent to receiving waters in the San Diego Region. Most of the boatyards are located adjacent to San Diego Bay, while Mission Bay, Oceanside Harbor, and Dana Point Harbor are serviced each by a single

boatyard. Additional boatyards are located in inland areas of the Region. Seven of the boatyards located adjacent to receiving waters are currently regulated under an individual NPDES permit. Eventually all of the waterfront boatyards will be regulated under an individual NPDES permit. Additionally, all of the boatyards in the Region are currently subject to the statewide General Industrial Storm Water Permit. Like the shipyard permits, boatyard permits do not contain numeric effluent limits but are based instead on BMPs.

The most significant waste categories associated with boatyards include hull maintenance related wastes and marine engine related wastes. Hull maintenance related wastes, and particularly antifouling paints, are believed to pose the greatest threat to water quality from boatyard operations. Cuprous oxide (copper) and TBT fluoride or TBT oxide are the principle toxicants in antifouling paint used at boatyards. Marine engine related wastes include fuels, oils, lubricants, antifreeze, solvents, and bilge water. The pollutants of concern from marine engine wastes are metals and petroleum hydrocarbons. PAHs are of particular concern because they persist in the marine environment. Implementation of BMPs is the key to controlling boatyard waste discharges to receiving waters.

GROUND WATER DEWATERING

A number of dewatering operations are associated with construction projects for foundations, bridges, roads, etc. Other dewatering operations are ground water remediation projects which are required under Cleanup and Abatement Orders issued by the Regional Board. Many of the proposed dewatering operations are located where petroleum or other pollutants plumes exist. Petroleum or other pollutants may be pumped from the ground water and discharged to a storm drain and subsequently to a water of the United States.

Since the mid-1980's, the Regional Board has regulated dewatering operations under the NPDES permit process. Two general NPDES permits have been adopted by the Regional Board which regulate discharges from ground water remediation projects and discharges from ground water dewatering operations to surface waters of the United States.

The first permit, Order No. 2000-90, NPDES No. CAG919001 regulates temporary ground water extraction and similar waste discharges to San Diego Bay and storm drains or other conveyance

systems tributary thereto. This Order prohibits ground water extraction waste discharges to San Diego Bay from new permanent ground water extraction operations.

The second permit, Order No. 2001-96, NPDES No. CAG919002 regulates ground water extraction waste discharges from construction, remediation, and permanent ground water extraction projects to surface waters within the San Diego Region except for San Diego Bay.

In addition, the Waiver ~~Policy~~ processOrder described earlier in this Chapter waives WDRs for short-term construction dewatering operations where there is no discharge to surface waters.

DREDGING AND DISPOSAL OF DREDGE SPOIL

REGULATORY FRAMEWORK FOR DREDGED MATERIAL DISPOSAL

FEDERAL STATUTES AND REGULATION

The regulation of dredged material disposal in waters of the United States (US) on a federal level is a responsibility shared by the USEPA and the USACOE. The Marine Protection, Research and Sanctuaries Act, also called the Ocean Dumping Act, is the primary federal environmental statute governing the discharge of dredged material to the ocean. The Clean Water Act is the primary federal statute governing the discharge of dredged and/or fill material into US waters. Material dredged from waters of the US and disposed in the territorial sea is evaluated under the Marine Protection, Research and Sanctuaries Act unless the material discharged is for the primary purpose of fill (e.g., beach replenishment, island creation, or underwater berms), in which case the disposal is evaluated under the Clean Water Act [33 CFR 336.0(b)]. Other applicable federal statutes and regulations include:

- **The Rivers and Harbors Act of 1899:** The Rivers and Harbors Act of 1899 (33 USC 401 et. seq.) requires a USACOE permit for any work or structure, including fill material discharges, in navigable waters of the United States. The primary purpose of section 10 of this act is to ensure that structures (i.e., disposal berms, piers,

pipelines, bridges, wharfs) constructed in navigable waters do not adversely affect federal interstate navigation.

- **The Fish and Wildlife Coordination Act of 1958:** The Fish and Wildlife Coordination Act requires that, for any proposed federal project or permit that may affect a stream or other body of water, the USACOE must first consult with federal and state fish and wildlife agencies. This consultation addresses the prevention of damages to wildlife resources and provides for the development and improvement of wildlife resources.

- **The Endangered Species Act of 1973:** Section 7(a)(2) of the Endangered Species Act (ESA), as amended (16 USC 1531 et. seq.) requires federal agencies, in consultation with the Secretaries of Interior (represented by the US Fish and Wildlife Service) and Commerce (represented by the National Marine Fisheries Service), to insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of such species.

- **The Coastal Zone Management Act of 1972:** The Coastal Zone Management Act (16 United States Code (USC) 1451 et. seq.) authorizes a federal program for the effective management, beneficial use, protection and development of the coastal zone. The act requires the USACOE to coordinate permit review and federal projects with all state level coastal zone review agencies. Under this act, coastal states are required to formulate a management program for the land and water resources of its coastal zone, which extends out to the seaward limit of the territorial sea, and submit it for approval to the Secretary of Commerce. In 1977, the California Coastal Management Program was approved.



California tree frog

Overview of the Clean Water Act

Section 404 of the Clean Water Act requires the USEPA, in conjunction with the USACOE, to promulgate guidelines for the discharge of dredged

or other fill material to ensure that such proposed discharge will not result in unacceptable adverse environmental impacts to waters of the United States. Section 404 assigns to the USACOE the responsibility for authorizing all such proposed

discharges, and requires application of the guidelines in assessing the environmental acceptability of the proposed action. The USACOE and the USEPA also have authority under section 230.80 to specify, in advance, sites that are either suitable or unsuitable for the discharge of dredged or fill material in US waters. In addition, Clean Water Act section 401 provides the States a certification role as to project compliance with applicable water quality standards.

Clean Water Act, Section 401 Certification State of California

The Clean Water Act, section 401 gives the states authority to grant, deny, or waive certification for a federally permitted or licensed activity that may result in a discharge to waters of the United States. Any applicant for a federal permit which conducts any activity which may result in any discharge into the navigable waters of the State must present to the permitting agency a certification (or waiver of certification) from the State that any such discharge will comply with the applicable Clean Water Act provisions of section 301, 302, 303, 306, and 307. The certification issued by the State should establish relevant effluent limitations, monitoring requirements, and standards or performance which become conditions of the federal permit. In California, the responsibility for section 401 certification is assigned to the State Board and regional boards. After review of data submitted by an applicant, and any other information available as to whether the proposed activity will comply with all applicable water quality standards, limitations and restrictions, the Regional Board may:

- Waive water quality certification;
- Issue waste discharge requirements; or,
- Recommend approval with or without conditions, or denial of water quality certification, to the State Board.

In order to grant section 401 certification, the State Board must certify that the proposed discharge will not result in unacceptable adverse environmental impacts to waters of the United States.

For a project to proceed, a waiver of certification or waste discharge requirements must be obtained from the Regional Board or a certification with or without conditions must be obtained from the State Board, indicating the Board's concurrence with the decision that the proposed action is not expected to cause a violation of the State's water quality standards.

STATE STATUTES AND REGULATIONS

The State of California has several programs that parallel or overlap many of the listed federal Acts. Relevant state statutes and regulations include the following:



- Water Code, Division 7 (Porter-Cologne Water Quality Control Act);
- State Board and Regional Water Quality Control Board Plans and Policies;
- Water Code, Division 4 (California Bay Protection and Toxic Cleanup Act);
- California Fish and Game Code;
- California Environmental Quality Act; and
- California Coastal Zone Management Act.

The primary statutory state law pertaining to the regulation of water quality and sediment control issues is the Porter-Cologne Water Quality Control Act which is contained in Division 7 of the Water Code.

California Water Code, Division 7 (Porter-Cologne Water Quality Control Act)

Dredging and dredged material disposal is an ongoing activity at harbors within the San Diego Region. The discharge of dredged or fill material which comes within the purview of section 404 of the federal Clean Water Act is not subject to regulation under the NPDES permit program (Clean Water Act section 402). However, if the project involves the discharge or potential discharge of waste (e.g. dredge spoils, dredge spoil return water, etc.) which may adversely impact water quality, then the discharge may be regulated through the issuance of WDRs. WDRs are issued by the Regional Board pursuant to the Porter-Cologne Water Quality Control Act.

The Regional Board is concerned with turbidity, dissolved oxygen depletion, and other physical, chemical, and biological parameters in the receiving waters which are impacted by dredge/fill projects. In recent years, there has also been concern about the concentrations of chemicals in the material to be dredged. Harbor areas may contain high levels

of contaminants in bottom sediments due to navigational use, and due to wastes from urban, industrial, and riverine sources. ~~The Regional Board Waiver Policy process described earlier in this chapter waives establishing WDRs for projects which involve dredging 5,000 cubic yards or less of material and are not expected to have any adverse impact on the environment.~~ For projects involving dredging ~~of more than 5,000 cy of material, or dredging of potentially or known contaminated material,~~ the proponent is required to submit a Report of Waste Discharge (RWD) in application for WDRs. The RWD must include a characterization of the material to be removed to determine whether the proposed project is expected to meet all applicable water quality standards, limitations, restrictions and discharge prohibitions. The decision to issue or waive WDRs for dredging projects is made on a case-by-case basis regardless of dredge spoil volume. Disposal of dredge material at authorized open-ocean disposal sites (e.g., LA-5 Ocean Dredged Material Disposal Site) fall under the jurisdiction of the USEPA and the USACOE. However, because of the potential threat to water quality due to dredging operations, the Regional Board may still issue a WDR for the actual dredging portion of the project.

Adopted WDRs typically require monitoring for dissolved oxygen, turbidity and, where concentrations of chemicals in the sediments are high, monitoring for chemical constituents. Monitoring may be required of the receiving water at the dredge site or at the disposal site(s), and of the dredge spoil return water if applicable.

Enforcement Process for Contaminated Sediment

Dredging is often part of the remediation process for contaminated sediments in marine waters. The Regional Board under the authority of the Water Code section 13304 may issue a cleanup and abatement order to require an identified responsible party which caused the discharge of chemical constituent(s) present in a contaminated sediment to remediate or effect cleanup of the contaminated sediment.

Specific directives of cleanup and abatement orders issued for remediation or cleanup of contaminated sediments typically direct the responsible party to:

- Quantify the lateral and vertical extent of the contaminated sediment;
- Examine the engineering feasibility of the following alternative sediment cleanup/ remediation strategies;

- ✓ Complete removal of all contaminated sediment;
 - ✓ Removal or remediation of contaminated sediment to a level that will conform with water quality objectives and protect/ restore beneficial uses; and
 - ✓ No action alternative level - The "no action" alternative level involves reliance upon natural processes for the remediation of contaminated sediment sites;
- Examine the cost of sediment cleanup/ remediation to various cleanup/ remediation levels; and
 - Examine the environmental consequences of sediment cleanup/ remediation to various cleanup/remediation levels.

State Water Resources Control Board and Regional Water Resources Control Board Plans and Policies

State plans and policies which affect dredging and disposal of dredge spoil include the Ocean Plan, the (Resolution No. 74-43), the Basin Plan, and any other applicable plans or policies.

Ocean Plan: The Ocean Plan establishes general requirements for waste discharges which could affect state ocean waters. For dredge/fill projects, this may include discharges associated with dredging operations, dredge spoils disposal including beach replenishment, or discharge of dredge spoil return water. The Ocean Plan requirements are incorporated into WDRs issued by the Regional Board for dredge/fill projects.

Water Quality Control Policy for the Enclosed Bays and Estuaries of California: This policy requires that dredge spoils to be disposed of in bay and estuarine waters must comply with federal criteria for determining the acceptability of dredged spoils to marine waters, and must be certified by the State Board or Regional Board as in compliance with state plans and policies. Dredging must also comply with applicable discharge prohibitions contained in the policy (i.e., the policy prohibits the direct or indirect discharge of silt, sand, soil, clay, or other earthen materials from onshore operations including mining, construction, agriculture, and lumbering, in quantities which unreasonably affect or threaten to affect beneficial uses).

California Bay Protection and Toxic Cleanup Act

The California Bay Protection and Toxic Cleanup Act (Water Code, Division 4, Chapter 5.6, sections 13390-13396) requires the Regional Board to identify and characterize toxic hot spots in bays and estuaries and ocean waters of the state and plan for cleanup or remediation of the sites. Furthermore, CWC section 13396 states that no person shall dredge or otherwise disturb a toxic hot spot without first obtaining Clean Water Act section 401 certification or WDRs. Dredging projects involving removal or disturbances of sediments at toxic hot spots must meet the following conditions to the satisfaction of the Regional Board:

- The polluted sediment will be removed in a manner that prevents or minimizes water quality degradation.
- Polluted dredge spoils will not be deposited in a location that may cause significant adverse effects to aquatic life, fish, shellfish, or wildlife or may harm the beneficial uses of the receiving waters, or does not create maximum benefit to the people of the state.
- The project or activity will not cause significant adverse impacts upon a federal sanctuary, recreational area, or other waters of significant national importance.

California Coastal Zone Management Act

The California Coastal Zone Management Act requires that the dredging of coastal waters and estuaries be limited where feasible to maintaining navigational depths [section 30233(a)(2)]. Section 30233(b) further encourages the transportation of dredged material so generated and determined to be suitable for beach replenishment to appropriate beaches or into suitable long shore current systems.

California Fish and Game Code

Dredging operations and the disposal of dredge spoil and dredge spoil return water are subject to applicable sections of the California Fish and Game Code, especially those pertaining to:

- Water pollution (Division 6, Chapter 2, section 5650);
- Endangered species (Division 3, Chapter 1.5, sections 2050 - 2098); and/ or the
- Alteration of any river, stream or lake (Division 2, Chapter 6, section 1601 and section 1603).

California Environmental Quality Act of 1973

The Regional Board may not adopt WDRs for a dredge/fill project until the California Environmental Quality Act (CEQA; P.R.C. 21000-21177) requirements have been satisfied. CEQA requires full public disclosure of a project and the assurance that environmental factors are considered in the decision making process. CEQA requires one of the following:

- an Environmental Impact Report;
- a Categorical Exemption; or
- a Negative Declaration.



San Diego Bay bridge

HISTORY OF DREDGE AND FILL PROJECTS

SAN DIEGO BAY

Dredging of San Diego Bay has occurred for a variety of reasons. San Diego Bay is a major port for commercial and military vessels. In order to provide adequate water depths for navigation and berthing of vessels, dredging projects are required from time-to-time to maintain existing water depths or to increase depths to accommodate these vessels. Significant dredging first occurred within San Diego Bay in the early 1900's.

The volume of material dredged from San Diego Bay over the years is estimated to be between 180 and 190 million cubic yards (mcy) (Smith, 1977 from US Navy, Sept. 1992). About 5 to 8 mcy was disposed at ocean dumping sites, about 35 mcy was placed along Silver Strand beach, and about 147 mcy was used around the Bay as fill. Most of this material was placed prior to 1970. During 1992 and 1993, there were a total of fifteen recent, ongoing, and future dredge and fill projects in San Diego Bay for a total volume of about 3.7 mcy. The US Navy anticipates dredging an additional 13 mcy through 1998.



Mission Bay and San Diego River
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OTHER AREAS

There is on-going maintenance dredging in other areas throughout the San Diego region.

These areas include:

- Agua Hedionda Lagoon;
- Mission Bay; and
- Oceanside Harbor.

Additional areas which have dredging projects scheduled include the following:

- Batiquitos Lagoon;
- Murrieta Creek;
- San Marcos Creek; and
- Santa Margarita River.

DISPOSAL OF DREDGED MATERIAL

Disposal of dredged material is a necessity whenever a dredging project is undertaken. There are alternatives for disposal available within the San Diego Region, including several which can yield significant environmental benefits. However, disposal of dredged material can be a significant problem when there is toxic contamination of the dredged materials. Prior to dredging, physical, chemical, and biological testing of the sediment have been required in order to determine the

appropriate alternative for disposal of the dredged material. Potential alternatives for the disposal of dredged material from San Diego Bay include:

- Beach replenishment;
- Habitat restoration/ enhancement;
- Ocean disposal;
- Incineration;
- Upland disposal without treatment;
- Upland disposal with treatment;
- Confined aquatic disposal; and
- Reuse sites such as capping.

Physical Characteristics of Dredged Material

Evaluation of the physical characteristics of sediments proposed for discharge is necessary to determine potential environmental impacts of disposal, the need for additional chemical or biological testing, as well as potential beneficial use of the dredged material. The physical characteristics of the dredged material include: particle-size distribution, water content or percent solids, specific gravity of solids, and plasticity characteristics. The sediment physical characteristics should also be evaluated from the standpoint of compatibility with different kinds of biological communities likely to develop for the disposal environments under consideration.

Chemical Characteristics of Dredged Material

The initial screening for contamination is designed to determine, based on available information, if the sediments to be dredged contain any contaminants in forms and concentrations that are likely to cause unacceptable impacts to the environment. During this screening procedure, specific contaminants of concern are identified in a site-specific sediment so that any subsequent evaluation is focused on the most pertinent contaminants.

Physical behavior of the material at the disposal site

Physical testing and assessment should focus on both the short-term and long-term physical behavior of the material. For open-water alternatives, these assessments might include an analysis of water-

column dispersion, mound development, and long-term mound stability or dispersion. For confined alternatives, these assessments might include an analysis of solids retention and storage requirements during disposal and long-term consolidation behavior in the confined disposal facility.

Any contaminant testing should focus on those contaminant pathways where contaminants may be of environmental concern, and the testing should be tailored to the available disposal site. For open-water alternatives, contaminant problems may be related to either the water column or benthic environment, and the appropriate testing and assessments would include required Clean Water Act or MPRSA testing. For confined sites, potential contaminant problems may be either water quality related (return water effluent, surface runoff, and ground water leachate), contaminant uptake related (plant or animal), or air related (gaseous release).

Traditional locations for disposal of non-contaminated dredged material have included nearshore ocean waters along Silver Strand, in-bay waters of the Naval Amphibious Base Coronado, and the LA-5 Ocean Dredged Material Disposal Site (LA-5).

Dredging permits issued during the past twenty years have allowed about 10 mcy of material to be disposed either on Silver Strand beaches or LA-5. Chemical testing data for projected future US Navy projects suggest that 92 percent of the material planned to be dredged from San Diego Bay will qualify for placement at either habitat enhancement sites, Silver Strand beaches or at LA-5.

Material which is not physically compatible with the receiving disposal site may qualify to be disposed of at LA-5. Material which cannot meet either the 404(b)(1) Guidelines or the USEPA ocean dumping criteria must be disposed in a different manner.

Beach Replenishment

Shore erosion is a major concern along the coast of the San Diego Region. Beach replenishment is usually accomplished by dredging sand from inshore or offshore locations and transporting the sand by truck, by split-hull hopper dredge, or by hydraulic pipeline to an eroding beach (e.g., Silver Strand beach). These operations may result in displacement of the substrate, changes in the topography or bathymetry of the borrow and replenishment areas, and destruction of nonmotile benthic communities. However, a well-planned beach nourishment operation can minimize these

effects by taking advantage of the resiliency of the beach and nearshore environment and its associated biota, and by avoiding sensitive resources. When dredged material is used for beach replenishment it should closely match the sediment composition of the eroding beach and be low in fine sediments, organic material, and pollutants. The USACOE requires that dredged sediments proposed for placement on a beach must be:

- Particles mostly greater than 74 microns (i.e., sand, gravel or rock);
- Compatible with sediments on the receiving beach; and
- Substantially the same as the disposal site.

Generally, the disposal of clean, sandy material on beaches poses no present problem in terms of sediment quality, quantity, or feasibility. In fact, to be consistent with the California Coastal Management Plan, every effort must be made to beneficially use sandy material for beach nourishment or habitat restoration/ enhancement.

Habitat Restoration/ Enhancement

Restoration/ enhancement of wetlands is an alternative that can benefit the environment. In general, restoration of a former wetland is more likely to be successful than creation of a new wetland where none had existed previously. In selecting a site, alteration of substrate and changes in circulation and sedimentation patterns should be considered. In general, the material used for wetland restoration should remain water-saturated, reduced, and near neutral in pH. These characteristics have a great influence on the environmental activity of any chemical contaminants which may be present.

Ocean Disposal

The ocean water disposal technique involves placing the dredged sediment in open ocean waters at an USEPA approved site. The suitability of dredged sediment for open-water disposal is evaluated by effects-based testing as there are no sediment criteria.

In situations where the contaminated sediment will not meet USEPA's or the Corps of Engineers' criteria for ocean disposal, the sediment must be treated to meet those criteria by physical, chemical, biological, or thermal treatment methods.

LA-5 Ocean Dredged Material Disposal Site: LA-5 received final designation from the USEPA in 1991. This site has been used for the disposal of dredged material since the 1970's and has no capacity or dumping rate restrictions. About 4 mcy were disposed there by the USACOE between 1977 and 1987. About 2.5 mcy were deposited by the US Navy, the National Steel and Shipbuilding Corporation, and Southwest Marine, Inc. during that same period (USEPA, 1988). The LA-5 site is a non-dispersive open water disposal site. Most of the material placed here is intended to remain on the bottom following placement. This site is located 11 km (5.4 nm) southwest of Point Loma on the continental shelf in 147 to 200 m (80 to 110 fm) of water. The center coordinates of the site are 32° 36' 83" North latitude and 117° 20' 67" West longitude, with a radius of 910 m (1,000 yd).

Upland (Landfill) Disposal without treatment

Upland disposal is the process of placing dredged material into or onto a properly permitted designated solid waste disposal facility or landfill, or into a structure specifically designed to accept dredged material. This upland disposal alternative is used when the dredged material does not qualify for any aquatic disposal alternative.

Upland (Landfill) Disposal with treatment

The landfill disposal with treatment technique refers to situations where the contaminated sediment will not meet state criteria for landfill disposal without the employment of physical, chemical, biological or thermal treatment methods.

Confined disposal

Confined disposal is placement of dredged material within diked nearshore or upland confined disposal facilities via pipeline or other means. Confined disposal facilities are designed and operated to provide adequate storage capacity for meeting dredging requirements and to maximize efficiency in retaining the solids. If contaminants are present in the dredged material, then control of contaminant releases is important in the design and operation of the confined disposal facility. In most cases confined disposal facilities must be used over a period of many years, storing material dredged periodically over the design life. Long-term storage capacity of these confined disposal facilities is therefore a major factor in design and management. Once water is drained from the confined disposal facility following active disposal operations, natural drying forces begin to dewater the dredged material, adding additional storage capacity.

Reuse Sites – Capping

Capping can be done in place or through the controlled accurate placement of contaminated material at an open water disposal site. Capping in place is a type of non-removal action and refers to the placement of a clean cover material over the contaminated sediment. Capping can also be done by the accurate placement of contaminated material at an open water disposal site followed by a covering or cap of clean isolating material.

In both cases, the purpose of the cover material is to minimize or prevent the migration of contaminants from the sediment to the water column. In remedial actions involving capping, monitoring is needed to ensure that the integrity of the cap is maintained. The key elements of the monitoring program may include the monitoring of:

- Changes in cap thickness;
- Erosion around cap boundaries; and/ or
- Possible leakage of contaminants from the cap.

PROBLEMS POSED BY DREDGING SEDIMENT / CONTAMINATED SEDIMENT

Many chemical substances discharged into marine waters tend to become attached to sediment particles and thus accumulate to high concentrations in benthic sediments. The dredging process can disturb bottom sediments leading to the release of pollutants into the water column by resuspension of contaminated sediment particles; dispersal of interstitial water in the sediment pores; and desorption of chemicals from the contaminated sediment. Common toxic constituents of many sediments include ammonia, low dissolved oxygen and hydrogen sulfide.

ENVIRONMENTAL THREAT ASSOCIATED WITH CONTAMINATED SEDIMENTS

Benthic marine sediments support biological communities which reside there (e.g., clams, worms, bottom feeding fish), and provide spawning habitat for many pelagic species (e.g., invertebrates and fish). Elevated concentrations of chemicals in the sediment may cause acute mortality or affect the reproductive behavior, egg hatching characteristics, and early life development of these organisms. In addition to causing acute mortality and abnormal development, contaminated

sediments can also lead to the accumulation of contaminants in organisms due to the effects of bioaccumulation. In addition, biomagnification of the contaminants can occur in the food chain when small contaminated organisms are consumed by higher trophic level species including man.

The threat to the public health from contaminated sediments centers around three principal pathways of exposure:

- Consumption of fish and shellfish contaminated by chemicals in the sediment through the processes of bioaccumulation and biomagnification;
- Direct contact with contaminated sediments by people; and
- Incidental ingestion of contaminated sediment or associated waters by people.

DISPOSAL OF CONTAMINATED MATERIAL DREDGE SPOIL RETURN WATER

After removal of the contaminated material from the water, the contaminated material must be separated from the slurry to attain two distinct waste streams, the concentrated contaminated material and the dredge spoil return water. The methods for separating the material solids from the water include the use of settling basins, clarifiers, impoundment basins, screens and cyclones. The dredge spoil return water consists of a substantially liquid waste stream that may need to be subsequently treated by physical, chemical or biological methods for removal of dissolved and suspended pollutants.



Waste

DISCHARGES OF WASTE TO LAND

Discharges of solid, semi-solid, and liquid wastes to landfills, waste piles, surface impoundments, pits, trenches, tailings ponds, natural depressions and land treatment facilities (collectively called "waste management units") have the potential to create significant pollution sources affecting water quality. Unlike surface waters, which often have the capacity to assimilate waste discharges of wastes, ground waters have little or no assimilative capacity. This is due to slow contaminant migration rates, lack of aeration, minimal biological activity, and laminar flow patterns. Waste containing elevated pollutant concentrations can require

containment in waste management units or active treatment for extended periods to prevent waste migration and impairment of the underlying ground water quality. The pollutants may continue to affect water quality long after the discharge has ceased, either because of continued leachate or gas discharges from the unit, or because pollutants have accumulated in underlying soils from which they are gradually released to ground water.

Landfills for disposal of municipal or industrial solid waste (solid waste disposal sites) are the major categories of waste management units in the Region. Surface impoundments are also used for storage or evaporative treatment of liquid wastes, waste piles for the storage of solid wastes, and land treatment units for the biological treatment of semi-solid sludge from wastewater treatment facilities. Sumps, trenches, and soil depressions have also been used in the past for liquid waste disposal. The Regional Board issues waste discharge requirements to ensure that these discharges are properly contained to protect the Region's water resources from degradation, and to ensure that dischargers undertake—implement effective monitoring to verify continued compliance with all applicable requirements.

Waste Management Units —are may be subject to concurrent regulation by other state and local agencies responsible for land use planning, solid waste management, and hazardous waste management. "Local enforcement agencies" (or LEAs) implement the State's solid waste management laws and local ordinances governing the siting, design, and operation of solid waste disposal facilities (usually landfills) with the concurrence of the California Department of Resources Recycling and Recovery (CalRecycle) Integrated Waste Management Board (CIWMB). CalRecycle ~~The CIWMB~~ also has direct responsibility for review and approval of plans for closure and post-closure maintenance of nonhazardous solid waste landfills. The Department of Toxic Substances Control (DTSC) issues permits for all hazardous waste management treatment, storage, and disposal facilities (which include incinerators, tanks, and warehouses where hazardous wastes are stored in drums as well as landfills, waste piles and surface impoundments). The State Board, regional boards, CIWMB CalRecycle, and DTSC have entered into a Memorandum of Understanding to coordinate their respective roles in the concurrent regulation of these discharges.

The laws and regulations governing discharges of hazardous and non-hazardous wastes have been revised and strengthened in the last few years over

the past decade. The discharge of municipal solid wastes to land are closely regulated and monitored; however, some water quality problems have been detected and are being addressed. ~~Recent Past~~ monitoring efforts under the State and Regional Boards' ~~Chapter 15 Land Disposal~~ and SWAT programs ~~have~~ revealed that discharges of municipal solid wastes to unlined landfills have resulted in ground water degradation and pollution by volatile organic constituents (VOCs) and other waste constituents. VOCs are components of many household hazardous wastes and certain industrial wastes that are present within municipal solid waste streams. VOCs can easily migrate from landfills either in leachate or by vapor-phase transport. Clay liners and natural clay formations between discharged wastes and ground waters are largely ineffective in preventing water quality impacts from municipal solid waste constituents. In a recently adopted policy for water quality control, the State Board found that "research on liner systems for landfills indicates that (a) single clay liners will only delay, rather than preclude, the onset of leachate leakage, and (b) the use of composite liners represents the most effective approach for reliably containing leachate and landfill gas" (State Board Resolution No. 93-62, Policy for Regulation of Discharges of Municipal Solid Waste).

The USEPA ~~has~~ adopted new federal regulations under Subtitle D of the Resource Conservation and Recovery Act (RCRA) which require the containment of municipal solid wastes by composite liners and leachate collection systems. Composite liners consist of a flexible synthetic membrane component placed above and in intimate contact with a compacted low-permeability soil component. This liner system enhances the effectiveness of the leachate collection and removal system and provides a barrier to vapor-phase transport of VOCs from the unit. Regional Boards and the CIWMB CalRecycle are implementing these new regulations in California under a policy described in State Board Resolution No. 93-62, ~~and new regulations from CIWMB.~~ The State Board ~~is in the process of developing~~ revised regulations under 23 CCR, Division 23, Title 27, Chapter 15, Discharges of Waste to Land Solid Waste, to fully implement water quality-related portions of the RCRA Subtitle D federal regulations. While a single composite liner of the type that can be approved under RCRA Subtitle D regulations is a significant improvement over past municipal solid waste containment systems, it should be noted that single composite liners will not necessarily provide complete protection for ground water resources.

CALIFORNIA CODE OF REGULATIONS TITLE 27 AND TITLE 23, CHAPTER 15

~~Chapter 15 Discharges of wastes to land includes regulations governing discharges of waste to land for treatment, storage, or disposal:~~

- The regulations governing discharges of non-hazardous wastes to land in California Code of Regulations (CCR) Title 27 cover landfills, surface impoundments, waste piles, land treatment units, mining waste management units and confined animal facilities.

- The regulations governing discharges of hazardous wastes to land in CCR, Title 23, Division 3, Chapter 15 cover landfills, surface impoundments, and waste piles.

In addition, actions to clean up and abate conditions of pollution or nuisance at contaminated sites⁹ are covered by relevant portions of the regulations where contaminated materials are taken off-site for treatment, storage, or disposal and, as feasible, where wastes are contained or remain on-site at the completion of cleanup actions. The regulations classify wastes according to their threat to water quality, classify waste management units according to the degree of protection that they provide for water quality, and provide siting, construction, monitoring, corrective action, closure and post closure maintenance criteria. ~~Chapter 15~~ The applicable regulatory requirements are minimum standards for proper management of each waste category. These regulations require the complete containment of wastes which, if discharged — to land for treatment, storage or disposal, have the potential to degrade the quality of water resources. The Regional Board may impose more stringent requirements to accommodate regional and site-specific conditions.

Some subcategories of Chapter 15 include:

~~Article 2 – Waste Classification and Management;~~

~~Article 3 – Waste Management Unit Classification~~

~~————— and Siting;~~

~~Article 4 – Construction Standards;~~

~~Article 5 – Water Quality Monitoring for Classified~~

⁹ Also see State Water Board Policy Resolution No. 92-49 (Chapter 5)

~~Waste Management Units;~~

~~Article 6 – Confined Animal Facilities;~~

~~Article 7 – Mining Waste Regulations;~~

~~Article 8 – Closure and Post-Closure~~

~~Maintenance; and~~

~~Article 9 – Compliance Procedures.~~

~~Chapter 15~~The applicable regulations defines waste types including hazardous wastes, designated wastes,¹⁰ nonhazardous wastes and inert wastes as shown in Table 4-7.

Chapter 15 requires the review and update of waste discharge requirements for all nonhazardous waste treatment, storage, and disposal sites by July 1, 1994. As of ~~1994–2014~~, the San Diego Region has ~~no two~~ hazardous waste disposal sites (Class I), which are the Otay Class I Landfill and former Omar Rendering Class I Landfill. Designated wastes (Class II), nonhazardous solid wastes (Class III) and the management of inert wastes are regulated by the Regional Board.

The regulation of nonhazardous solid waste disposal sites (Class III) has been ongoing by the Regional Board since the early 1960's. Many of the small older sites have closed, and waste is now being disposed at large regional sanitary landfills. The Board's main actions at nonhazardous solid waste facilities are review of Joint Technical Documents (JTDs) for the review and revision of waste discharge requirements for the active sites to assure consistency with the current regulations. These actions include review of proposed engineering design and construction plans for liner systems, leachate collection and removal systems, storm water conveyance systems, etc. and construction quality assurance (CQA) documents for new expansions of operating waste containment units and landfill cover systems at closing units; defining the levels of designated wastes, the upgrading of ~~ground~~ water quality monitoring systems to identify–determine if water quality protection standards are violated; ~~the~~ establishing ~~of~~ corrective action programs where standards are violated; ~~and~~ review and oversight of the development and implementation of facility closure plans.

The criteria for ~~determining whether~~classifying a nonhazardous waste is a designated waste are based on water quality objectives in the vicinity of

¹⁰ Also see Water Code section 13173.

the site, the containment features of the solid waste facility, and the solubility/mobility of the waste constituents. Therefore, all owners and operators of active nonhazardous municipal solid waste facilities in the San Diego Region who wish to receive wastes other than municipal solid waste or inert waste must propose waste constituent concentration criteria above which wastes will be considered designated waste and therefore, not suitable for disposal at their site.

In addition, the Regional Board may revise waste discharge requirements ~~are to be revised~~ to incorporate reclassification and retrofitting requirements and a revised monitoring program. Closed, abandoned and inactive landfills and other nonhazardous solid waste disposal sites are also subject to the provisions of either Title 27 (section 20080(g)) for nonhazardous wastes) or Chapter 15 (for hazardous wastes).

Persons responsible for such sites may be required to develop and implement monitoring, to comply with closure and post-closure maintenance requirements, and to comply with reporting, notification, financial assurances, and record keeping requirements.

Waste Classification

Contaminated soil and other material must be treated or properly disposed in order to minimize the threat to the quality of surface or ground waters.

Waste is classified in California by two separate California Environmental Protection Agency (Cal-EPA) agencies with separate regulatory authority. The California Department of Toxic Substances Control (DTSC) classifies waste as hazardous or non-hazardous based on the threat to public health. The State Board, together with the regional boards, classifies non-hazardous waste as "designated", "nonhazardous", or "inert" based on the threat that each poses to the beneficial uses of ground and surface waters, as required by the Porter-Cologne Water Quality Control Act and regulations, water quality control plans and policies set forth by the Regional Board.

As shown in Figure 4-2, the ~~Chapter 15~~applicable regulations divide waste into four categories which in turn, determine the classes of waste management units to which their discharge is permitted for treatment, storage or disposal. Detailed criteria are contained in Title 22 of the CCR, Division 4.5, ~~Chapter 11~~, for determining whether a waste falls into the hazardous category. These criteria fall under the headings of toxicity, ignitability, reactivity, corrosivity, and listing under

the Resource Conservation and Recovery Act (RCRA). Hazardous waste may be discharged only to Class I waste management units which provide both natural geologic and engineered containment features to isolate the wastes from the environment, unless a specific variance has been granted by DTSC from California's hazardous waste management requirements.

"Nonhazardous solid waste" (see [Title 27, section 20220](#), Table 4-7) is the regulatory term for "municipal solid waste" or "refuse" and is characterized as having a significant proportion of putrescible (degradable) matter, stringent moisture limitations, and prohibitions against inclusion of "designated" or "hazardous" wastes. "Nonhazardous solid waste" may be discharged to Class III landfills that protect beneficial uses of nearby waters, but do not provide complete waste containment. The only threat to water quality posed by wastes in the "inert" category is siltation. Paving fragments and non-degradable construction debris are examples of "inert waste". Wastes in this category may be discharged to unclassified waste management units that are located and managed to keep the wastes from entering surface waters or drainage courses.

"Designated waste" is defined in the [California Water Code section 13173 and Chapter 15 Title 27, section 20210](#) regulations, and is described in Table 4-7. The second part of the definition refers to those wastes granted a variance by DTSC from Class I disposal.

Dischargers are required to submit an initial analysis of the material by a state-certified laboratory. If the material is deemed hazardous, the discharger is referred to the California Department of Toxic Substances Control. For non-hazardous materials, general WDRs can be issued on a case-by-case basis. All permitted treatment or disposal includes monitoring and reporting requirements.

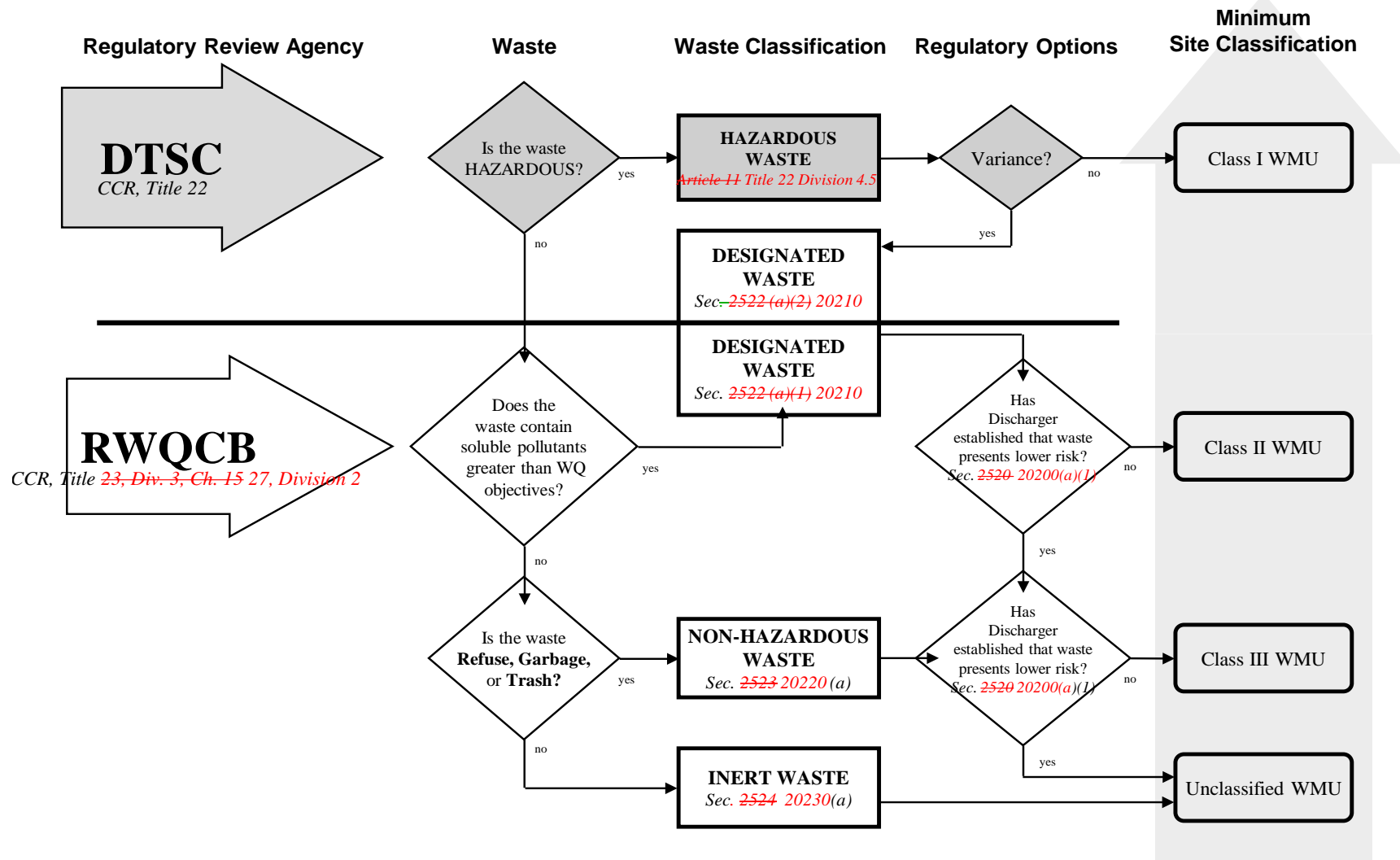
Remediation treatment includes biodegradation (by a land treatment process) for hydrocarbon contaminated soil found on a site and a fixation process for metals contaminated soils. In-situ disposal (without treatment) can be allowed, on a case-by-case basis, for material that is not considered to be a threat to surface or ground water.

Table 4 - 76. Landfill Classifications

Disposal Site Classification	Definitions of Waste Types (California Code of Regulations, Title 273, Division 23, Chapter 15, sections 20220521 et. seq.)	Examples
Class I Hazardous Waste	<p>(a) Hazardous waste is any waste which, under section 66300 <u>Division 4.5</u> of Title 22, is required to be managed according to Chapter 30 of <u>Division 4.5</u> of Title 22.</p> <p>(b) Hazardous waste shall be discharged only at Class I waste management units which comply with the applicable provisions unless wastes qualify for a variance under <u>section 25143 of the Health and Safety Code, section 66310 of Title 22.</u></p> <p>(c) Waste which have been designated as restricted wastes by DHS DTSC pursuant to section 6690066268.29, of Title 22 shall not be discharged to waste management units after the restriction dates established by section 66905 <u>Article 2, Chapter 18, Division 4.5</u> of Title 223 unless:</p> <ol style="list-style-type: none"> (1) Such discharge is for retrievable storage, and (2) DHS-DTSC has granted a variance from restrictions against land disposal of the waste under section 66930-66268.29 of Title 22. 	Materials that contain high concentrations of pesticides, certain solvents, and PCBs are examples of hazardous wastes.
Class II Designated Waste	<p>(a) Designated waste is defined as:</p> <ol style="list-style-type: none"> (1) Nonhazardous waste which consists of or contains pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality objectives, or which could cause degradation of waters of the state. (2) Hazardous waste which has been granted a variance from hazardous waste management requirements pursuant to section 66310 of Title 22 <u>section 25143 of the Health and Safety Code.</u> <p>(b) Wastes in this category shall be discharged only at Class I waste management units <u>in compliance with Chapter 15</u> or at Class II waste management units which comply with the applicable provisions of Chapter 15 <u>Title 27</u> and have been approved for containment of the particular kind of waste to be discharged. Decomposable wastes in this category may be discharged to Class I or II land treatment waste management units.</p>	Materials with high concentrations of biological oxygen demand (BOD), hardness, or chloride. Inorganic salts and heavy metals are "manageable" hazardous wastes.
Class III Nonhazardous Solid Waste	<p>(a) Nonhazardous solid waste means all putrescible and nonputrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes and other discarded solid or semi-solid waste: provided that such wastes do not contain wastes which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentrations which exceed applicable water quality objectives, or could cause degradation of waters of the state (i.e., designated waste).</p>	Garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid wastes.

Disposal Site Classification	Definitions of Waste Types (California Code of Regulations, Title 273, Division 23, Chapter 15, sections 20220521 et. seq.)	Examples
<p>Class III Nonhazardous Solid Waste</p> <p>(continued)</p>	<p>(b) Except as provided in Sub section 20220520(b) of Chapter 15 Title 27, nonhazardous solid waste may be discarded at any classified landfill which is authorized to accept such waste, provided that:</p> <p>(1) The discharger shall demonstrate that co-disposal of nonhazardous solid waste with other waste shall not create conditions which could impair the integrity of containment features and shall not render designated waste hazardous (e.g., by mobilizing hazardous constituents);</p> <p>(2) A periodic load-checking program approved by DHS CalRecycle or Solid Waste LEA and Regional Boards shall be implemented to ensure that hazardous materials are not discharged at Class III landfills.</p> <p>(c) Dewatered sewage or water treatment sludge may be discharged at a Class III landfill under the following conditions, unless DHS DTSC determines that the waste must be managed as a hazardous waste:</p> <p>(1) The landfill is equipped with a leachate collection and removal system;</p> <p>(2) The sludge contains at least 20 percent solids by weight if primary sludge, or at least 15 percent solids if secondary sludge, mixtures of primary and secondary sludges, or water treatment sludge; and</p> <p>(3) A minimum solids-to-liquid ration of 5:1 by weight shall be maintained to ensure that the co-disposal will not exceed the initial moisture-holding capacity of the nonhazardous solid wastes. The actual ratio required by the Regional Board shall be based on site-specific conditions.</p> <p>(d) Incinerator ash may be discharged at Class III landfill unless DHS DTSC determines that the waste must be managed as hazardous waste.</p>	<p>Garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid wastes.</p>
<p>Unclassified /Inert</p>	<p>(a) Inert waste does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives. It does not contain significant quantities of decomposable waste.</p> <p>(b) Inert waste do not need to be discharged to classified management units.</p> <p>(c) Regional Boards may prescribe individual or general waste discharge requirements for discharges of inert wastes.</p>	<p>Concrete, rock, asphalt, plaster, brick, vehicle tires, uncontaminated soils.</p>

Figure 4-2. Waste Classification Process



RESOURCE CONSERVATION AND RECOVERY ACT OF 1976

The Resource Conservation and Recovery Act (RCRA) is the federal law regarding the treatment, storage and disposal of hazardous waste to land. The State implements RCRA's Subtitle C (management of hazardous wastes) through the Department of Toxic Substance Control (DTSC) and the Regional Boards. In August 1992, the USEPA formally delegated RCRA Subtitle C program implementation authority to DTSC. As described above, regulation of hazardous waste discharges is also included in ~~CCR Title 23, Chapter 15~~ (Chapter 15). Monitoring requirements were amended in 1991 to make Chapter 15 monitoring requirements be equivalent to RCRA requirements. Those RCRA equivalent monitoring requirements also carried over into Title 27 in 1997. These monitoring requirements are implemented through the adoption of WDRs for hazardous waste sites covered by RCRA. The discharge requirements are then a part of a state RCRA permit issued by DTSC.

Federal regulations required by the RCRA's Subtitle D (nonhazardous wastes) ~~have been~~ were adopted for municipal solid waste landfills (40 CFR Parts 257 & 258). The California Department of Resources Recycling and Recovery (CalRecycle) California Integrated Waste Management Board (CIWMB) and the State Board are jointly responsible for implementation of is the State lead agency for Subtitle D implementation in California. The State Board and the CIWMB are applying to the USEPA for State program approval. It is important to note that certain federal regulatory requirements will be effective unless and until the State program is approved. Delegation of authority for T the State Board also has the responsibility to implement Subtitle I (Underground Storage Tanks). will occur after USEPA approves the State's program application.

SOLID WASTE ASSESSMENT TEST (SWAT)

The Regional Board administers the Solid Waste Assessment Test (SWAT) Program in the Region. The SWAT program requires owners of active or inactive non-hazardous solid waste disposal sites to evaluate the possible migration of hazardous waste or leachate to waters of the state. The SWAT program was initiated with the enactment of Water Code section 13273 in 1985. In addition to requiring site evaluations, the SWAT program also:

- Provides deadlines for implementation of water quality monitoring systems at active solid waste disposal sites;

Requires the State Board to develop a ranked list of all solid waste disposal sites, on the basis of the threat which they may pose to water quality; and

- Requires operators of active and inactive solid waste disposal sites to implement a water quality monitoring system to verify that the solid waste disposal site has not been affected by leakage, and if there is leakage to take remedial actions under the Chapter 15 Land Disposal program.

Program funding was eliminated in 1991, reducing Regional Board review to SWAT sites under regulation due to higher priority work in other Regional Board programs. All sites eventually will be required to complete a SWAT and more sites will be reviewed if more program funding becomes available.

SLUDGE USE AND DISPOSAL

Sludge is a residual by-product of sewage treatment, water treatment, and certain industrial processes. The higher the degree of wastewater treatment, the larger the residue of sludge that must be handled. The treatment and disposal of sludge can be the single most complex and costly operation in a municipal wastewater treatment system. The sludge is made of materials settled from the wastewater - such as rags, sticks, and organic solids - and of solids generated in the wastewater treatment processes - such as the excess activated sludge created by aeration or the chemical sludge created by a tertiary treatment process.

The quantities of sludge involved are significant. For primary treatment the quantities of sludge may be 2,500 to 3,500 gallons per MG of wastewater treated. When treatment is upgraded to activated sludge, the quantities increase by 15,000 to 20,000 gallons per MG of wastewater treated. Use of chemicals can add another 10,000 gallons. For a typical activated sludge municipal wastewater treatment plant, the amount of sludge to be disposed of is typically about one ton per MG or about 20 pounds per month per home.

Raw sludge usually contains 93 to 99.5 percent water before it is treated further or dewatered. It contains organic solids and dissolved nutrients (e.g., nitrogen and phosphorus), making it useful as a supplement to chemical fertilizers and soil conditioners. Other typical constituents are

inorganic ions, such as iron and zinc. While trace amounts of these inorganic ions are used by plants and organisms, some heavy metals that may be present in sewage sludge from household or commercial and industrial sources can be toxic to plants, animals, and humans. Untreated sludge also contains disease-causing organisms (e.g., bacteria, viruses, protozoa, and eggs of parasitic worms). In addition, sewage sludge may contain toxic chemicals from household, commercial, and manufacturing activities that use the sewer system to dispose of these liquid wastes.

Most wastewater treatment plants treat the sludge prior to ultimate use or disposal. Normally this treatment consists of some combination of the following processes:

- **Conditioning:** treatment of the sludge with chemicals or heat so that the water may be readily separated.
- **Thickening:** separation of as much water as possible by gravity or flotation process by subjecting the sludge to vacuum pressure, or other drying processes.
- **Stabilization:** stabilization of the organic solids so that they may be handled or used as soil conditioners without causing a nuisance or health hazard through processes referred to as "digestion".
- **Reduction:** reduction of solids to a stable form by wet oxidation processes or incineration.

The disposal point alternatives for municipal wastewater sludge in the San Diego Region are limited. Since treated and untreated sludge can contain high concentrations of toxic metals and significant amounts of toxic organic pollutants and pathogens, the USEPA and the Regional Board do not allow the direct discharge of sludge to the ocean or any other surface waters. Air pollution regulations have strict requirements on sludge incineration processes. Sludge disposal to land must be carefully controlled because of potential impacts on ground and surface water quality.

Sludge handling and disposal is regulated under 40 CFR Part 503 as a self-implementing program enforced by USEPA; the State does not have delegated authority for implementing the sludge program. Uses of sludge or sludge by-products and sludge disposal in the Region include:

- Sludge digester methane gas as fuel in gas boilers to generate electricity;

- Sludge as a soil amendment: composting dewatered sludge (pathogens are killed at composting temperatures);
- Sludge as a nutrient source for non-edible crops: direct application to agricultural crops not meant for direct human consumption (mixing, tilling, or injecting sludge into soil);
- Sludge disposal directly in certain landfills;
- Sludge disposal in-situ; and
- Incineration.

Prior to disposal of sludge, an initial analysis by a state certified laboratory is required to determine if there are any hazardous substances in the sludge. Nonhazardous sludge can be disposed of in the above ways, usually under WDRs. Disposal of nonhazardous sludge at Class III landfills is regulated under WDRs and must meet criteria listed in Table 4-7. Landfills are required to report the quantity and chemical composition of all accepted sludge as part of their individual WDRs.

Currently, the Regional Board can regulate handling and disposal of sludge pursuant to [Chapter 15 Title 27](#) and [DTSC Department of Health Services](#) standards. The USEPA has promulgated a policy of promoting those municipal sludge management practices that provide for the beneficial use of sludge while maintaining or improving environmental quality and protecting public health. USEPA is currently developing sludge use and disposal criteria. The USEPA has also proposed a rule which requires states to develop a program to assure compliance with the Federal criteria. The State Board will be developing a state sludge management program consistent with the USEPA policy and criteria.

AUTO SHREDDER WASTE

[According to CalRecycle, autoshredder waste is one of the top three materials used for alternative daily cover at nonhazardous waste landfills in California.](#) There is a significant volume of auto shredder waste generated in California every year. [CalRecycle reports that approximately 500,000 tons of autoshredder wastes were used as alternative daily cover in 2004, 2008 and 2012. In 1985, 166,500 tons of auto shredder waste was produced. There was one producer of auto shredder waste in the San Diego Region as of February, 1994.](#) Auto shredder waste is the material that remains after articles such as auto bodies, appliances and sheet metal are shredded and have had their metals

removed. The majority of auto shredder waste is being treated to nonhazardous levels, but a significant portion of the waste must be disposed of in a hazardous waste landfill. Eight metal compounds, which include cadmium, total and hexavalent chromium, lead, copper, mercury, nickel and zinc, plus PCBs may cause auto shredder waste to be classified as hazardous. Senate Bill 976 was passed in 1985 which required Regional Boards to prepare a list of Class III, nonhazardous waste landfills as authorized to accept and dispose of auto shredder waste. ~~There are only four landfills which currently accept auto shredder waste in California. They are West Contra Costa, Altamont, BKK landfill and Prima Deshecha.~~

POLICY ON DISPOSAL OF SHREDDER WASTE (RESOLUTION NO. 88-06)

~~The State Water Board Policy on the Disposal of Shredder Wastes (Shredder Waste Disposal Policy Order 87-22) was adopted on March 19, 1987. The Regional Board adopted Resolution No. 88-06 on February 8, 1988 to incorporate that policy into the Basin Plan and enforce the statewide policy (Resolution 87-22). This policy designates West Miramar Landfill, Otay Annex Landfill, and Prima Deshecha Landfills as facilities that are authorized to receive shredder wastes. The policy also permits the disposal of shredded wastes produced by the mechanical destruction of car bodies, old appliances and similar castoffs, into certain landfills under specific conditions designated and enforced by the Regional Boards. Hazardous and nonhazardous shredder waste may be disposed of in appropriate Class III landfills where doing so would not cause water quality impairment. The policy specifies the shredder must not exceed PCB levels of 50 milligrams per kilogram (mg/kg). Also, the shredder waste must be disposed on the last and highest lift in a closed disposal cell or in an isolated cell solely designated for the disposal of shredder waste.~~

SHREDDER WASTE POLICY (RESOLUTION NO. 85-92)

~~The Regional Board adopted Resolution No. 85-92, the Designation of Class III Landfills within the San Diego Region to Accept Shredder Wastes as Required by section 25143.6 of the Health and Safety Code (Shredder Waste Policy) on December 16, 1985. The Shredder Waste Policy, required by section 25143.6 of the Health and Safety Code, designates three landfills, the City of San Diego's West Miramar Solid Waste Disposal Facility, the County of San Diego's Otay Annex Sanitary Landfill, and the County of Orange's Prima~~

~~Deshecha Canada Sanitary Landfill, as being authorized to dispose of shredder wastes as required by section 25143.6 of the Health and Safety Code. These three landfills are subject to the following conditions:~~

~~The appropriate agency of the City of San Diego, the County of San Diego, and the County of Orange shall, prior to the start of such an operation, submit a report of waste discharge and obtain revised waste discharge requirements for the disposal of shredder wastes. The report of waste discharge shall contain sufficient information demonstrating conformance with Item "i" or, alternatively, Item "ii" listed below to their satisfaction of the Regional Board.~~

~~i. The report of waste discharge shall demonstrate that shredder waste will be discharged to a Class I or Class II waste management unit in accordance with the criteria stated in Chapter 15, Title 23 of the CCR.~~

~~ii. The report of waste discharge shall demonstrate that under section 2520 (a)(l), Chapter 15, Title 23, CCR, the shredder waste contains a particular waste constituent or combination of constituents which present a lower risk of water quality degradation than indicated by its classification as a designated waste.~~

~~Upon application for modification of waste discharge requirements, other landfills within the San Diego Region may be authorized by the Regional Board to accept and dispose of shredder wastes, subject to the restrictions discussed above.~~

CONTROL OF NONPOINT SOURCE POLLUTION

CHRONOLOGY OF NONPOINT SOURCE POLLUTION CONTROL MEASURES

To implement nonpoint source pollution control, several regulatory measures have been taken by federal, state, regional and local government. The following chronology shows the applicable regulatory measure, responsible governmental agency, and year when each measure was enacted or adopted. These regulatory measures will be discussed in the pages that follow.

Regulatory Measure	Responsible Agency	Year
RB Resolution No. 79-25	RB	1979
RB Resolution No. 87-91	RB	1987
CWA, section 201(g)(1)(b)	USEPA	1987
CWA, section 205(j)(5)	USEPA	1987
CWA, section 319(h)	USEPA	1987
CWA, section 402(p)	USEPA	1987
CWA, section 603(c)(2)	USEPA	1987
CZARA, section 6217	USEPA	1990
RB Resolution No. 92-21	RB	1992

THE NEED FOR NONPOINT SOURCE POLLUTION CONTROL

Efforts to improve water quality under the NPDES program have traditionally focused on reducing pollutants from the major point sources, namely municipal sewage and industrial process wastewater. Point sources are defined as discrete conveyances, from which pollutants are, or may be discharged. These point sources received early emphasis because they were obvious sources of pollution and easily linked to degraded water quality conditions. However, as the permitting effort proceeded and control measures for municipal sewage and industrial wastewater were implemented, it became increasingly clear that control and reduction of nonpoint source pollution was also needed in order to restore and protect the nation's waters.

DEFINITION OF NONPOINT SOURCE POLLUTION

In contrast to point sources, nonpoint sources of water pollution are generally defined as sources which are diffuse in nature, usually associated with man's uses of land, and are not subject to the federal NPDES permitting program. Diffuse sources originate over a wide area rather than from a definable point. They often enter receiving waters in the form of surface runoff but are not conveyed by way of pipes or discrete conveyances. By definition,

nonpoint sources (like discharges to ground water) are exempt from the federal NPDES permitting program which regulates point sources to surface waters.

CATEGORIES OF NONPOINT SOURCE POLLUTION

Nonpoint source pollution is primarily the result of man's uses of land such as urbanization, roads and highways, vehicles, agriculture, construction, industry, mineral extraction, physical habitat alteration (dredging/ filling), hydromodification (diversion, impoundment, channelization), silviculture (logging), and other activities which disturb land. Additional categories of nonpoint sources include agricultural return water, marinas and recreational boating, confined animal facilities, resource extraction, channel erosion, resuspension of pollutants from contaminated aquatic sediments, waste disposal sites, septic systems (onsite or subsurface disposal), atmospheric deposition, acid precipitation, seawater intrusion, and geothermal development.

OVERLAPS BETWEEN NONPOINT & POINT SOURCES

The distinction between point source and nonpoint sources is not always clear. As a result, there have always been overlaps and ambiguities between programs designed to control nonpoint sources and those designed to control point sources of pollution. The most important example of such an overlap involves urban runoff and storm water which are clearly diffuse and nonpoint in origin, but become channelized and are ultimately discharged through discrete point source conveyance systems to receiving waters. Because it becomes channelized, urban runoff is legally considered a point source discharge. However, because it originates as nonpoint source, urban runoff and storm water are discussed in the Nonpoint Source section.

SEVERITY OF NONPOINT SOURCE PROBLEM

According to the 1988 National Water Quality Inventory, nonpoint source pollution has become the largest single factor preventing the attainment of water quality standards. The inventory reported over 40% of the nation's rivers and streams are impaired due to siltation and 25% are impaired due to nutrients (such as phosphorus and nitrogen) from nonpoint sources. Agricultural runoff was reported as the major nonpoint pollution source affecting

over 50% of impaired rivers. Also, over half of the states reported threats to ground water from nonpoint pollution sources.

NONPOINT SOURCE FUNDING

Innovative ways of financing and implementing nonpoint source projects have been developed. Prior to the 1987 amendments to the Clean Water Act, states used section 106 and 205(j) monies to fund limited nonpoint source activities. The primary federal funding for current nonpoint source program development and implementation includes section 104(b)(3), 205(j)(5), 319(h), 201(g)(1)(b), 603(c)(2), and 604(b) monies as described below.

Section 104(b)(3): This section established grants for state water pollution control agencies and others for the purpose of conducting and promoting research and investigations related to the causes, effects, extent, prevention, reduction, and elimination of pollution. Such research and investigations are to be carried out in cooperation with federal, state, and local agencies.

Section 205(j)(5): This section established a set-aside of construction grants for the purposes of carrying out activities under section 319, including program development and the preparation of state assessment reports and management plans. These funds were used for assessment and development activities for California's program through fiscal year 1989.

Section 319(h): Grant funds authorized by this section can be used for the implementation of nonpoint source management programs but cannot be used for assessment activities. States must have an USEPA approved Assessment and Management Plan before qualifying for these monies. This grant program funds both State and Regional Board programs and provides competitive grants for other agencies to use in implementing nonpoint source measures around the state. These grants include a "non-federal" match of 40 percent which illustrates the intent of Congress and USEPA to have the states make a financial commitment to implementing nonpoint source programs.

Section 201(g)(1)(b): The 1987 amendments to the Clean Water Act added this section that established a new purpose for which 201 funds could be used - "...any purpose for which a grant can be made under section 310(h) and (i)". These funds can be used for either nonpoint source development or implementation projects.

Section 603(c)(2): The 1987 amendments added Title VI to the Clean Water Act establishing a State Water Pollution Control Revolving Fund Program (SRF). This program provides funding in the form of loans, refinancing, and bond insurance which can be used for (1) construction of publicly owned treatment works, (2) the implementation of state nonpoint source management programs, and (3) the development and implementation of state estuary conservation and management plans. The State and Regional Boards encourage local agencies to apply for these low-interest loans to implement nonpoint source demonstration projects and programs in the Region.

Section 604(b): States must set aside one percent of their Title VI allotments or \$100,000, whichever is greater, to carry out planning programs under 205(j) and 303(e) of the Clean Water Act. These funds can be used under 205(j) planning for nonpoint source related activities. This can become an important source of funding for nonpoint source planning and assessment tasks since these types of activities cannot be carried out under section 319.

SECTION 319 NONPOINT SOURCE MANAGEMENT PROGRAM

To address the nonpoint source pollution problem, Congress added section 319 to the Clean Water Act in 1987. Section 319 requires each state to develop and implement a Nonpoint Source Management Program and to conduct an inventory of the waterbodies in the State which are impaired due to nonpoint source pollution. To fulfill these requirements, the State Board adopted the Nonpoint Source Management Plan (NPSMP) in 1988 which is discussed in Chapter 5 and the Water Quality Assessment in 1990 which is discussed later in this chapter.

The NPSMP established a statewide policy for managing nonpoint source inputs to California's waters and is incorporated by reference into this Basin Plan. The objective of the Nonpoint Source Management Program in California is to measurably improve water quality through the implementation of various BMPs.

Unlike end of pipe treatment for point sources (which is impractical and cost prohibitive for nonpoint sources), the key to managing nonpoint source pollution is pollution prevention. Pollution prevention means stopping the generation of pollution at its source by reducing the use of products containing pollutants. Once pollutants

have been generated, pollution control BMPs must be employed to prevent the existing pollution from coming into contact with the waters of the State. BMPs are defined as the schedules of activities, prohibitions, procedures, or other management practices designed to prevent or reduce the discharge of pollutants into receiving waters.

The State and Regional Board(s) believe that the voluntary and widespread application of BMPs is the most effective means by which nonpoint source pollution can be reduced. Accordingly the following three general management options are adopted in the Nonpoint Source Management Plan to address nonpoint source problems. In general, the least stringent option that successfully protects or restores water quality is employed. More stringent options are only required if water quality improvements are not achieved.

(1) Voluntary implementation of BMPs: Voluntary implementation of BMPs is encouraged through financial assistance, education, training, technical assistance, and demonstration projects. Grants and loans provide incentives.

(2) Regulatory based encouragement of BMPs: Regional Boards require waste discharge requirements for nonpoint sources but waive the requirement if BMPs are effectively implemented. Regional Boards can also enter into management agency agreements (MAAs) with other agencies which specify acceptable BMPs and their implementation. The MAAs are referenced in Regional Board basin plans and become the primary basis for evaluation of compliance. (The State Board has existing MAAs with the US Forest Service, the California Board of Forestry and Department of Forestry).

In either case, the Regional Board will generally refrain from imposing effluent requirements on dischargers who are implementing BMPs in accordance with a waiver of waste discharge requirements or an approved management agency agreement. In both cases, the BMPs become the primary mechanism for meeting water quality standards.

(3) Issuance of permits: Adopt and enforce waste discharge requirements which set effluent limits on the discharge of specific pollutants.

The State Board has also established four program objectives for its Nonpoint Source Management Program, each of which are being implemented in the San Diego Region as follows:

(1) Implementation of Nonpoint Source Management Plan: This includes integration of the Coastal Nonpoint Pollution Control Program (which is required under the CZARA and is described below) into the NPSMP.

(2) Outreach Activities: Regional Board outreach activities primarily center around the industrial, construction, and municipal participants in the NPDES Storm Water Permit Program (described in a later section). Other activities include participation in Resource Conservation District, technical advisory and planning committee, and lagoon foundation meetings.

(3) Watershed Assessment Projects: San Diego's target watershed is Escondido Creek and San Elijo Lagoon.

(4) Project Tracking and Participation: The Regional Board has two nonpoint source program contracts. The first contract is entitled the Chollas Creek Watershed Protection Plan project. The Chollas Creek contract has been completed. However, the watershed remains a high priority for the toxic substances monitoring program and for chronic and acute toxicity monitoring. These monitoring programs may identify changes in the water quality due to the education program funded by this contract.

(5) The second project involves a nitrate contamination project in the Rainbow Creek watershed. Although the USEPA funded study has not been formally initiated, the Flynn-Rainbow Nursery has converted to a complete tailwater recovery and reuse system. This conversion resulted in a reduction of nitrate loads to the creek. The Rainbow Creek contract will be modified to study other nurseries and sources of nutrients.

ALL NONPOINT SOURCE DISCHARGES ARE CURRENTLY REGULATED

Despite the overlaps between point and nonpoint sources, all nonpoint source discharges are currently regulated under one of two relatively new statutory requirements. These requirements are the NPDES Storm Water Permitting Program required under section 402(p) of the Clean Water Act and the Coastal Nonpoint Pollution Control Program required under section 6217 of the CZARA.

Although the two programs are complementary and exclusive of each other (i.e., one program applies to any discharge that the other does not), their recent implementation has heightened the confusion about

point source verses nonpoint source program applicability.

Both the programs are fully discussed in later sections, and a brief overview is included here. In its simplest form, the Clean Water Act section 402(p) program, which is an NPDES permitting program, is designed to regulate storm water and urban runoff (i.e., the nonpoint source discharges that become point sources). Virtually all other nonpoint sources are subject to the Coastal Nonpoint Pollution Control Program under CZARA. Although there are a few minor complications which are also discussed later, the essential concept is that all nonpoint source discharges are currently subject to regulation under either the NPDES Storm Water Program or the Coastal Nonpoint Pollution Control Program.

NPDES STORM WATER PROGRAM



SECTION 402(P) CLEAN WATER ACT

Pursuant to the federal Clean Water Act, many municipalities and most industries in the United States are now required to obtain coverage under an NPDES permit for discharges of storm water runoff. NPDES storm water permits authorize only the discharge of storm water into storm water conveyance systems and prohibit all non-storm water discharges.

DEFINITION OF STORM WATER

The federal regulations (40 CFR 122, 123, 124, November 1990) define storm water as surface runoff from rain or snow melt, including sheet flow. This is a narrow definition which is meant to include the runoff of precipitation only. Storm water does not include water which originates from any source other than precipitation such as process wastewater, cooling waters, and wash waters. These are examples of non-storm water discharges and are not allowed in the storm water conveyance system. A non-storm water discharge is any discharge that is not composed entirely of storm water. Also unacceptable for discharge into the storm water conveyance system is precipitation runoff which has come in contact with pollutants.

THE PROBLEM

Although storm water runoff is part of the natural hydrologic cycle, human activities, particularly urbanization, can result in significant and

problematic changes to the natural hydrology of an area. Under conditions of minimal urbanization, water is percolated through pervious surfaces in which soil filtration and biological action remove pollutants. During urbanization, pervious surfaces (i.e., vegetated and natural ground cover) are converted to impervious surfaces (i.e., rooftops and roads) decreasing the infiltration capacity of the soil for both water and pollutants.

As a result, when rain falls on and drains through urban freeways, industries, construction sites, and neighborhoods it picks up a multitude of pollutants. The pollutants can be dissolved in the runoff and quickly transported by gravity flow through a vast network of concrete channels and underground pipes referred to as storm water conveyance systems.

Such systems ultimately discharge the polluted runoff, without treatment, into the nation's creeks, rivers, estuaries, bays, and oceans. In short, urbanization results in a dramatic increase in the volume, velocity, and especially in the pollutant load carried by storm water runoff to receiving waters.

Pollutants typically found in urban runoff include sediment, nutrients (e.g., fertilizers), oxygen-demanding substances (e.g., decaying vegetation), bacteria, viruses, heavy metals, synthetic organics (e.g., fuels, oils, solvents, lubricants), pesticides, and other toxics. These pollutants severely degrade the beneficial uses of surface waters, and threaten the health of both humans and aquatic organisms.

In addition to the pollutants contributed by precipitation runoff, dry weather flows also cause serious degradation of receiving water quality. Dry weather flows, which can be substantial, consist of flows from illicit connections and illegal discharges to the storm water conveyance system. Common examples of the latter include illegally disposed used motor oil and antifreeze.

Studies, most notably the Nationwide Urban Runoff Program (NURP), found pollutants in urban runoff to be similar to those found in sewage and industrial wastewater discharges. Similar concentrations were also observed. Thirty-eight states report urban runoff as a major cause of impaired water quality. Locally, the closure of Southern California beaches following major storm events due to high bacteriological levels in ocean waters is a common occurrence. Clearly urban runoff is a significant water quality problem which deserves attention.

STATUTORY AUTHORITY

To address the storm water/urban runoff problem, Congress added section 402(p) to the Clean Water Act in 1987. This section, and the federal regulations which implement it (40 CFR 122, 123, and 124; November 1990), require NPDES permits for storm water/ urban runoff discharges from municipalities and industries, including construction.

The distinction between point source and nonpoint sources of pollution begins to fade with the requirement for NPDES permits for storm water discharges. Although storm water is clearly diffuse and nonpoint source in origin, it is quickly channelized and ultimately discharged through discrete point source conveyance systems to receiving waters. Because of this, storm water is legally considered a point source discharge and as such is subject to the NPDES permitting program under section 402(p).

MUNICIPAL, INDUSTRIAL, AND CONSTRUCTION PERMITS -- COMMON CHARACTERISTICS

As a result of the 1987 Clean Water Act amendments, there are currently three types of storm water permits in California: municipal, industrial, and construction. The municipal permits are areawide permits which were issued by the Regional Board. The industrial and construction permits are statewide general permits which were issued by the State Board. There are three important characteristics which all storm water permits have in common.

Permit Objective

The overall objective of the entire storm water program and all three types of permits is to reduce or eliminate the discharge of pollutants into the storm water conveyance system. Section 402(p) of the Clean Water Act does however establish different performance standards for municipal and industrial discharges. Municipalities must reduce pollutant discharges to the maximum extent practicable, or MEP (see discussion below). Industries (including construction) must implement Best Available Technology (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce pollutants.



Best Management Practices

Pollution Prevention

The permit objective is achieved by way of pollution prevention. To eliminate pollutants in storm water, one can either clean it up by removing pollutants or prevent it from becoming polluted in the first place. Because of the overwhelming volume of storm water and the enormous costs associated with pollutant removal, pollution prevention is the only approach that makes sense. Pollution prevention which means stopping the generation of pollution at its source by reducing the use of products containing pollutants, is in fact, the basis of the entire storm water program. Once pollutants have been generated, pollution control BMPs must be employed to prevent the existing pollution from coming into contact with the water of the State. It is important to point out that this approach is distinctly different from the conventional end-of-pipe treatment approach commonly used in water quality regulation.

Pollution prevention is accomplished by way of BMPs which are defined as schedules of activities, prohibitions, procedures, or other management practices designed to prevent or reduce the discharge of pollutants to storm water.

Source control BMPs include practices that eliminate or reduce pollutants at their point of generation, or source, so that they cannot come into contact with storm water. Source controls are non-structural, inexpensive, and can be extremely effective. Because source control BMPs are site specific, they vary widely depending on the application. For example, regulatory powers and land use planning are important BMPs for municipalities. Berming and covering storage areas are excellent BMPs at industrial facilities; reduced vegetation removal and phased development planning are effective at construction sites.

Two source control BMPs are common to all three applications (municipalities, industries, and construction), namely good housekeeping practices (cleaning up and immediately disposing of wastes properly) and most importantly, education (employee and public). Education, which ultimately results in a change in behavior and increased public awareness, is the key to pollution prevention. Many people think that street gutters are plumbed to the sanitary sewage treatment plant and do not realize that they flow instead directly to the bays and ocean without treatment. Education should be conducted in two directions: (1) prevent the discharge of

pollutants and (2) reduce the use of materials which are the sources of pollution.

No Numeric Effluent Limits

None of the three types of storm water permits contain numeric effluent limits at this time. The permits are intended to be BMP based and instead contain narrative receiving water limitations.

AREAWIDE MUNICIPAL STORM WATER PERMITS

Under section 402(p) of the Clean Water Act and the federal regulations implementing it, operators of large and medium sized municipal storm water conveyance systems are required to obtain NPDES permits for their storm water conveyance systems at this time. Large and medium sized municipal storm water conveyance systems are defined as those serving populations greater than 250,000 and 100,000, respectively. Smaller municipalities (those under serving populations less than 100,000) have until late 1994 to obtain coverage but may be required to do so earlier if it is determined that (1) they are significant contributors of pollutants to receiving waters or (2) if their storm water conveyance systems are "interrelated" to larger municipal systems. In the municipal permits the Regional Board made a finding that all of the smaller municipalities in the San Diego Region meet both of these criteria (Order No. 90-42). All the municipalities contribute to the condition of water quality impairment (see Table 4-8) and the storm water discharges are "interrelated" in that they jointly and cumulatively contribute significant pollutants to the near coastal waters of San Diego County. Consequently, in July 1990, the Regional Board adopted an areawide Municipal Storm Water Permit for each of the three counties in the Region, San Diego, Riverside, and Orange as follows:

(1) Order No. 90-42 (NPDES Permit No. CA 0108758), Waste Discharge Requirements for Storm Water and Urban Runoff from the County of San Diego and Incorporated Cities of San Diego County and the San Diego Unified Port District.

(2) Order No. 90-46 (NPDES Permit No. CA 0108766), Waste Discharge Requirements for Storm Water and Urban Runoff from the Riverside County Flood Control and Water Conservation District, the County of Riverside and the Incorporated Cities of Riverside County within the San Diego Region.

(3) Order No. 90-38 (NPDES Permit No. CA 0108740), Waste Discharge Requirements for Storm Water and Urban Runoff from the County of

Orange, the Orange County Flood Control District and the Incorporated Cities of Orange County within the San Diego Region.

Included as co-permittees in the above permits are all of the land use regulatory agencies; the county, all incorporated cities within the county, and special districts. For this reason, the municipal permits are referred to as "areawide" permits. As it moves from inland to coastal areas, storm water does not recognize jurisdictional boundaries. Since all municipalities contribute to the cumulative storm water pollution problem, a coordinated, "areawide" approach to managing it is essential, more effective, and far less expensive than numerous individual efforts.

Objective

The objective of an areawide municipal storm water permit is to reduce pollutants in storm water discharges to the maximum extent practicable (MEP). This is a standard used by USEPA for municipal discharges of storm water. Although not specifically defined in the federal regulations, the intent of MEP is to reduce as much as possible the discharge of pollutants. Thus, the municipal dischargers are required to employ whatever BMPs are feasible (i.e., are likely to be effective and are not cost prohibitive). Where a choice is made between two BMPs which provide generally comparative effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs which address a pollutant source or to pick a BMP based solely on cost, which would be clearly less effective. In order to reduce pollutants to the MEP many factors including technical feasibility and effectiveness, as well as economic factors, must be taken into consideration.

Permit Requirements

Municipal Storm Water Permits contain the following two major requirements:

- (1) Prohibit non-storm water discharges; and
- (2) Develop/implement a comprehensive storm water management program. The comprehensive storm water management program must include the following five components:
 - BMP program;
 - Monitoring and reporting program;

- Illicit connection/ illegal discharge detection program;
- Storm water ordinance or code; and a funding source.

Ultimate Responsibility for Quality of Storm Water Discharges (Municipal Regulation of Industry)

Under an areawide municipal storm water permit, municipalities are ultimately held responsible for the quality of discharges from their storm water conveyance systems, including contributions from industrial and construction activities. This provides important incentive for municipalities to regulate these activities occurring within their jurisdiction.

As called for in the federal storm water regulations, the regulation of industrial storm water discharges (including construction) into municipal storm water conveyance systems should be accomplished by a cooperative effort between the Regional Board and the local municipality. Under a municipal storm water permit, municipalities are required to adopt and enforce ordinances (including ordinances for erosion control) which prohibit the discharge of pollutants to storm water conveyance systems. In order for the municipalities to be in compliance with their municipal permit, it is essential that the municipalities rigorously enforce their ordinances and grading permits and conduct inspections for compliance with both. They are further authorized to impose additional requirements on industry as necessary to ensure compliance with their municipal permit.

Table 4 - 87. Receiving Waters Impacted by Pollution from Storm Water and Urban Runoff (Order No. 90-42)

IMPACTED RECEIVING WATER	REFERENCES	PARAMETERS	MUNICIPALITIES / JURISDICTION
San Diego Bay	WQLS, NPSI	PET, TRA, SYN, COL, DEB, MET	City of San Diego, Coronado, National City, Chula Vista, Imperial Beach, La Mesa, Lemon Grove, County of San Diego, San Diego Unified Port District
Mission Bay	WQLS, NPSI	COL, MET	City of San Diego
Santa Margarita Lagoon	WQLS, NPSI	NUT	Camp Pendleton, County of San Diego, County of Riverside, Temecula
Oceanside Harbor	NPSI	TRA, SYN	Camp Pendleton, Oceanside
Buena Vista Lagoon	NPSI	NUT, SED	Oceanside, Vista, Carlsbad, County of San Diego
Agua Hedionda Lagoon	SDHSR	COL	Carlsbad, San Marcos
Batiquitos Lagoon	WQLS, NPSI	NUT, SED	Carlsbad, Encinitas, San Marcos, County of San Diego
San Elijo Lagoon	WQLS, NPSI	NUT, SED	Encinitas, Escondido, Solana Beach, County of San Diego
San Dieguito Lagoon	NPSI, TSMP	SED, TRA	City of San Diego, Del Mar, Solana Beach, County of San Diego, Escondido
Los Penasquitos Lagoon	WQLS, NPSI	NUT, SED	City of San Diego, Del Mar, Poway, County of San Diego
Tijuana River Estuary	WQLS, NPSI	TRA, SYN, DOX, NUT	Tijuana, Mexico, City of San Diego, Imperial Beach
San Diego River	NPSI	SYN, PES, SED	City of San Diego, La Mesa, El Cajon, Santee, County of San Diego
Forester Creek	NPSI	TRA	El Cajon, Santee
Tijuana River	WQLS, NPSI	NUT, DEB, COL, DOX, SYN, PES, TRA	Tijuana, City of San Diego
Lake Hodges	NPSI	NUT, DIS	City of San Diego, Escondido, Poway

*** Abbreviations for Table 4-8:**

REFERENCES

WQLS	Water Quality Limited Segment
NPSI	Nonpoint Source Inventory Report
SDHSR	State DHS Report on Shellfish Contamination in Agua Hedionda Lagoon
TSMP	Toxic Substances Monitoring Program elevated values

PARAMETERS

COL	Coliform bacteria or other microbes
DEB	Debris
DIS	Dissolved Solids
DOX	Low dissolved oxygen, except when associated with algal blooms caused by nutrients
MET	Metals, except trace elements
NUT	Nutrients, macro- and micro-nutrients, including algal bloom-low dissolved oxygen syndrome
PES	Pesticides, except trace elements, including insecticides, nematocides, herbicides, and fungicides
PET	Petroleum distillates
SED	Sedimentation/turbidity, including habitat alteration due to sedimentation
SYN	Synthetic organics, except herbicides and pesticides
TRA	Trace elements: aluminum, beryllium, cadmium, chromium, copper, lead, mercury, manganese, molybdenum, nickel, selenium, silver, titanium, and zinc.

GENERAL INDUSTRIAL STORM WATER PERMIT

To reduce the administrative burden of issuing individual permits to the overwhelming number of industries now subject to NPDES storm water permitting, USEPA has initiated a four-tiered strategy for regulating industries. The first tier involves the use of a small number of "general" permits. A general permit is a single permit under which many facilities can obtain coverage (for example, all of the industries in a given type). Under the tiered strategy, the permitting process begins general and becomes increasingly more specific and rigorous over time. Subsequent tiers target specific watersheds, industry types, and finally individual facilities.

Consistent with the tiered approach, the statewide General Industrial Storm Water Permit entitled, "Waste Discharge Requirement (WDR) for Discharges of Storm Water Associated with Industrial Activities excluding Construction Activities, Order No. 91-13 (General Permit No. CAS 000001)" was adopted by the State Board on November 19, 1991.

Industries Requiring Coverage

As shown below, the federal regulations identify eleven categories of industrial facilities which are required to obtain coverage under an NPDES storm water permit. Ten of the eleven categories are covered under the statewide General Industrial Storm Water Permit. Category x, construction activities, is covered under a separate permit, which will be discussed in a later section. Categories i through ix are considered "mandatory industries" and are required to obtain coverage under the General Industrial Storm Water Permit whether or not they have materials and activities exposed to storm water. Category xi, "conditional industries," are only required to obtain coverage under the general permit if they have materials, equipment, or activities exposed to storm water. Six of the categories are defined by narrative descriptions of the industrial activity. The remaining five categories are defined by Standard Industrial Classification (SIC) codes.

- (i) Facilities Listed Under
40 CFR Subchapter N
- (ii) (Heavy) Manufacturing Facilities
- (iii) Oil and Gas/ Mining Facilities
- (iv) Hazardous Waste Treatment, Storage, or
Disposal Facilities
- (v) Landfill, Land Application sites and Open
Dumps

- (vi) Recycling Facilities
- (vii) Steam Electric Power Generation Facilities
- (viii) Transportation Facilities
- (ix) Sewage or Wastewater Treatment Works
- (x) Construction Activities
- (xi) (Light) Manufacturing Facilities (with
exposure)

In addition to private industry, industrial facilities owned or operated by governmental entities (including federal, state, and municipal facilities) are also required to obtain permit coverage.

When Is Coverage Not Needed

If a facility discharges all of its storm water to a municipal sanitary sewer system or to evaporation ponds, percolation ponds, or dry wells, and if there is no discharge to surface water under any circumstances, coverage under the general permit may not be required.

Permit Requirements

The General Industrial Storm Water Permit and General Construction Storm Water Permit both contain the following three major requirements:

- (1) Eliminate non-storm water discharges;
- (2) Develop and implement a Storm Water Pollution Prevention Plan. A Storm Water Pollution Prevention Plan (SWPPP) is a site specific plan consisting of all BMPs which will be implemented at a facility to reduce or eliminate the discharge of pollutants to storm water. (It is the most important requirement and the key to source controls); and
- (3) Develop and implement Monitoring and Reporting program (in accordance with the general permit).

GENERAL CONSTRUCTION STORM WATER PERMIT

Although it is one of eleven industrial categories specified in the federal regulations, construction activities are regulated under a separate general permit in California. The statewide General Construction Storm Water Permit entitled, "Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity, Order No. 92-08-DWQ (General Permit No. CAS 000002)," was adopted by the State Board on August 20, 1992.

Definition of Construction

Construction activity includes, but is not limited to clearing, grading, and excavation, as well as building and reconstruction. Construction activity does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

Who Needs Coverage?

In California at this time, discharges of storm water associated with construction activities that result in the disturbance of five acres or more of total land are required to obtain coverage under the general permit. Construction activities disturbing less than five acres are also required to obtain coverage under the permit if they are part of a larger common plan of development or sale. Because of a recent court ruling, it is important to note that the current five acre exemption is subject to change.

Erosion - The Major Construction Concern

Natural erosion processes are greatly accelerated when protective ground cover is removed during construction activities. Studies reveal that the rate of erosion on land where construction activities are occurring is approximately 2,000 times greater than on timber land that has not been logged.

Erosion results in not only the loss of productive soil, which is essentially irreplaceable, but also in severe impacts to water quality. Twenty-one states, including California, report construction site runoff as a major cause of water quality impairment. "Clean sediment" alone is by definition, a pollutant because of its ability to degrade water quality. Although there are many water quality impacts associated with clean sediment, the two most important ones include: (1) increased turbidity and corresponding decreased light transmittance (resulting in reduced biological productivity and adverse effects on aesthetic value); and (2) direct suffocation of benthic (bottom dwelling)

communities due to excessive sediment deposition. In addition to these problems, sediment also provides a major transport mechanism for countless other pollutants. First priority should be placed on soil stabilization and erosion prevention, not sediment interception.

Permit Requirements

The General Construction Storm Water Permit contains the same three requirements as the General Industrial Storm Water Permit (see discussion above).

Industries/Construction Are Subject To Municipal Regulation

There is a "double" system of regulation for industrial storm water which is discharged through municipal conveyance systems. Such discharges are regulated by both the statewide general permit (industrial or construction) issued to the discharger and by the municipality subject to the areawide Municipal Storm Water Permit. It is the Regional Board's responsibility to enforce the general permits and the areawide Municipal Storm Water Permit. It is the responsibility of the municipality to enforce its own ordinances. The statewide general permits (industrial and construction) specifically require dischargers to comply with the lawful requirements of local agencies regarding discharges to storm water conveyance systems within their jurisdiction.



Highway

HIGHWAY RUNOFF CONTROL PROGRAM

Cars, trucks, and other vehicles are the major contributors to highway runoff pollution. Landscaping, highway maintenance, and highway construction also contribute to highway runoff pollution (see Table 4-9). An essential component of the NPDES storm water program is the implementation of practices for maintaining public highways that reduce impacts on receiving waters from highway runoff.

However, cities and counties (permittees) do not have jurisdiction over public highways controlled by the California Department of Transportation (Caltrans). To comply with the requirements of the NPDES storm water program, Caltrans must either actively participate as an entity in the Area Wide storm water program, or obtain a separate NPDES

permit for storm water discharges for highways under its jurisdiction. Such a program for Caltrans shall include a Storm Water Management Plan which addresses the design, construction, and maintenance of highway facilities relative to reducing pollutants in highway discharges to the maximum extent practicable. The Plan shall include:

- a characterization of Caltrans highway systems, including pollutants, highway layout, and drainage control system in the area;
- a description of existing highway runoff control measures;
- a description of additional highway runoff control measures to enhance pollutant removal; and

- a plan for monitoring the effectiveness of control measures and highway runoff water quality and pollutant loads.

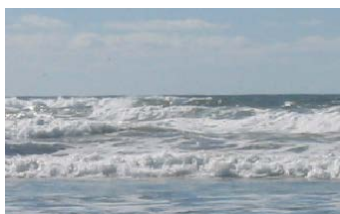
The highway runoff management plan shall specifically address litter control, proper pesticide/herbicide management, reduction of direct discharges, reduction of runoff velocity, landscape over-watering, use of grassed channels, curb elimination, catch basin maintenance, appropriate street cleaning, establishing and maintaining vegetation, infiltration practices, and detention/retention practices. Caltrans shall coordinate its urban runoff program with local agencies and existing programs related to the reduction of pollutants in highway runoff.

Table 4-98. Highway Runoff Constituents and their Primary Sources

CONSTITUENT	PRIMARY SOURCES
Particulates	Pavement wear, vehicles, maintenance
Nitrogen, Phosphorus	Atmosphere, roadside fertilizer application
Lead	Tire wear (lead oxide filler material, lubricating oil and grease, bearing wear)
Zinc	Tire wear (filler material), motor oil (stabilizing additive), grease
Iron	Auto body rust, steel highway structures (guard rails, bridges, etc.), moving engine parts
Copper	Metal plating, bearing and bushing wear, moving engine parts, brake lining wear, fungicides and insecticides
Cadmium	Tire wear (filler material), insecticide application
Chromium	Metal plating, moving engine parts, brake lining wear
Nickel	Diesel fuel and gasoline (exhaust), lubricating oil, metal plating, bushing wear, brake lining wear, asphalt paving
Manganese	Moving engine parts
Cyanide	Anticake compound used to keep deicing salt granular (ferric ferrocyanide, sodium ferrocyanide, yellow prussiate of soda)
Sodium, Calcium, Chloride	Deicing salts
Sulfate	Roadway beds, fuel, deicing salts
Petroleum	Spills, leaks or blow-by of motor lubricants, antifreeze and hydraulic fluids, asphalt surface leachate

COASTAL NONPOINT POLLUTION CONTROL PROGRAM

COASTAL ZONE ACT REAUTHORIZATION AMENDMENTS



Imperial Beach

In 1990, Congress amended the Coastal Zone Management Act (CZMA). The amendments are referred to as the Coastal Zone Act Reauthorization Amendments

(CZARA). Section 6217, "Protecting Coastal Waters", of CZARA established the Coastal Nonpoint Pollution Control Program. Section 6217 of CZARA requires USEPA to develop, and states to implement, enforceable "management measures" (i.e., BMPs) to control nonpoint source pollution in coastal waters. The definition of the "coastal zone" in California was expanded to encompass the entire state.

Like the NPDES storm water permitting program, implementation of the Coastal Nonpoint Pollution Control Program is still evolving. As of the 1994 Basin Plan update, USEPA has published management measures, which are collectively referred to as the "(g) guidance", pursuant to section 6217(g) of the CZARA. There are six major categories of nonpoint sources addressed by the (g) guidance, including: agriculture sources, forestry, urban areas, marinas, hydromodification projects and wetlands.

The storm water NPDES permitting program under the Clean Water Act and the Coastal Nonpoint Pollution Control Program section under CZARA are intended to be complimentary but exclusive of each other. In other words, the Coastal Nonpoint Pollution Control Program applies only to nonpoint sources that are not currently regulated under an NPDES storm water permit. This includes all of the traditional non-urban nonpoint sources such as agriculture and silviculture and those urban sources which are not currently subject to the NPDES storm water permitting program. Examples of the latter in 1994 include some municipalities with populations under 100,000; construction sites disturbing less

than 5 acres; and storm water discharges from wholesale, retail, service, or commercial activities.

The key concept is that all nonpoint pollution sources, both urban and non-urban (including those that become point sources), are currently subject to regulation under either the NPDES Storm Water Permitting Program required under section 402 (p) of the Clean Water Act or the Coastal Nonpoint Pollution Control Program required under section 6217 of the CZARA.

AGRICULTURE

In the San Diego Region, agriculture ranks as the fourth largest industry in the economy and accounts for 1.7 percent of the Region's economy. The coastal and inland valley areas of the county possess a moderate and virtually frost-free climate able to support a variety of sub-tropical crops, making the San Diego area a unique agricultural region. The primary crops being grown for the national and international markets are avocados, citrus, cut flowers, and nursery products. To a lesser extent, local fresh market crops and livestock are produced in the area.

The San Diego County Water Authority (Authority) is the largest agricultural water consuming agency within Metropolitan Water District (MWD), requiring approximately 50 percent of MWD's total agricultural water supply each year. Agricultural water use within the Authority is concentrated mainly in north county agencies such as Rainbow MWD, Valley Center MWD, Fallbrook PUD and Yuima MWD.

Pursuant to the CZARA section 6217 (g), USEPA has identified management measures to protect coastal waters from sources of nonpoint pollution from agriculture. Specifically, the (g) Guidance for agriculture contains management measures to address erosion from cropland, applying nutrients to cropland, applying pesticides to cropland, confined animal facilities, land used for grazing, and cropland irrigation. The three most significant water quality impacts from agriculture in the San Diego Region are:

- erosion of agricultural soils;
- agricultural irrigation return water (salt loading and applied chemicals); and
- confined animal facilities.

Basic information on each impact is summarized below.

EROSION CONTROL

Erosion is a problem, not only in terms of the loss of agricultural production, but also because it degrades important aquatic habitat. Eroded soils can bury benthic communities, cover spawning grounds, destabilize channel banks and fill sensitive wetland areas. Furthermore, other pollutants are often bound to eroded soils. Under certain conditions, these pollutants may be remobilized into the water column causing problems for human health, wildlife, and aquatic resources.

The State and Regional Boards have adopted narrative standards that prohibit the impairment of aquatic habitat from erosion. However, no specific numeric standard limiting sediment loads has been established. Implementation of effective management practices to control erosion is typically accomplished through the combined efforts of several agencies working with landowners. Local Resource Conservation Districts, with technical assistance from the U.S. Soil Conservation Service, help landowners prevent erosion problems. The University of California, Agricultural Extension Service also assists in developing management practices and informing growers of optimum strategies for soil fertility and stabilization. Additionally, the U.S. Agricultural Stabilization and Conservation Service provides grants and low interest loans to farmers for improvements which retain valuable topsoil in cultivated areas.

AGRICULTURAL IRRIGATION RETURN WATER

Agricultural irrigation return water is the wastewater which runs off or leaches through an irrigated area. The two major concerns with agricultural irrigation return water are salt loading and the release of applied chemicals.

SALT LOADING

Since the water supply in the San Diego Region is generally quite high in salts and the climate is dry, irrigation with this relatively saline water causes salt accumulation in the soil. Crop roots absorb only essentially pure water while leaving dissolved salts behind. If these salts are not leached out by regularly applying more irrigation water than is needed for evapotranspiration, salts accumulate in the root zone and the land eventually becomes too salty for agriculture. However, the saline soils may be reclaimed by leaching. The percolation of the water used to leach salts from the soil can be a serious source of ground water degradation.

The actual effect of irrigation return water on ground water quality in the Region is difficult to determine without further study. The construction of irrigation return water drain tiles to collect and transport return flows is a possible remedial measure that could be implemented in certain portions of the Region. This has not been considered necessary to date and no plans for such construction are presently pending.

APPLIED CHEMICALS

Modern agriculture is based on the extensive use of applied chemicals such as fertilizers, pesticides, and herbicides to obtain high crop yields. The improper use of these applied chemicals may lead to serious degradation of both ground water and surface water quality. Some of the chemicals applied to farm land move down with deep-percolation water from crop root zones and can contaminate underlying ground water. Surface waters are primarily contaminated by the runoff of irrigated agriculture containing sediments, nutrients such as phosphorus and nitrogen, pesticides, and other pollutants.

The release of applied chemicals, into surface and ground waters can have adverse effects on the quality of those waters and the beneficial uses supported by them. Aquatic toxicity, as measured by toxicity bioassay tests, has been found in many waters within the State. The application of agricultural chemicals, in some cases, has been linked directly to this toxicity and is suspect in many other impaired waterbodies. In addition to degradation of the aquatic environment, the contamination of ground and surface waters by pesticides and fertilizers is believed to also pose a threat to human health. Pesticides for example are known to bioaccumulate.

The Basin Plan contains a water quality objective requiring that all waters be maintained free of toxic substances in concentrations that are toxic to human, plant, animal, or aquatic life. The Basin Plan also contains a water quality objective for pesticides requiring that no individual pesticide or combination of pesticides be present in the water column, sediments, or biota at concentrations that adversely affect beneficial uses.

Although the Department of Pesticide Regulation (DPR) controls the application and use of agricultural pesticides, regulation of the quality of agricultural runoff waters is the responsibility of the State and regional boards. The regional boards have adopted water quality standards that apply to all surface waters of the State. Although standards for certain metals and some older pesticides have

been adopted, standards for the majority of currently used agricultural chemicals do not exist. Generally, narrative standards which prohibit toxicity and degradation of waterbodies apply to agricultural discharges as do specific toxicity standards. To implement these standards, the regional boards have relied on a number of voluntary efforts and a concerted effort to educate growers on the need to protect waterbodies from the adverse effects of farm chemicals. The State Board also uses grant funds to support implementation of projects which demonstrate improved management practices.

In coordination with DPR, the regional boards have begun to put restrictions on the use of certain agricultural chemicals to address water quality problems. DPR has the responsibility to condition the use of any agricultural chemical to ensure its safe use. Where DPR has been convinced of the significant potential to cause environmental problems, it has established restrictions on the application, release, or timing of pesticide applications. DPR also encourages changes in formulations or in the combinations of pesticides applied in order to minimize water quality problems. An overall integrated pest management program for each agricultural site, rather than sole reliance on pesticides is needed.

There are other reasons to be concerned with the judicious use of agricultural chemicals (in addition to environmental issues). These interests are often concerned with questions of production and profit. To the extent that the application of agricultural chemicals are limited for cost control reasons, these concerns often result in benefits for water quality as well.

The narrative and/or numeric nutrient objectives presented in this Basin Plan are also applicable to irrigation return water. The State Board may require the use of pollutant control techniques to implement irrigation water management in its water rights permits or through Nonpoint Source Management Plan.

Irrigation water management may be implemented through reducing the use of fertilizers and pesticides to levels which minimize their presence in irrigation return water, as well as through the implementation of irrigation systems which reduce the volume of return water.

IRRIGATION WATER

In 1992, two laws were passed which require agricultural water suppliers delivering more than 50,000 AF/Y to prepare water management plans

(CWC, sections 10800 and 10904). The plans are to focus on water conservation measures, improved irrigation efficiency, and environmental enhancement. The Department of Water Resources has established an advisory committee to review and study irrigation practices for these purposes. The implementation of conservation plans will likely have a side benefit of reduced erosion as irrigation efficiency improves.



Dairy

DAIRIES – CONFINED ANIMAL FACILITIES

Problems associated with dairy operations in the San Diego Region include ground water mineralization, the addition of nitrates to ground water, surface runoff of biodegradable and suspended material, nuisance odors, the addition of nutrients to adjacent surface water streams and other miscellaneous problems. All dairies in the Region are regulated under waste discharge requirements. These waste discharge requirements implement the regulations for confined animal facilities contained in CCR, Title 273, Division 23, ~~Article 1~~ Chapter 15, ~~Article 6~~, sections ~~22560-22565~~.

The major requirements contained in waste discharge requirements for dairies are as follows:

- (1) Dairies must be designed and constructed to retain all facility wastewater generated, together with all precipitation on, and drainage through manured areas during a 25-year, 24-hour storm.
- (2) All precipitation and surface drainage outside of manured areas, including that collected from roofed areas, and runoff from tributary areas during the storm events described in subsection (1) of this section, shall be diverted away from manured areas, unless such drainage is fully retained.
- (3) Retention ponds and manured areas at dairies must be protected from inundation or washout by overflow from any stream channel during 20-year peak stream flows. Existing facilities that are protected against 100-year peak stream flows must continue to provide such protection.
- (4) New facilities shall be protected against 100-year peak stream flows.

- (5) Retention ponds shall be lined with or underlain by soils which contain at least 10 percent clay and not more than 10 percent gravel or artificial materials of equivalent impermeability.
- (6) Facility wastewater, collected precipitation and drainage may be discharged to properly operated use or disposal fields or to wastewater treatment facilities approved by the Regional Board.

Regional Board Dairy Waste Management Policy (Resolution No. 87-71)

The Regional Board adopted Resolution No. 87-71, "A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region" (Regional Board Dairy Waste Management Policy) on November 16, 1987. On March 17, 1988, the State Board adopted Resolution No. 88-35 approving the Regional Board Dairy Waste Management Policy with a few minor changes.

The Regional Board Dairy policy contained in Resolution No. 87-71 is incorporated below; accordingly Resolution No. 87-71 is superseded.

The Regional Board regulatory program on dairy waste disposal is designed to be a part of the Basin Plan. The program is based upon the following principles to ensure that the goals of the Basin Plan are implemented:

- (1) The Regional Board is committed to the reasonable protection of present and future beneficial uses of ground water.
- (2) Coordination among state, federal, and local agricultural and regulatory agencies, the dairy industry, local planning and land-use agencies is necessary to resolve potential water quality problems associated with dairies.
- (3) Cooperation between this Regional Board and the dairy industry is required when developing and implementing measures to achieve conformance with the Basin Plan ground water objectives.
- (4) Comprehensive assessments of salt loading on the ground water basins in the San Diego Region are necessary to develop reasonable and cost effective water quality protection measures for all nonpoint and point sources of waste.
- (5) An interim dairy wasteload regulatory program is necessary until the assessment studies noted

in Principle 4 are completed. The interim program should provide a simple, region-wide approach to controlling dairy wasteloads, that may be reviewed on a case-by-case basis if necessary. The program should be easy to understand, easy to implement and enforce and provide greater protection of water quality than present practices.

As part of an overall program of dairy waste management, the following measures shall be implemented:

- (1) The Regional Board shall continue to enforce all State and Federal water quality laws, and regulations regarding dairy waste treatment and disposal, including ~~CCR- Chapter 15, Title 273-CCR~~ and USEPA Effluent Guidelines and Standards for feedlots point source category (40 CFR 412).
- (2) The Regional Board shall continue to seek funding to conduct the necessary studies and develop computer models to provide an accurate assessment of existing and projected wasteloads in the various ground water basins.
- (3) Based upon the results of the studies described in item 2, the Regional Board will revise Basin Plan ground water objectives if warranted and specify or revise wasteload limits that will be appropriate for the point and nonpoint sources of waste, including dairies if necessary.
- (4) For an interim period, until the necessary ground water assimilative capacity and wasteload assessment studies are completed, the Regional Board shall limit the disposal of corral manure to dairy disposal land to no more than 3 tons dry weight or 10 cubic yards per acre per year, and to cropland where crops are grown and harvested twice annually, to no more than 12 tons dry weight per acre per year. The Regional Board shall consider manure application higher than the 12 tons per acre per year limit upon demonstration that the crops require the increased manure loadings.
- (5) The U.S. Department of Agriculture, Soil Conservation Service, University of California at Riverside, the State and County Departments of Agriculture and other governmental and educational institutions are encouraged to provide dairy operators with the latest technical information regarding

waste disposal practices that would result in additional water quality protection.

- (6) The local land use and planning agencies are encouraged to conduct long-term planning for addressing water quality issues of new and expanded dairies in the region. The dairy industry is encouraged to provide accurate five-year projections of dairy herds at existing dairies and potential locations for new dairies to the planning agencies and to the Regional Board, so that the Board may include the required Basin Plan studies as part of the Board's triennial review process.
- (7) The Regional Board will continue to obtain and review technical information regarding the hydrologic basins and to recommend the update of Basin Plan standards if warranted.
- (8) The Regional Board encourages the implementation of water conservation measures at dairies, and the beneficial reuse of dairy farm wastewater that would replace the use of imported water.

EROSION AND SEDIMENT CONTROL

Currently erosion and sediment control is accomplished primarily by way of the municipal and construction storm water permits (see previous discussion).

In 1987, the San Diego Regional Water Quality Control Board implemented a policy for the control of human induced erosion and sedimentation. This policy is presented below. The Regional Board deferred the implementation of regulatory programs for erosion and sedimentation control to local government agencies. The local Resource Conservation Districts have agreements with the Regional Board regarding erosion and sediment control.

Soil erosion resulting from a wide variety of causes, including construction, hillside cultivation and other agricultural activities, non-maintained roads, and off road vehicles may result in serious



Santa Margarita River

water quality impacts. The goal of the policy is the protection of water quality through the reduction and prevention of accelerated (man-caused) erosion to the level necessary to restore and protect beneficial uses of receiving waters now significantly impaired or threatened by impairment due to sedimentation through the implementation of the Best Soil Management Practices (BMPs). Construction sites can contribute runoff into storm drains at rates 100 to 2,000 times greater than non-developed sites, due to the large amounts of soil that are usually uncovered. Property owners are held responsible for all activities and practices that may cause an adverse impact on water quality due to waste discharges and surface runoff from their lands.

Sediment and erosion control is particularly important in areas with, or that drain into, delicate habitats such as lagoons, floodplains and some waterways. Lagoons are particularly sensitive to influx of silts and nutrients, which may cause severe turbidity and eutrophication problems. Severe amounts of silt may cause a lagoon to eventually become infilled. Siltation also damages tributaries and riparian corridors leading to the lagoons.

Poor agricultural grading practices may cause significant erosion of the soil, causing heavy sediment, nutrient and possibly herbicide and pesticide runoff loads to be discharged into nearby surface waters.

In most cases, the adverse results of man's activities can be reduced and in some instances eliminated through the use of both structural and non-structural measures of various types that are properly employed at the appropriate time. The high cost of lost resources, resource replenishment and after-the-fact repair and maintenance make both pre-project erosion control planning and preventive maintenance necessary.

EROSION AND SEDIMENT CONTROL PROGRAM (RESOLUTION NO. 87-91)

Regional Board Resolution No. 87-91 entitled, "A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region" (Erosion and Sediment Control Program) was adopted on December 21, 1987. The Regional Board Erosion and Sediment Control Program contained in Resolution No. 87-91 is incorporated below; accordingly Resolution No. 87-91 is superseded.

GOAL OF PROGRAM

The goal of the Regional Board's erosion control program is the protection of water quality through the reduction and prevention of accelerated (man-caused) erosion to the level necessary to restore and protect beneficial uses of receiving waters now significantly impaired, or threatened by impairment, by sediment.

MANAGEMENT PRINCIPLES

- (1) Property owners are considered ultimately responsible for all activities and practices that could result in adverse effects on water quality from waste discharges and from surface runoff.
- (2) Local units of government should have the lead role in controlling land use and construction activities that cause erosion and may, as necessary, impose further conditions, restrictions, or limitations on waste disposal and other activities that might degrade the quality of waters of the State.
- (3) BMPs should be implemented to reduce erosion and sedimentation and minimize adverse effects on water quality.

REGIONAL BOARD IMPLEMENTATION MEASURES

- (1) Local governments shall be encouraged to develop effective erosion and sedimentation control ordinances and regulatory programs that are at least equivalent to the model ordinance in the "Erosion and Sediment Control Handbook" published by the California Department of Conservation, May 1981.
- (2) If necessary, a Memorandum of Understanding (MOU) or Management Agreement could be adopted to more clearly define the cooperative roles between the local units of government and the Regional Board.
- (3) The Regional Board may participate with other concerned agencies such as the California Department of Fish and Game, the Resource Conservation Districts, the various lagoon foundations, etc., to identify watersheds, coastal lagoons and estuaries with critical erosion and sediment problems. The Regional Board may assist in the assessment of such problems and causes,

and assist in the development of alternative measures to prevent future problems.

- (4) As time and resources permit, the Regional Board will review existing local grading ordinances to determine the adequacy of the ordinances to provide effective erosion control. The Regional Board may then recommend specific improvements to the ordinances for consideration by the local agencies. If necessary, the Regional Board may request a report on the implementation of the Board's recommendation.
- (5) If necessary, the Regional Board may request periodic status reports of construction and grading activities from local agencies to determine the effectiveness and potential problems with the implementation of local erosion and sediment control program.
- (6) The Regional Board shall encourage the Resource Conservation Districts to review and update if necessary, their erosion control ordinances in order to develop more effective programs for erosion and sediment control for agricultural activities. Local units of government are encouraged to take a more active role in addressing erosion problems from agricultural activities.

THE ELSINORE-MURRIETA-ANZA RESOURCE CONSERVATION DISTRICT SEDIMENT CONTROL ORDINANCE (RESOLUTION NO. 79-25) AND THE RESOURCE CONSERVATION DISTRICTS OF SAN DIEGO COUNTY EROSION AND SEDIMENT CONTROL POLICY (RESOLUTION NO. 92-21)

The Elsinore-Murrieta-Anza Resource Conservation District and the Resource Conservation Districts (RCDs) of San Diego County were established to provide for the conservation of soil and water resources and for the prevention and control of soil erosion and sediment damage due to agricultural and other land use activities.

The RCDs establish guidelines for land management programs by adopting BMPs such as those presented in the Soil Conservation Service Technical Guide covering San Diego County. Currently, farmers and other land owners contact the RCDs on a voluntary basis for assistance in developing individual erosion and sediment control programs which conform to the BMPs.

In order to assure that all farmers and other land owners operate under the Resource Conservation Districts BMP guidelines, and to better address the existing and potential water pollution problems caused by agriculture and other land uses, the RCDs have adopted sediment control ordinances and policies (e.g., Elsinore-Murrieta-Anza Resource Conservation District Sediment Control Ordinance and the Resource Conservation Districts of San Diego County Erosion and Sediment Control Policy). These documents formally adopt the Soil Conservation Service's BMPs and define the existing and expanded functions and responsibilities of the RCDs. These documents also suggest means by which the California Regional Water Quality Control Board, San Diego Region, can assist the RCDs in implementation of the policy.

The Resource Conservation District Sediment Control Ordinance, and the Erosion and Sediment Control Policy establish the duties of the Regional Board and the RCD's as outlined below. The Resource Conservation Districts will implement these documents as follows:

- (1) Continue to assist farmers and other land owners in establishing management programs which comply with BMPs.
- (2) Authorize any of its directors to file a formal complaint against any person who is causing or permitting any accelerated erosion and sediment damage.
- (3) Take action against any person causing or permitting any accelerated erosion and sediment damage.
 - (A) Receive complaints from RCD directors, land occupiers, or city, state and county officials responsible for the maintenance of water quality in the jurisdictions.
 - (B) Conduct hearings of the Resource Conservation District Board of Directors on complaints. If the complaint is valid, the "land disturber" is allowed two months to develop and implement a voluntary conservation plan.
 - (C) Request action by the Regional Board if compliance schedules are not followed or if further noncompliance occurs, when such noncompliance results in the intentional or negligent discharge or deposition of any waste where it is, or probably will be discharged into the waters of the state or

creates or threatens to create a condition of pollution or nuisance.

The Regional Board will assist the Resource Conservation Districts in implementing the Erosion and Sediment Control Policy by doing the following:

- (1) Inform the appropriate RCD of instances when the staff of the Regional Board finds that accelerated erosion damage has occurred or is likely to occur as a result of violations of the BMP guidelines.
- (2) Receive requests for action on complaints from the RCDs when compliance schedules have not been met or when further noncompliance has occurred, and consider appropriate enforcement action pursuant to section 13304 (a) of the Porter-Cologne Water Quality Control Act.

RESOURCE EXTRACTION

SAND, GRAVEL AND RELATED OTHER MINERAL RESOURCE EXTRACTION OPERATIONS

The sand and gravel related processing industry represents one of the largest single classes of industry in the San Diego Region. Construction activities in the Region will require a continuing need for sand and gravel products. The industry can generally be classified as follows:

- Sand and gravel processing (including rock crushing);
- Concrete batching;
- Asphalt batching;
- Asphalt product manufacturing;
- Concrete product manufacturing; and
- Clay and clay product processing.

The largest volume of waste from sand and gravel processing operations results from product washing. Many of the sedimentary deposits mined for sand and gravel in the San Diego Region contain a high percentage of silt and clay. Extensive washing is required to remove the fine material. Other waste includes cement truck wash water, sediment separated from the wash water, and rejected product (broken brick, block, pipe etc.).

Recycled wash waters are discharged to storage ponds and can contain high concentrations of total dissolved solids because of evaporation and leaching from product materials. The percolation of these recycled waters can adversely affect ground water quality. It is recognized that the permeability of the ponds receiving the wash waters is low because of the sealing effects of silts and clay sediments in the wash water. Sediment and wash water discharged to surface waters can adversely affect aquatic life through sediment deposition and increases in turbidity.

Many sand and gravel operations are regulated with waste discharge requirements (WDR). The waste discharge requirements prohibit the discharge of sand and gravel wash water to surface waters. The requirements also require that waste holding ponds have 100-year frequency flood protection. Mining Operations may also be subject to "Mining Waste Management" requirements in CCR Title 27 (sections 22470 to 22510). Resolution No. 83-21 entitled, "A Resolution Conditionally Waiving Adoption of Waste Discharge Requirements for Certain Specific Types of Discharges" conditionally waives WDRs for sand and gravel mining operations not conducted in flowing streams. Sand and gravel mining operations are subject to regulation under section 404 of the Clean Water Act. Before a section 404 permit can be obtained, the discharger must obtain water quality certification pursuant to section 401 of the Clean Water Act. See previous discussion of Water Quality Certification (section 401).

Many mining operations are subject to California's Surface Mining and Reclamation Act (SMARA) of 1975 and the federal Surface Mining Control and Reclamation Act (SMCRA) of 1977. These laws, which have similar provisions, require reclamation of mined lands in order to protect public health and safety and to prevent or minimize adverse environmental effects such as water quality degradation, flooding, erosion, and sedimentation. Additionally, SMCRA requires mine operators to establish baseline hydrologic conditions; in the event that adjacent waters are contaminated, diminished, or interrupted, SMCRA further requires mine operators to replace the water supply.

Under SMARA regulations (California Public Resources Code (section 3505, Article 1), mining operators must:

- Control soil erosion by minimizing removal of vegetation and overburden, managing stockpiles, and constructing erosion control facilities;

- Control water quality by constructing settling ponds and basins and conducting operations in such a way as to prevent siltation of ground water recharge areas;
- Protect fish and wildlife habitat by taking "reasonable measures";
- Protect natural drainage ways by proper placement and control of mine waste rock and overburden piles or dumps; and
- Control erosion and drainage by grading and revegetation, and construction of basins to impound surface runoff, and protection of spillways from erosion.

FLOOD CONTROL

In a natural setting, the dynamic nature of water creates an ever changing stream channel within the floodplain. In the San Diego Region, where rainfall is extremely variable, flood plains which appear to be dry one year, may contain tremendous torrents the following year. Sometimes the dry appearance of the flood plain has made people mistakenly think flood waters do not occur there. The dry appearance of a portion of the flood plain is deceptive. Floods are a natural part of any flood plain. Flood plains cannot be fully protected against floods.

In the past, developments clustered near or within the flood plain. Flood control channels were constructed to protect these properties. Flood control channels were built to constrict the flood plain and to allow maximum development on adjacent lands. These developments increased the amount of impervious area (roads, buildings, parking lots and other structures) and increased local storm runoff. Storm water, which prior to development would have been absorbed into the soil, instead filled local storm drains. Thus, the precipitation which might at one time have caused local flooding caused intensified downstream flooding.

Today, many flood plains have been channelized to protect property. There are a variety of channel designs which have been built. Channel designs vary in range from completely natural to entirely concrete lined with concrete bottoms. Other channel types include natural channels modified to contain a low-flow channel with or without side filling or riprap or concrete; and with or without encroachment by agriculture and/or urban areas.



Rose Canyon Creek

IMPACTS OF CHANNELIZATION

To the degree that a natural watercourse is channelized, the negative impacts to the watershed are increased. The following impacts occur with channelization:

- (1) Channel modification and channelization of streams induces changes in land use practices. The resulting change in land use practices often results in detrimental changes to surface water quality.
- (2) With future increases in the urbanization of an area, the impervious area increases, contributing additional storm water runoff. Flood channels were built to contain a certain design flow and the design flow can be exceeded by additional storm water runoff.
- (3) As the flood plain is constricted and confined within a channel, the potential damage from storm runoff is increased.
- (4) Channelization reduces ground water recharge.
- (5) Impervious channels designed to remove the runoff quickly also transport pollutants down the flood control system just as quickly. Most of the surface water runoff from urban areas flows into flood control channels without any mechanism to control the input of toxics.
- (6) Channelization results in the direct loss of instream habitat. Fish and other aquatic life are totally dependent upon the surface waters within floodplains.
- (7) Channelization results in the loss of riparian habitat.
- (8) Channelization causes an increase in ambient stream temperatures within and downstream from the channelized section. The rise in stream temperature may degrade the habitat for aquatic life.
- (9) The loss of riparian areas through channelization results in the loss of wildlife. Riparian areas are the most important habitat for the majority of western wildlife species, and are essential for many wildlife species.
- (10) Loss of riparian areas results in a loss of the buffering capacity of the riparian vegetation to moderate flows.
- (11) Loss of the riparian areas results in a loss of the natural filtering capacity that these areas provide. The natural filtering capacity of riparian areas reduces the concentration of potentially toxic constituents in storm water runoff. Riparian areas provide an improvement in the quality of water produced from the watershed.
- (12) Stream and riparian habitats are needed to provide corridors for fish and wildlife resources. A highly modified concrete channel may not allow for fish or wildlife passage. Even a limited section of concrete channel can disconnect habitats. The separation of habitats reduces the viability of fish and wildlife populations.

CONCLUSION

Channel modifications need to be evaluated for their ultimate consequences for the watershed. In California's past there was inadequate consideration towards the retention of wetlands, riparian systems, and natural flood plains. The economic assessment of flood control alternatives should consider any proposed project in its entirety. Wetlands, riparian systems and natural flood plains accommodate natural stream meandering, aggradation, degradation and overbank flow better than those lands directly encroached upon by development.

Consideration and utilization of methods to reduce storm water runoff and allow infiltration and percolation of storm waters are needed. Methods should include minimizing the further construction of flood control channels, particularly concrete channels, and the retention of riparian areas within floodplains. Riparian areas within flood plains need to be protected in order to allow the natural filtering capacity of the riparian area to improve the quality of storm water produced from the watershed; and to

preserve alluvial percolation capacity and aquatic habitat values. When possible riparian areas need to be restored.

Riparian and stream habitats provide natural beauty which is appreciated and valued by people. Riparian and stream habitats, especially in urban areas, are vital to enhancing our quality of life. People are far more likely to respect and be stewards of "natural" reaches of streams than channelized or artificially modified reaches. Riparian lands represent a significant value to society.



Noble Canyon Creek

FUTURE DIRECTION: WATERSHED - BASED WATER QUALITY CONTROL

The concept of comprehensive watershed level management of water resources is currently being incorporated into various elements of the State's Nonpoint Source Management Program. The watershed protection approach is an integrated strategy for more effectively protecting and restoring beneficial uses of state waters. By looking at an entire watershed, one can more clearly identify critical areas and practices which need to be targeted for pollution prevention and corrective actions. This approach not only addresses the waterbody itself, but the geographic area which drains to the watercourse. This strategy also integrates both surface and ground waters, inland and coastal waters, and point and nonpoint sources of pollution. Point sources have received most of the regulatory attention in the past, however, significant improvements in point sources, coupled with continued water quality impairments, have necessitated that the water resources community look at a more integrated approach which considers impacts from both point and nonpoint sources of pollutants.

The Watershed Protection Approach is built on the following three main principles:

- The target watersheds should be those where pollution poses the greatest risk to human health, ecological resources, desirable uses of the water, or a combination of these;
- All parties with a stake in the specific local situation should participate in the analysis of the problems and the creation of solutions; and
- The actions undertaken should draw on the full range of methods and tools available, integrating them into a coordinated, multi-organizational attack on the problems.

Many agencies and organizations concerned with water resources have come to recognize that this type of approach can be very effective in realistically assessing cumulative impacts and formulating workable mitigation strategies. The CZARA, USEPA guidance, and various legislative proposals clearly state the need to consider the implications of land use on water quality. USEPA program managers are re-thinking their approach to the allocation of resources (especially within the Nonpoint Source Program) and will be primarily funding studies that are part of a watershed planning and implementation effort.

The traditional approach to managing pollutant discharges into streams, lakes, and the ocean has evolved over time, often with separate programs to address various aspects of the total water quality problem. Some of these programs have different, overlapping, or conflicting priorities. Moving from the more facility-specific controls of the past to management of water quality on a watershed basis, will entail some growing pains. Many of the programs at our disposal will need to be reshaped and integrated at the watershed level. Some programs will need to be reoriented and integrated, while other programs may not be amenable to the watershed approach. Nonetheless, public agencies and private organizations concerned with water resources have come to recognize that a comprehensive evaluation of pollutant contributions on a watershed scale is the only way to realistically assess cumulative impacts and formulate workable strategies to truly protect our water resources. Both water pollution and habitat degradation problems can best be solved by following a basin-wide approach.

REMEDIATION OF POLLUTION

The Regional Board allocates substantial resources to the investigation of polluted waters and enforcement of corrective actions needed to restore water quality. Specific remediation programs include:

- Underground Storage Tanks Program including the Local Oversight Program;
- Spills, Leaks, Investigation and Cleanup Program (SLIC);
- Aboveground Petroleum Storage Tank Program; and
- DoD Site Investigations.

The Regional Board sets cleanup goals based on the State's Antidegradation Policy set forth in State Board Resolution No. 68-16 and Resolution No. 92-49 Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code section 13304 and the Cleanup and Abatement Policy discussed later in this chapter. Under these policies, whenever the existing quality of water is better than that needed to protect present and potential beneficial uses, such existing quality will be maintained, with certain exceptions (as described in Chapter 5, Plans and Policies). Accordingly, the Regional Board prescribes cleanup goals that are based upon background concentrations. For those cases where dischargers have demonstrated that cleanup goals based on background concentrations cannot be attained due to technological and economic limitations, the Antidegradation Policy sets forth policy for cleanup and abatement based on the protection of beneficial uses. The Regional Board can, on a case-by-case basis, set cleanup goals as close to background as technologically and economically feasible. Such goals must at a minimum, restore and protect all designated beneficial uses of the waters.

Furthermore, such cleanup levels cannot result in water quality less than that prescribed in the Basin Plan and policies adopted by the State and Regional Board, and must be consistent with maximum benefit to the people of the State.



Naval Base Point Loma (submarine facility)
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UNDERGROUND STORAGE TANKS

The Underground Storage Tank Program was enacted in 1983 and took effect January 1, 1984. The authority for the program is found in the Health and Safety Code, Division 20, Chapter 6.7, and the regulations for the program are found in the CCR, Title 23, Division 3, Chapter 16. The regulations are designed to ensure the integrity of all underground storage tanks (UST), and to detect any leaks.

There are approximately 2,000 known cases of leaking underground storage tanks in the Region. Approximately 35 percent of the cases involve instances where only soil contamination is present, 35 percent involve instances where ground water contamination has been confirmed, and the remaining 30 percent are cases which have been closed. The majority of the releases from these underground storage tanks are gasoline and the constituent of most concern is benzene, a known carcinogen. A smaller percentage of the underground storage tank releases involve chlorinated industrial solvents, which are suspected carcinogens. As anticipated, the majority of the sites where these releases have occurred are automotive service stations. Tanks from industrial facilities contribute a smaller but significant minority. To date, these ground water impacts have affected only a few drinking water supply wells. The Regional Board maintains and regularly updates the Leaking Underground Storage Tank Information System (LUSTIS) database, which identifies all known underground storage tank release sites in the Region.

Implementation of the underground storage tank program includes direct Regional Board oversight of leaking underground storage tank cleanups. It also

involves coordination of oversight activities with local agencies under contract with the State Board through the Local Oversight Program. Local agencies have the authority, pursuant to section 25297.1 of the Health and Safety Code to act on behalf of the Regional Board in requiring investigations and cleanup of underground tank cases. The local agencies also implement the permitting, construction, inspections and monitoring portion of the Underground Tank Regulations. The Orange County Health Care Agency, the County of Riverside Department of Environmental Health and San Diego County Department of Health Services, Environmental Health Services handle the vast majority of the active cases in the Region.

Title 23, Division 3, Chapter 16, Article 11 provides that corrective action of releases from underground storage tanks includes one or more of the following phases:

- Preliminary Site Assessment Phase: This includes, at a minimum, initial site investigation, initial abatement actions and initial site characterization.
- Soil and Water Investigation Phase: This includes the collection and analysis of data necessary to assess the nature and vertical and lateral extent of the unauthorized release to determine a cost-effective method of cleanup.
- Corrective Action Plan Implementation Phase: This consists of carrying out the cost-effective alternative selected during the Soil and Water Investigation Phase for remediation or mitigation of the actual or potential adverse effects of the unauthorized release.
- Verification Monitoring Phase: This includes all activities required to verify implementation of the Corrective Action Plan and evaluate its effectiveness.

Cleanup levels for soil and ground water pollution resulting from leaking underground storage tanks will be established based on the Cleanup and Abatement Policy described later in this chapter.

UNDERGROUND STORAGE TANK CLEANUP FUND

The State Board, Division of Clean Water Programs, administers the Underground Storage Tank Cleanup Fund. The Cleanup Fund can be used as a mechanism to satisfy federal financial responsibility requirements and pay for corrective action and third party liability costs resulting from a leaking petroleum underground storage tank. The

Fund can also pay for direct cleanup (by local agency or regional board) of underground storage tank sites requiring emergency and prompt action on abandoned or recalcitrant sites. This Fund, collected by the Board of Equalization, is supported by a 0.6 cent per gallon fee for gasoline. The Fund has been established to provide reimbursement to tank owners or operators for costs of cleanup of the effects of unauthorized releases of petroleum. Up to ~~one~~ 1.5 million dollars (\$1,9500,000) can be provided per site, with the first ten thousand dollars (\$10,000) being provided by the claimant. With certain qualifications, expenditures made to remediate an unauthorized petroleum release since January 1, 1988 can be reimbursed and letters of credit can be issued for the funding of ongoing remediation activities.

Owners/ operators of petroleum USTs as defined in section 25281(x) of the California Health and Safety Code and owners of petroleum USTs located on residential property who meet the following requirements are eligible for the fund:

- There has been an unauthorized release of petroleum from the UST reported to and confirmed by the regulatory agency.
- As a result of this unauthorized release, the owner/ operator must take corrective action as required by a regulatory agency.
- The owner/ operator must be in compliance with any applicable financial responsibility requirements and any UST requirements.

Regional boards provide technical support to both applicants who file claims against the underground storage tank Cleanup Fund and State Board staff members who verify the corrective action work that the claims cover. For claims that involve future work, the Regional Board will oversee site investigation and cleanup on cases for which they are the lead agency.

SITE CLEANUP SPILLS, LEAKS, INVESTIGATION AND CLEANUP

Reports of unauthorized discharges, such as spills and leaks from above ground storage tanks are investigated through the Regional Board's ~~Spills, Leaks, Investigation and Cleanup (SLIC) Site Cleanup~~ Program. This program is not restricted to particular pollutants or environments; rather, the program covers all types of pollutants (such as solvents, petroleum fuels, and heavy metals) and all environments (including surface and ground water, and the vadose zone). Upon confirming that an

unauthorized discharge is polluting or threatens to pollute regional waterbodies, the Regional Board oversees site investigation and corrective action. Statutory authority for the program is derived from the Water Code, Division 7, section 13304. Guidelines for site investigation and remediation are promulgated in State Board Resolution No. 92-49 as amended on April 21, 1994 entitled "Policies and Procedures For Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304".

Cleanup levels for soil and ground water pollution resulting from sites investigated through the SLIC Program will be established based on the Cleanup and Abatement Policy described later in this chapter.

ABOVEGROUND PETROLEUM STORAGE TANKS

In order to prevent unauthorized discharges from aboveground petroleum storage tanks, the State of California has enacted legislation designed to lower the risk of spills and leaks. The state's Aboveground Petroleum Storage Act was enacted in 1989 and amended in 1991. The Act became effective on January 1, 1990 (Health and Safety Code, Chapter 6.67, section 25270 et. seq.) The Act requires owners or operators of above ground petroleum storage tanks to file a storage statement with the State Board and implement spill prevention measures. Examples of such measures include daily visual inspections of any storage tanks containing crude oil or its fractions, the installation of secondary containment for all tanks with sufficient capacity to hold the contents of the largest tank at the facility plus sufficient volume for rainfall to avoid the overflow, and development of a "Spill Prevention Control and Countermeasure Plan." In the event of an unauthorized release, the owner or operator must notify the Regional Board officials and undertake appropriate monitoring and corrective action. Additionally, annual fees are levied on tank owners. ~~The Regional Board uses~~ These fees are used to fund aboveground petroleum tank inspections and enforcement.

DEPARTMENT OF DEFENSE FACILITIES

There are twenty-two major Department of Defense (DoD) facilities in the San Diego Region. The

following is a list of DoD facilities and the corresponding lead agency for the facility in the Region.

Department of Defense Facility	Lead Agency
United States Marine Corps Base, Camp Pendleton	USEPA
Coronado Navy Amphibious Base	DTSC
Imperial Beach Auxiliary Landing Field	DTSC
Naval Air Station Miramar	DTSC
North Island Naval Aviation Depot	DTSC
Naval Air Station North Island	DTSC
San Diego Fleet Anti-Submarine Warfare Training Center	DTSC
San Diego Fleet Combat Training Center	DTSC
Marine Corp Recruit Depot, San Diego	DTSC
Naval Command, Control and Ocean Surveillance Center	DTSC
San Diego Naval Computer and Telecommunications Station	DTSC
San Diego Naval Electronics Systems Engineering Center	DTSC
San Diego Naval Hospital	DTSC
32 Street Naval Station, San Diego	DTSC
Naval Submarine Base, San Diego	DTSC
Fleet Industrial Supply Center	DTSC
San Diego Naval Training Center	DTSC
San Diego Public Works Center	DTSC
San Diego Shore Intermediate Maintenance Activity	DTSC
Air Force Plant # 19, San Diego	DTSC
Fallbrook Naval Weapons Station	DTSC
Search, Evade, Resist, Escape Camp, Warner Springs	DTSC

Significant ground water contamination has been detected at a number of these facilities. Contamination is severe enough at one of these facilities to have it placed on USEPA's National Priorities List (NPL) for remediation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, commonly referred to as Superfund).

For the National Priority List facility (Camp Pendleton), the USEPA is the lead environmental regulatory agency for oversight of investigation and

cleanup. CERCLA requires USEPA to consider applicable or relevant and appropriate state laws and regulations when establishing cleanup standards for remedial activities. To ensure that the state's concerns are properly addressed, two Cal-EPA agencies, the Regional Board and the Department of Toxic Substances Control (DTSC), also perform a significant oversight role in the investigations and cleanup of these facilities.

The USEPA, DoD, DTSC and the Regional Board have signed Federal Facility Agreements (FFA) for the National Priorities List facility. The intent of the FFA is to ensure that: (1) environmental impacts are investigated; (2) remedial actions are defined; (3) procedural framework or schedules are established; (4) cooperation among agencies is facilitated; (5) adequate assessment is performed; and (6) compromise is reached.

The USEPA is not involved in the investigation and cleanup of DoD facilities that are not on the National Priority List (DoD facilities other than Camp Pendleton). However, many of the facilities potentially have significant contamination. In these cases, the Regional Board and DTSC enter into Federal Facility Site Remediation Agreements (FFSRA) with DoD. Federal Facility Site Remediation Agreements are very similar to the above-mentioned Federal Facility Agreements, with the exception that USEPA is not a party.

In the table above showing the DoD in the San Diego Region, the DTSC has been identified as the "lead" agency, and the Regional Board is the "support" agency. A Memorandum of Understanding has been signed by the State Board and DTSC which describes the roles of each agency. The Regional Board's oversight role is with regard to the investigation and cleanup of water resources that have been impacted, or are threatened, by waste discharges from the facilities. The Regional Board's responsibility also extends to source areas (landfills, contaminated soil, etc.) that currently, or may in the future, pose a threat to water quality. DTSC's role is to address all other environmental aspects including health risk assessment, air emissions, community relations, etc.

The State Board and DTSC have entered into a two-year cooperative agreement with the DoD for cleanup and oversight reimbursement. All work performed by the State agencies with regard to the investigation and cleanup of environmental problems at these facilities is fully reimbursed by DoD.

Cleanup levels for soil and ground water pollution resulting from DoD facilities will be established based on the Cleanup and Abatement Policy described later in this chapter.

CLEANUP AND ABATEMENT POLICY

I. CONTAMINATED SOIL AND GROUND WATER

The Regional Board has identified numerous sites where unauthorized waste discharges have resulted in soil and ground water pollution. The majority of these sites have been identified as a result of the Regional Board's implementation of the remediation programs described previously in this Chapter. The unauthorized waste discharges at many of these sites have resulted in adverse effects on water quality and beneficial uses. In some cases the polluted sites pose a threat to the public health. It is the responsibility of the Regional Board to establish cleanup and abatement goals and objectives for the protection of water quality and the beneficial uses of waters of the state in this Region which are consistent with applicable state and federal statutes and regulations.

Water Code section 13304 authorizes the Regional Board to require cleanup and abatement of soil and ground water pollution. The Cleanup and Abatement Policy described below shall apply to all types of discharges subject to Water Code section 13304.

II. PURPOSE OF POLICY

The purpose of this Cleanup and Abatement Policy is to provide:

- A. Guidance to dischargers involved in the investigation, cleanup and abatement of soil and ground water pollution sites to ensure these activities are in conformance with applicable state and federal laws, regulations and policies;
- B. Guidance to dischargers on Regional Board methodology for determining cleanup levels at soil and ground water pollution sites; and
- C. Consistency and uniformity in Regional Board requirements for investigation, cleanup and abatement of analogous discharges that involve similar wastes, site characteristics, and water quality considerations.

III. CLEANUP AND ABATEMENT PRINCIPLES

A. The Cleanup and Abatement Policy is guided on the following principles, which are based on Water Code sections 13000 and 13304, CCR, Title 23, Division 3, Chapter 15 (hereinafter Chapter 15), CCR, Title 23, Division 3, Chapter 16 (hereinafter Chapter 16), and applicable State Board policies. The Regional Board shall require:

1. Cleanup and abatement actions to conform with the provisions of State Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality Waters in California) provided that under no circumstances shall these provisions be interpreted to require cleanup and abatement which achieves water quality conditions that are better than "natural" background conditions.
2. Cleanup and abatement actions to conform with the provisions of State Board Resolution No. 92-49, Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code section 13304;
3. Cleanup and abatement actions to conform with applicable or relevant provisions of Chapter 15 to the extent feasible;
4. Cleanup and abatement actions to implement the applicable provisions of Chapter 16 for investigations and cleanup of hazardous substances from underground storage tanks; and
5. Dischargers to cleanup and abate the effects of discharges in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable if background levels of water quality cannot be restored, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible. Any alternative cleanup levels less stringent than background shall apply section 2550.4 of Chapter 15, or, for cleanup and abatement associated with underground storage tanks, apply section 2725 of Chapter

16, provided that the Regional Board considers the conditions set forth in section 2550.4 of Chapter 15 in setting alternative cleanup levels pursuant to section 2725 of Chapter 16. Any such alternative cleanup level shall:

- a. Be consistent with maximum benefit to the people of the State;
- b. Not unreasonably affect present and anticipated beneficial use of such water; and
- c. Not result in water quality less than prescribed in the Water Quality Control Plans and Policies adopted by the State and this Regional Board.

IV. CLEANUP AND ABATEMENT INVESTIGATIONS

A. The Regional Board shall apply the guidelines described in IV.B. below in overseeing investigations to determine the nature and extent of a discharge and appropriate cleanup and abatement measures. The level and complexity of the investigations, assessments, and feasibility studies of cleanup and abatement alternatives required below shall be determined by the discharge type, the extent of pollution, and any other applicable site-specific characteristic(s).

B. The Regional Board shall require dischargers to:

1. Investigate the nature and extent of the discharge or threatened discharge to ensure that adequate cleanup plans are proposed. The goal of the investigation shall be to adequately characterize the pollutants in the discharge and determine the vertical and horizontal extent of pollution in soil and ground water. The investigation shall determine where concentrations of pollutants reach background levels. The investigation shall extend off-site to any location necessary to determine the source and assess the vertical and horizontal extent of the discharge.
2. Take immediate action to remove, treat, or contain pollution source(s) to the maximum extent practicable. Sources of pollution may include:

- a. Ongoing sources of discharge from storage or distribution systems for wastes or hazardous materials;
 - b. Soils or ground water which are polluted with mobile or immobile concentrations of non-aqueous phase liquids (NAPLs);
 - c. Soils which are polluted with leachable concentrations of soluble pollutants;
 - d. Polluted soils which are eroded and transported to storm drains, abandoned or active wells, surface waters, or lands beyond the control of the discharger.
3. Submit the following information for consideration in establishing cleanup levels in accordance with the conditions set forth in Chapter 15, section 2550.4:
- a. An assessment of the adverse effects on ground water quality and beneficial uses;
 - b. A risk assessment to determine impacts and threats to human health and the environment; and
 - c. A feasibility study of cleanup alternatives which compares effectiveness, relative cost, and time to attain the following alternative cleanup levels;
 - (1) background levels; levels
 - (2) levels which meet all applicable water quality objectives and do not pose significant risks to health or the environment, and
 - (3) an alternate cleanup level in between the cleanup levels described in (1) and (2) above which meets the requirements as specified in section III.A.5. of this Cleanup and Abatement Policy.
4. Provide documentation that plans and reports are prepared by professionals qualified to prepare such reports, and that all investigative, and cleanup and abatement activities are conducted under the direction of appropriately

qualified professionals. Professionals should be qualified, licensed where applicable, and competent and proficient in the fields pertinent to the required activities. A statement of qualifications of the responsible lead professionals shall be included in all plans and reports submitted by the discharger.

V. APPROVAL of CLEANUP LEVELS

- A. The Regional Board shall approve soil and ground water cleanup levels through the adoption or affirmation of cleanup and abatement orders; or
- B. The Executive Officer or a local agency may approve cleanup levels as appropriately delegated by the Regional Board.

VI. GROUND WATER CLEANUP LEVELS

- A. Ground water cleanup levels shall be based on:
 - 1. The provisions of State Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California, State Board Resolution No. 88-63, Sources of Drinking Water, and State Board Resolution No. 92-49, Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code section 13304;
 - 2. Applicable narrative and numerical water quality objectives and beneficial uses described in Chapters 2 and 3 of this Basin Plan;
 - 3. Pollutant concentrations which do not pose a significant threat to human health or the environment. Threat to human health and the environment shall be determined through a risk assessment.
 - a. The Regional Board is not the lead agency for specifying risk assessment procedures. The risk assessment shall be conducted using the most current procedures authorized by the DTSC, Office of Environmental Health Hazard

Assessment or the USEPA. The Regional Board will assist the discharger, as necessary, in obtaining the appropriate, most current, procedures from these agencies.

- b. In the absence of scientifically valid data to the contrary, theoretical risks from chemical constituents shall be considered additive across all media of exposure, and shall be considered additive for all chemicals having similar toxicological effects or having carcinogenic effects;
- c. The Regional Board is not the lead agency for reviewing risk assessments. The Regional Board will rely on the California Department of Toxic Substances Control, Office of Environmental Health Hazard Assessment, or appropriately designated regulatory local health agencies to review and evaluate the adequacy of risk assessments.
- d. The discharger shall submit the risk assessment to the Regional Board in accordance with section IV.B.3.b. of this policy. The Regional Board will coordinate the review of the risk assessment in accordance with the following hierarchy:
 - (1) The Regional Board will first seek the assistance of any appropriate supporting health agency currently involved with the cleanup of the site.
 - (2) If unsuccessful, the Regional Board will seek the assistance of previously uninvolved appropriate health agencies.
 - (3) If unsuccessful, the Regional Board will seek the assistance of the DTSC in accordance with the terms and conditions of the *MEMORANDUM OF UNDERSTANDING BETWEEN THE DEPARTMENT OF HEALTH SERVICES AND THE STATE WATER RESOURCES CONTROL BOARD, THE*

REGIONAL WATER QUALITY CONTROL BOARDS FOR THE CLEANUP OF HAZARDOUS WASTE SITES. AUGUST 1, 1990.

- 4. Applicable state and federal statutes and regulations;
- 5. Relevant standards, criteria, and advisories adopted by other state and federal agencies;
- 6. Technical and economic feasibility of attaining background concentrations and of attaining concentrations lower than defined by 2 and 3 above. Technical and economic feasibility shall be determined in accordance with the following criteria:
 - a. Technical feasibility shall be determined by assessing the availability of technologies which have been shown to be effective in reducing the pollutant concentrations to the established cleanup levels. Bench-scale and/or pilot-scale studies may be necessary to make this feasibility assessment.
 - b. Economic feasibility refers to the objective balancing of the incremental benefit of attaining more stringent cleanup levels compared with the incremental cost of achieving those levels. Economic feasibility does not refer to the subjective measurement of the discharger's ability to pay the costs of cleanup.
 - c. Applicable factors to be considered in the establishment of cleanup levels greater than background are listed in Chapter 15, section 2550.4.
 - d. The discharger's ability to pay is one factor to be considered in determining whether the cleanup level is reasonable. However, availability of economic resources to the

discharger is primarily considered in establishing reasonable schedules for compliance with cleanup levels.

- B. The Regional Board shall set ground water cleanup levels to attain background water quality, unless the discharger demonstrates that it is either technically or economically infeasible to attain background water quality. If the discharger makes such a demonstration to the satisfaction of the Regional Board, cleanup levels are set between background water quality concentrations and concentrations that meet all criteria in items A.2 and A.3 above. Within this concentration range, cleanup levels will be set at the lowest concentrations that are technically and economically feasible to achieve. In no case will cleanup levels be established below natural background conditions.
- C. Compliance with cleanup levels must occur at all points throughout the plume or area of contamination to protect potential beneficial uses of water resources as required by Water Code sections 13000 and 13244 and Health and Safety Code section 25356.1 (c).
- D. The Regional Board may consider relaxing ground water cleanup levels that were previously established at levels more stringent than applicable water quality objectives, only when a final remedial action plan has been pursued in good faith and all of the following conditions are met:
 - 1. Modified cleanup levels meet the conditions listed in VI.A.1., VI.A.2., and VI.A.3. above; and
 - 2. An approved cleanup program has been fully implemented and operated for a period of time which is adequate to understand the hydrogeology of the site, pollutant dynamics, and the effectiveness of available cleanup technologies; and
 - 3. Adequate source removal and/or isolation is undertaken to eliminate or significantly reduce future migration of pollutants to ground water; and
 - 4. The discharger has demonstrated that no significant pollutant migration will

occur to other underlying or adjacent aquifers; and

- 5. Ground water pollutant concentrations have reached asymptotic levels (i.e., pollutant concentration reductions are no longer significant) using appropriate technology; and
- 6. Alternative remediation techniques for achieving cleanup levels have been evaluated and are inappropriate or not economically feasible.

VII. SOIL CLEANUP LEVELS

- A. Soil pollution can present a health risk and a threat to water quality. The Regional Board designates soil cleanup levels for the unsaturated zone based upon threat to water quality and risk to human health or the environment. Guidance from the USEPA, DTSC, or the Office of Health Hazard Assessment is considered in determining health and environmental risks. Cleanup levels for contaminated soils which threaten water quality, shall be established in accordance with the following criteria:
 - 1. Concentrations of the residual leachable/mobile pollutants shall be equal to background concentrations unless background levels are technically or economically infeasible to achieve.
 - 2. Where background levels are technically or economically infeasible to achieve, soil cleanup levels shall be established to ensure that residual leachable/mobile pollutants will not cause, or threaten to cause, exceedances of applicable ground water cleanup levels or water quality objectives, and do not pose significant risks to health or the environment.
 - 3. Soil cleanup levels less stringent than background may be based on site specific technical evaluations of pollutant fate and transport processes, human health and environmental risk assessment methods as long as such methods are based on site specific field data, technically sound principles, and the criteria described in VII.A.2. above.

B. Where residual leachable/mobile soil pollutants which threaten water quality remain on site the discharger shall:

1. Implement measures as necessary to ensure that soils with residual pollutants are covered or otherwise managed to minimize pollution of surface waters or exposure to the public; and
2. Implement the applicable provisions of Chapter 15 to the extent that it is technologically or economically feasible to do so as described in State Board Resolution No. 92 - 49. This may include, but is not limited to, subsurface barriers or other containment systems, pollutant immobilization, toxicity reduction, and financial assurances.

C. The Regional Board shall generally require sampling to verify soil cleanup and may also require follow-up ground water monitoring. The degree of monitoring will reflect the amount of uncertainty associated with the soil cleanup level selection process. Follow-up ground water monitoring may be limited where residual concentrations of leachable/mobile pollutants in soils are not expected to adversely affect ground water quality.

VIII. TIME SCHEDULES

The Regional Board shall determine schedules for investigation, and cleanup and abatement, taking into account the following factors:

- A. The degree of threat or impact of the discharge on water quality and beneficial uses;
- B. The obligation to achieve timely compliance with cleanup and abatement goals and objectives that implement the applicable Water Quality Control Plans and Policies adopted by the State and Regional Board;
- C. The financial and technical resources available to the discharger; and
- D. Minimizing the likelihood of imposing a burden on the people of the state with the expense of cleanup and abatement, where feasible.

TOTAL MAXIMUM DAILY LOADS

A total maximum daily load (TMDL) is the amount of a pollutant that can be discharged into a waterbody and still maintain its water quality standards (i.e., the designated beneficial uses and the adopted water quality objectives that support the beneficial uses). A TMDL must account for seasonal variations and include a margin of safety (MOS) to account for any lack of knowledge concerning the relationship between pollutant loadings and receiving water quality.

Pollutant loadings in excess of the TMDL are expected to have an adverse effect on water quality by causing exceedances of the applicable water quality standards. Allowable pollutant loadings are calculated and assigned to all point source and nonpoint source discharges to ensure that the applicable water quality standards are not exceeded in the receiving water.

A portion of the TMDL may be held explicitly in reserve as the MOS (e.g., MOS = 10 percent of TMDL), or the MOS may be implicitly included (i.e., MOS = 0) by incorporating conservative assumptions in the calculation of the TMDL (i.e., assumptions result in a lower calculated TMDL). The portion of the TMDL not in the MOS is assigned to point sources and nonpoint sources.

Point sources are assigned wasteload allocations (WLAs) and nonpoint sources (including natural and background sources) are assigned load allocations (LAs). The WLAs and LAs may differ for each pollutant source, but the TMDL and MOS do not change. The TMDL for a pollutant in the receiving water, and the WLAs and LAs for a pollutant discharged from different sources into a waterbody are calculated at levels that, when each are met, are expected to result in the attainment of the associated water quality objectives for the pollutant and protection of the applicable beneficial uses in the receiving water.

Establishing TMDLs for waters is required under section 303(d) of the Clean Water Act. Clean Water Act section 303(d) requires that the State establish a priority ranking of waters that do not meet water quality standards after application of technology based controls. The USEPA strongly encourages states to include the priority ranking as part of the Biennial Clean Water Act Sections 303(d), 305(b) and 314 Integrated Report, which is discussed in more detail in Chapter 6.

Waters identified under section 303(d) (a.k.a. the 303(d) List) are designated as Water Quality Limited Segments (WQLSs). In accordance with the priority ranking, TMDLs must be established for pollutants suitable for such calculations. For the purpose of developing information for all waters not identified as WQLSs, states are also required to estimate the TMDLs with seasonal variations and margin of safety.

One or more numeric targets are typically required to calculate TMDLs at levels necessary to attain and maintain applicable narrative and numerical water quality standards in WQLSs. Numeric targets interpret the existing water quality standards (i.e., beneficial uses and the water quality objectives established at levels sufficient to support those uses). After identifying the impaired beneficial uses of a waterbody, the numeric targets are often based on the water quality objectives in Chapter 3. Chapter 3 contains numeric and narrative water quality objectives. If applicable water quality objectives are numeric, the numeric water quality objectives can serve as the basis for the numeric targets. If applicable water quality objectives are narrative, one or more quantifiable target values or measurable indicators must be selected to measure progress and evaluate final attainment and maintenance of the narrative water quality objectives. In WQLSs, when numeric targets are met in the waterbody, the water quality standards should be attained and restored. While numeric targets and TMDLs interpret water quality standards, *numeric targets and TMDLs are not water quality standards.*

TMDLs are not self-implementing or directly enforceable for sources in the watershed. Instead, TMDLs must be implemented through the programs or authorities of the San Diego Water Board and/or other entities to compel dischargers responsible for controllable sources to achieve the pollutant load reductions identified by a TMDL analysis to attain the water quality objectives that will support the designated beneficial uses of a waterbody.

The authorities that are available to the San Diego Water Board to implement TMDLs are given under the Porter-Cologne Water Quality Control Act (Division 7 of the Water Code). The available regulatory authorities include incorporating discharge prohibitions in to the Basin Plan, issuing individual or general waste discharge requirements (WDRs), or issuing individual or general conditional waivers of WDRs. The San Diego Water Board has the authority to enforce Basin Plan prohibitions, WDRs, or conditional waivers of WDRs through the issuance of enforcements actions (e.g., time schedule orders, cleanup and abatement orders,

cease and desist orders, administrative civil liabilities). The San Diego Water Board also has the authority to require monitoring and/or technical reports from dischargers, which may be used to support the development, refinement, and/or implementation of TMDLs, WLAs, and/or LAs.

Additionally, the USEPA has delegated responsibility to the State and Regional Boards for implementation of the federal National Pollutant Discharge Elimination System (NPDES) program, which specifically regulates discharges of "pollutants" from point sources to "waters of the United States." The San Diego Water Board regulates discharges from point sources to surface waters with WDRs that implement federal NPDES regulations (NPDES requirements). Federal regulations require that NPDES requirements incorporate water quality based effluent limitations (WQBELs) that must be consistent with the requirements and assumptions of any available WLAs. WQBELs may be expressed as numeric effluent limitations, when feasible, and/or as a best management practice (BMP) program of expanded or better-tailored BMPs.

Upon establishment of TMDLs by the state or U.S. Environmental Protection Agency (USEPA), the state is required to incorporate TMDLs into the state water quality management plan. This Basin Plan and applicable statewide plans serve as the water quality management plan for the watersheds under the jurisdiction of the Regional Board. TMDLs are programs for the implementation of existing water quality standards, and are established in the Basin Plan subject to the requirements of Water Code section 13242. TMDLs incorporated into the Basin Plan, therefore, are required to include 1) a description of the actions (i.e., programs or authorities) of the Regional Board and/or other entities necessary to achieve the TMDLs, 2) a compliance time schedule by which the TMDLs, and thereby the restoration of the beneficial uses in the receiving waters, are to be achieved, and 3) a description of the monitoring program that is required to determine compliance with TMDLs, WLAs, and LAs in the receiving waters. These elements are referred to as the TMDL Implementation Plan.

TMDLs that have been established for the San Diego Region are provided in Chapter 7.

IMPLEMENTATION PROVISIONS FOR INDICATOR BACTERIA WATER QUALITY OBJECTIVES IN THE CONTEXT OF A TMDL

Water quality objectives for indicator bacteria shall be strictly applied except when otherwise provided for in a TMDL. Within the context of a TMDL, the Regional Board may implement the indicator bacteria water quality objectives by using a “reference system and antidegradation approach” or a “natural sources exclusion approach,” as described in Chapter 3 (Water Quality Objectives).

There are natural sources of bacteria which may cause or contribute to exceedances of water quality objectives for indicator bacteria. It is not the intent of the Regional Board to require treatment or diversion of natural water bodies or to require treatment of natural sources of bacteria. Such requirements, if imposed by the Regional Board, could adversely affect valuable aquatic life and wildlife beneficial uses supported by water bodies in the Region.

Implementation of indicator bacteria water quality objectives using the reference system and antidegradation approach requires control of indicator bacteria from anthropogenic sources so that bacteriological water quality in the targeted waterbody is consistent with that of a reference system. The reference system and antidegradation approach also requires that no degradation of existing bacteriological water quality in the targeted water body occurs when the existing bacteriological water quality is better than that of a water body in a reference system. A reference system is a watershed and the beach to which the watershed discharges that is minimally impacted by anthropogenic activities that can affect bacterial densities in the water body. Under the reference system and antidegradation approach, a certain frequency of exceedances of the indicator bacteria water quality objectives is allowed. The allowed frequencies of exceedances are either the observed frequency of exceedances in the selected reference system or the targeted water body, whichever is less.

Under the natural sources exclusion approach, dischargers must demonstrate they have implemented all appropriate best management practices to control all anthropogenic sources of indicator bacteria to the target water body such that they do not cause or contribute to exceedances of the indicator bacteria water quality objectives. The requirement to control all sources of anthropogenic indicator bacteria does not mean the complete

elimination of all anthropogenic sources of bacteria as this is both impractical as well as impossible. Dischargers must also demonstrate that the residual indicator bacteria densities are not indicative of a human health risk. After all anthropogenic sources of indicator bacteria have been controlled such that they do not cause exceedances of the indicator bacteria water quality objectives, and natural sources have been identified and quantified, exceedances of the indicator bacteria water quality objectives may be allowed based on the residual exceedances in the target water body. The residual exceedances shall define the background level of exceedance due to natural sources.

The Regional Board will evaluate the appropriateness of these approaches and the specific exceedances or exceedance frequencies to be allowed under each within the context of TMDL development or recalculation for a specific water body. If appropriate, the Regional Board may select to use one or both of these approaches during initial TMDL calculation or during subsequent recalculation following TMDL implementation.

These implementation provisions may only be used within the context of a TMDL addressing municipal storm water (including discharges regulated under statewide municipal NPDES waste discharge requirements), discharges from concentrated animal feeding operations, and discharges from non-point sources. These implementation provisions shall not be applied within the context of a TMDL addressing individual industrial storm water discharges, or general industrial and construction storm water discharges.

OTHER PROGRAMS

GROUND WATER MANAGEMENT

Ground water management programs can both enhance water quality and protect beneficial uses of ground water in the larger basins of the San Diego Region. These management programs consist of measures for the periodic monitoring and assessment of ground water levels and quality; the planned extraction and export of poor quality ground water with recharge of better quality water from an outside source; controls established on the use of ground water within the basin; and controls on inflow of poor quality water from outside the basin.

Because of the limited amount of natural recharge, the use of reclaimed water for ground water recharge must be considered in any effective ground water management program in the San Diego Region. For this reason, agencies involved in wastewater disposal play a vital role in the development of these programs. Several local and state agencies, as well as some private consultants have been studying ways to encourage this approach for protecting the Region's ground water basins. Proponents have noted that there are many advantages in storing water and reclaimed water in ground water aquifers as opposed to surface water reservoirs. Underground facilities are less costly than surface storage facilities and they are less land intensive than surface water reservoirs. Also, the ground water aquifers can serve as distribution systems, minimizing the need for surface water transport facilities. In addition, reclaimed water stored in ground water aquifers are not subject to evaporative losses.

Filtration through the soils in the basin can provide additional treatment of the reclaimed water, and injection of reclaimed water along the coastal strip can be used to help combat seawater intrusion.

Ninety percent of the potable water supply for the San Diego Region comes from two major sources of imported water. Water from the Colorado River is imported through the Colorado River Aqueduct and water from northern California is imported through the State Water Project. Both sources are blended to form San Diego Region's water supply. Additionally, approximately ten percent of the water supply comes from local reservoirs. The quality of the imported water has been showing increases in mineral content, particularly boron, percent sodium and TDS. Direct use of this supply reflects the mineral content of Colorado River water. Each additional use of the water (reclaimed from this supply) for irrigation and ground water recharge incrementally increases the dissolved mineral content.

Water reclamation activities should, then, be focused on local benefits and impacts on ground water quality. Proposed projects should be examined in terms of:

- Areas with high reclaimed water demands;
- Constituent concentrations in relation to basin plan objectives;
- Assimilative capacity of receiving basins; and
- Potential for improving ground water quality in near-surface and deep aquifers.

The major basins in San Diego County that have been studied for the implementation of a ground water management plan are the San Pasqual Valley, the Lower San Luis Rey Valley, Lower San Dieguito River Valley, Santee Basin, Lower Sweetwater River Basin, Lower Tijuana River Basin, Upper Santa Margarita River Basin, and the San Juan Creek Basin. A goal of these management plans is to rejuvenate the quality of the ground water in these basins to meet basin objectives. The general plan is to pump the poor quality ground water from these basins to the ocean, and recharge the basins with reclaimed and natural run off waters, which will then be extracted for beneficial use when water quality objectives are met. The following is a description of the proposed programs.

SAN PASQUAL VALLEY

The San Pasqual ground water management plan would utilize between 5,000 and 8,000 AF/Y of reclaimed water for agricultural irrigation and ground water recharge, thus reducing the need for this amount of imported water. The reclaimed water is available from the City of Escondido Hale Avenue Wastewater treatment plant, which presently discharges directly to the ocean. The City of San Diego owns 7,436 acres of land in the San Pasqual Valley which has been set aside as an agricultural preserve. There is 38,000 acre-feet of usable ground water in the valley. The western portion of the valley has degraded ground water quality, and has been designated as the reclamation basin. There is a plan to pump this poor quality ground water to the ocean and recharge the basin with reclaimed water of higher quality, to provide a positive salt balance. When the ground water quality improves, it will be used for irrigation of parks and golf courses, the Wild Animal Park and for landscape and freeway irrigation. There is a large and continued demand for irrigation water in the area. The eastern portion of the basin is designated as potable, and efforts will be made to keep the quality of the ground water from degrading. A third part of the basin, called the Narrows, is located between the San Pasqual reclamation basin and the Hodges basin. It has a very small capacity and will be used to prevent surface and ground water flows of reclaimed water from entering Lake Hodges Reservoir, a potable storage reservoir for the City of San Diego.

LOWER SAN LUIS REY VALLEY

Imported water comprises almost the entire supply for this basin. Ground water use is limited due to deteriorated water quality. There are four operating wastewater treatment facilities in this basin that

could supply over 12,000 acre-feet per year (AF/Y) of treated wastewater that could be used for ground water recharge or other beneficial uses. At the present time reclaimed water is only being used for freeway landscape irrigation. Many springs and wells that used to be ephemeral, now flow all year long with imported irrigation return water. In many areas of this basin, reclaimed water is of higher quality than the existing ground water quality. Use of reclaimed water can be utilized to improve the conditions of the ground water quality.

LOWER SAN DIEGUITO RIVER VALLEY

The San Dieguito ground water management plan includes the utilization of approximately 2,000 to 4,000 AF/Y of recharge of reclaimed water. The reclaimed water will initially be used for irrigation, rejuvenation of non-potable ground water resources and for creating a fresh water barrier near Interstate 5. Water from the City of Escondido's Hale Avenue Reclamation Facility will be treated to tertiary treatment standards and pumped to the reclamation area in the San Dieguito Valley, where it will undergo recharge to replace poor quality water pumped to the ocean or desalted and treated to potable water standards. This reclaimed water will be used for agriculture and landscape irrigation. As the ground water quality improves, this basin could supply water to areas outside the basin, such as La Jolla Valley and North City West for landscape irrigation. The San Dieguito Basin lacks a centralized wastewater collection system. Water services are provided by four different governmental agencies, and sewer service is provided by eight governmental agencies. There are plans to interconnect the existing and proposed treatment facilities into an integrated system which can supply reclaimed water throughout the basin. The benefits of a ground water management plan in this basin include inexpensive storage and distribution of excess reclaimed water flows available during low irrigation months. This ground water management plan will result in improved ground water quality and will provide an efficient use of available water resources.

SANTEE

The Padre Dam Municipal Water District is reviewing the feasibility of a comprehensive ground water management plan for Santee basin. Ground water from the eastern part of the basin is used for domestic, agricultural and stock watering purposes, and generally has TDS concentrations of 260-1,310 mg/l. The ground water in the main portion of the Santee basin has TDS concentrations of up to 2,990 mg/l. In times of drought, this water could supplement imported water supplies. At the present

time, reclaimed water is used only for recreational purposes at Santee Lakes Campground, and Park. The Padre Dam Municipal Water Districts 1.0 MGD tertiary and 2.0 MGD secondary capacity treatment facility provides 1,200 AC/Y of reclaimed water which is used for the Santee Lakes. Water from Lake No. 1 is used to irrigate the landscaping of the surrounding the lakes. Currently only 1 MGD of the plant's capacity is being utilized. All flows over 1 MGD are sent to the Metropolitan Sewer System. Future water reuse projects include another 1,200 AF/Y projected need for the Santee Town Center and city park and approximately 1,400 AF/Y for industrial use. High quality reclaimed water could provide a potential source for recharging the ground water basin and improve existing water quality. Careful management of the basin could mitigate impacts of a high water table to prevent resurfacing of reclaimed water.

LOWER SWEETWATER RIVER BASIN

The Sweetwater Authority completed initial ground water basin studies of the Lower Sweetwater River Basin in June, 1993. As part of the agency's water resources program, the Sweetwater Authority is reviewing the feasibility of using ground water from the Lower Sweetwater Basin to augment its potable water supply.

The Lower Sweetwater Basin extends along the Sweetwater River from the Sweetwater Reservoir Dam approximately eight miles to San Diego Bay. It consists of an alluvial aquifer and the underlying San Diego Formation aquifer. Current use of ground water within the basin is limited, with turf irrigation the predominate use. The Basin is recharged from natural runoff and water from the upstream urban runoff diversion system which, in part, surrounds the Sweetwater Reservoir and spills over the Sweetwater Dam. Water quality data indicate that the ground water is moderately saline with TDS concentrations averaging 1,400 mg/l.

The Sweetwater Authority is currently evaluating the feasibility of constructing ground water extraction wells, a water treatment facility, a brackish water pipeline from each well to the treatment facility, a product water delivery pipeline and pump station, and a brine disposal pipeline. Preliminary findings indicate that extraction and treatment (to potable water standards) of 1,600 to 3,600 AF/Y of ground water from the Lower Sweetwater River Basin is feasible. Some additional production and/or ground water storage may be available in the San Diego Formation aquifer. San Diego Formation hydrogeological studies are ongoing; however preliminary findings

indicate that the managed storage potential in the aquifer may be significant.

LOWER TIJUANA RIVER BASIN

The Tijuana Valley County Water District adopted a Resolution of Intention to prepare a Ground Water Management Plan in accordance with Water Code sections 10750 - 10755 in February, 1993. The stated goals of the District are summarized as follows:

- Protect ground water quality and quantity in the Tijuana River Basin for existing and future property owners, agricultural and recreational users;
- Develop the ground water basin into a sub-regional water supply reservoir;
- Provide water to Valley customers and sell excess ground water to customers outside the Basin;
- Implement measures for ground water recharge with surface floodwater containment and runoff control facilities, and reclaimed water, if available; and
- Work with the City and County of San Diego and appropriate state and federal agencies, to propose a workable international floodwater and wastewater control solution for the Valley.

The District's current plans include development of ground water management alternatives for the production and treatment of approximately 2,500 AF/Y of potable ground water.

UPPER SANTA MARGARITA RIVER BASIN

In Riverside County, the upper Santa Margarita River Basin contains several million acre-feet of high quality ground water in the Pauba/ Temecula aquifer system. The Rancho California Water District is considering a plan that will implement the use of reclaimed water for beneficial uses and for ground water recharge. Some changes in basin plan water quality objectives are needed to develop this project. The Santa Rosa SBR Water Reclamation Facility, near Temecula, percolates reclaimed waters through highly permeable alluvium, which recharge and mix with ground water in an upper aquifer. A tentative projection calls for 5 MGD of reclaimed water production by the year 2000.

SAN JUAN CREEK

In Orange County, a management plan is underway in the San Juan Creek Basin. Ground water supplies are limited in this basin due to low recharge and poor quality. The capacity of the San Juan Creek Basin is approximately 90,000 acre-feet. With proper management of the ground water basin, approximately 50,000 AF/Y could be utilized. The basin currently provides approximately 5,000 AF/Y of usable ground water - less than 2,000 AF/Y is used for urban supply and approximately 3,000 AF/Y is used for agricultural and irrigation purposes. The only ground water that meets drinking water standards and most agricultural requirements is found in the highlands of the northeasternmost portion of the basin. Ground water quality data indicate that the TDS concentration ranges from 300 mg/l (in the northeasternmost portion of the basin) to 1,850 mg/l (in the lower and western portion of the basin). Approximately 3.0 MGD of treated wastewater is being reclaimed for irrigation of a golf course, park, greenbelt and landscaping. In addition, reuse is proposed for effluent from Moulton-Niguel Water District's Water Reclamation Plant 3A, which has been expanded from a capacity of 0.5 MGD to 2.4 MGD, and for effluent from Trabuco Canyon Water District's Robinson Ranch Wastewater Reclamation Plant, which has a capacity of 0.25 MGD. The TDS concentration in secondary effluent in the basin ranges from 500 to 900 mg/l. Reclaimed water could be used to enhance surface water flows and quality or to improve ground water quality in the lower and western parts of the basin. The use of reclaimed water for urban or agricultural irrigation could help reduce demands for ground and imported water. A ground water monitoring plan for the San Juan Creek Basin has been proposed by the Department of Water Resources which would identify any basinwide changes that may occur in water quality that could affect current and potential beneficial uses. This program would provide an early warning that ground water supplies may be endangered.

SALT BALANCE

Salt balance is a theoretical concept where the total mass of dissolved minerals entering a ground water basin system from all sources is equal to the total mass of dissolved minerals leaving the system, either through extraction or natural outflow. It is preferable to have a balance of the salt inflows and outflows to maintain water quality in a basin.

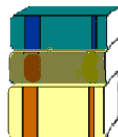
Utilizing the following management measures would enhance the prospects for salt balance for ground

water basins in the Region. These measures include:

- Limiting ground water extractions from basins to perennial-yield levels;
- Increasing the efficiency of irrigation practices;
- Reducing fertilizer application;
- Improving the quality of imported water used for irrigation;
- Use storm water runoff for ground water recharge, since storm water is low in TDS;
- Extract and demineralize poor quality ground water when this option becomes economically feasible; and
- Utilize intrusion barriers and regulate ground water pumpage to prevent and reverse problems of salt water intrusion.

SOLE SOURCE AQUIFER PROGRAM

The Safe Drinking Water Act of 1974 provides for a sole source aquifer program. Under this program, USEPA may designate an aquifer as a sole source if it provides more than half of the drinking water for a given area, and no other affordable sources of drinking water exist. The Act provides that, when certain criteria are met, a group may petition the USEPA to designate a sole source aquifer. Thus, in May of 1993, a local citizens' group, Backcountry Against Dumps petitioned the USEPA to designate the Campo/ Cottonwood Creek aquifer as the sole source of drinking water in a 400 square-mile area. The Campo/Cottonwood aquifer is bordered by Mexico to the south, and includes within its borders reservations for the Campo, La Posta, Manzanita, and Cuyapaibe Indian tribes. The aquifer lies about 20 miles east of El Cajon, California. This designation means the USEPA may review proposed projects in the aquifer area which receive partial federal funding and which could contaminate the aquifer or endanger public health. Examples of projects potentially subject to review include construction or renovation of housing projects, airports, and highways. Projects that do not receive some federal funds would not be reviewed.



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5. PLANS AND POLICIES

INTRODUCTION



The State Board has adopted several statewide Water Quality Control Plans that are incorporated by reference into the Regional Board Basin Plan.

Additionally, both the State and Regional Boards adopt policies, separate from the plans, that provide detailed direction on the implementation of certain plan provisions. In the event that inconsistencies exist among various plans and policies, the more stringent provisions apply.

This update of the San Diego Region's Basin Plan has been revised to be consistent with all State and Regional Board plans and policies adopted to date. All of the Regional Board plans and policies which implement, interpret, or make specific the Basin Plan and which are listed later in this chapter have been incorporated in this Basin Plan and are superseded. Following are summaries of these plans and policies.

STATE BOARD PLANS AND POLICIES

ANTIDegradation POLICY (STATE BOARD RESOLUTION NO. 68-16)

One of the most significant water quality control policies with respect to the protection of water quality is the *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (State Board Resolution No. 68-16), also known as the State Antidegradation Policy. This policy was adopted on October 28, 1968. It satisfies the federal Clean Water Act antidegradation policy requirement (40 Code of Federal Regulations (CFR) 131.12). The State Antidegradation Policy requires that high quality waters of the state are maintained to the maximum extent possible, even where that quality is better than needed to protect beneficial uses. Specific findings must be made in order to allow any changes in water quality. Changes in water quality are allowed only if the change is consistent with maximum benefit to the people of the State, does not unreasonably affect

present and anticipated beneficial uses, and does not result in water quality less than that prescribed in water quality control plans or policies.

Actions which may adversely affect surface water quality must satisfy both Resolution No. 68-16 and the federal antidegradation policy (40 CFR 131.12). The requirements of the two policies are similar: the federal policy requires that existing instream uses and the level of water quality necessary to protect them must be maintained and protected. In addition, a reduction in water quality can be allowed only if there is a demonstration that such a reduction is necessary to accommodate important economic or social development.

STATE POLICY FOR WATER QUALITY CONTROL

The *State Policy for Water Quality Control* serves as the general basis for water quality control policies and was adopted by the State Board on July 6, 1972. The policy declares the State Board's intent to protect water quality through the implementation of water resources management programs.

The policy provides that water quality control plans adopted by the State Board will include minimum requirements for effluent quality. Water quality control plans will also specifically define the maximum constituent levels acceptable for discharge to various waters of the State. However, the policy allows discretion in the application of the latest available technology for the design and operation of wastewater treatment systems. The policy states that secondary treatment systems are the minimum acceptable level of treatment and that advanced treatment systems will be required where necessary to meet water quality objectives.

The policy contains twelve general principles to implement the provisions and intent of the Porter-Cologne Act. These principles are listed below:

- (1) Water rights and quality control decisions must assure protection of available fresh water and marine water resources for maximum beneficial use.
- (2) Municipal, agricultural, and industrial wastewaters must be considered as a potential integral part of the total available fresh water resource.
- (3) Coordinated management of water supplies and wastewaters on a regional basis must be

- promoted to achieve efficient utilization of water.
- (4) Efficient wastewater management is dependent upon a balanced program of source control of environmentally hazardous substances, treatment of wastewaters, reuse of reclaimed water, and proper disposal of effluents and residuals.
 - (5) Substances not amenable to removal by treatment systems presently available or planned for the immediate future must be prevented from entering sewer systems in quantities which would be harmful to the aquatic environment, adversely affect beneficial uses of water, or affect treatment plant operation. Persons responsible for the management of waste collection, treatment, and disposal systems must actively pursue the implementation of their objective of source control for environmentally hazardous substances. Such substances must be disposed of such that environmental damage does not result.
 - (6) Wastewater treatment systems must provide sufficient removal of environmentally hazardous substances which cannot be controlled at the source to assure against adverse effects on beneficial uses and aquatic communities.
 - (7) Wastewater collection and treatment facilities must be consolidated in all cases where feasible and desirable to implement sound water quality management programs based upon long-range economic and water quality benefits to an entire basin.
 - (8) Institutional and financial programs for implementation of consolidated wastewater management systems must be tailored to serve each particular area in an equitable manner.
 - (9) Wastewater reclamation and reuse systems which assure maximum benefit from available fresh water resources shall be encouraged. Reclamation systems must be an appropriate integral part of the long-range solution to the water resource needs of an area and incorporate provisions for salinity control and disposal of nonreclaimable residues.
 - (10) Wastewater management systems must be designed and operated to achieve maximum long-term benefit from the funds expended.

- (11) Water quality control must be based on the latest scientific findings. Criteria must be continually refined as additional knowledge becomes available.
- (12) Monitoring programs must be provided to determine the effects of discharges on all beneficial water uses including effects on aquatic life and its diversity and seasonal fluctuations.

STATE WATER QUALITY PROTECTION AREAS / AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE

The Regional Boards were required to select areas in coastal waters which contain "*biological communities of such extraordinary, even though unquantifiable, value that no acceptable risk of change in their environments as a result of man's activities can be entertained.*" These areas are known as 'Areas of Special Biological Significance' (ASBS).

ASBS are those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All ASBS are also classified as subset of State Water Quality Protection Areas (SWQPAs).

SWQPAs are defined in Public Resources Code, section 36700(f) as "a nonterrestrial marine or estuarine area designated to protect marine species or biological communities from an undesirable alteration in natural water quality, including, but not limited to, areas of special biological significance that have been designated by the State Water Resources Control Board through its water quality control planning process."

In the San Diego Region, Areas of Special Biological Significance ASBS/SWQPAs include the following:

- **La Jolla, San Diego County:** Ocean waters within the boundaries of the City of San Diego, County of San Diego, State of California, as follows: beginning at the most northerly point of Goldfish Point as shown on La Jolla Park Map No. 352 filed in the office of the County Recorder of said county, thence in a northerly direction to a point being the intersection of longitude 117° 16' 15" west with the easterly prolongation of the southerly line of Pueblo Lot 1298 as shown on the map of Pueblo Lands of San Diego made by James Pascoe known as

miscellaneous map No. 36 filed in the office of the County Recorder as said county, thence easterly along said prolongation of the southerly line of Pueblo Lot 1298 to the intersection with the mean high tide line, thence in a generally southerly direction along said mean high tide line to the point of beginning.

- **Heisler Park, Orange County:** Ocean waters within a line beginning at the intersection of the line of mean high tide with the westerly boundary line of Heisler Park, as described in a deed to the City of Laguna Beach, recorded in book 1666, page 144, Official Records Orange County, California; thence south 16° 21' west 800 feet more or less to the line of the Laguna Beach Marine Life Refuge, as per Division 7, Chapter 1, Article 2, section 10904, State of California Fish and Game Code; thence along said marine life refuge south 73° 39' east, 2,400 feet more or less to the easterly boundary of said refuge; thence along said easterly boundary north 14° 58' west, 700 feet more or less to the line of mean high tide in a westerly direction to the point of beginning.
- **San Diego - Scripps, San Diego County:** Ocean waters within that portion of Fish and Game District 19 consisting of that certain strip of land lying between the westerly edge of Pueblo Lot No. 1298 of the Pueblo Lands of the City of San Diego, according to the official map of said pueblo lands as made by James Pascoe, and filed in the office of the County Recorder of said County of San Diego, and the mean high tide line opposite to and west of said pueblo lot, which said strip of land is bounded on the north by the northerly boundary line of said pueblo lot extended westerly and on the south by the southerly boundary line of said pueblo lot extended westerly; together with the state waters of the State of California adjacent thereto, being those state waters which lie between said extended northerly and southerly boundaries of said pueblo lot and extend westerly from said mean high tide line for a distance of 1,000 feet.
- **Irvine Coast, Orange County:** Ocean waters within that portion of California state tide and submerged lands adjoining the Newport Beach Marine Life Refuge bounded by a line beginning at the intersection of the southwesterly extension of Lot 141, Tract No. 3357, as shown on a map recorded in Book 107, Page 1 of Miscellaneous Maps on file in the office of the County Recorder, Orange County and the line of ordinary high tide; thence, southeasterly along the line of ordinary high tide

approximately 20,000 feet to its intersection with the southwesterly extension of the northwesterly boundary line of the City of Laguna Beach; thence, southwesterly along such southwesterly extension 1,000 feet or to the 100-foot isobath, whichever distance from shore is greater; thence northwesterly along a line parallel to and 1,000 feet or to the 100-foot isobath, whichever distance from shore is greater southwesterly of the line of ordinary high tide to the southwesterly extension of said Lot 141; thence northeasterly along such southwesterly extension to the point of beginning.

The impact of the adoption of ASBS and SWQPAs on the Basin Plan is that discharges of wastewaters and/or heat must be sufficiently removed spatially from these areas to assure the maintenance of natural water quality conditions in these areas. Existing wastewater and/or heat discharges which influence the natural water quality in these areas shall be prohibited and phased out as promptly as possible, or limited by the imposition of special conditions in accordance with the Porter-Cologne Water Quality Control Act and implementing regulations, including, but not limited to the California Ocean Plan and the California Thermal Plan.

ENCLOSED BAYS AND ESTUARIES POLICY



San Diego Bay

(RESOLUTION NO. 74-43)

The *Water Quality Control Policy for Enclosed Bays and Estuaries of California* (Enclosed Bays and Estuaries Policy) was adopted by State Board Resolution No. 74-43 on May 16, 1974. This policy is designed to prevent water quality degradation and protect beneficial uses in enclosed bays and estuaries. The policy outlines water quality principles and guidelines to achieve these objectives. Decisions by the Regional Board must be consistent with the provisions designed to prevent water quality degradation.

The policy lists principles of management that include the State Board's desire to phase out all discharges of municipal wastewaters and industrial process waters (exclusive of cooling waters) to enclosed bays and estuaries as soon as

practicable. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of the receiving waters above that which would occur in the absence of the discharge. Discharge prohibitions are placed on the following:

- New discharges of municipal wastewaters and industrial process waters (exclusive of cooling water, treated ballast water and innocuous nonmunicipal wastewater discharges, such as clear brines, wash water and pool drains) which are not consistently treated and discharged in a manner that would enhance the quality of the receiving waters as defined in the Policy;
- Municipal and industrial waste sludge and untreated sludge digester supernatant, centrate, or filtrate;
- Rubbish or refuse into surface waters or at any place where they would be eventually transported to enclosed bays and estuaries;
- Silt, sand, soil, clay, or other earthen materials from onshore operations including mining, construction, and lumbering in quantities which unreasonably affect or threaten to affect beneficial uses;
- Materials of petroleum origin in sufficient quantities to be visible or in violation of waste discharge requirements (except for scientific purposes);
- Radiological, chemical, or biological warfare agent or high-level radioactive waste; and
- Discharge or by-pass of untreated waste.

POLICY ON THE USE AND DISPOSAL OF INLAND WATERS USED FOR POWERPLANT COOLING (RESOLUTION NO. 75-58)

The *Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling* (Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling) was adopted by State Board Resolution No. 75-58 on June 19, 1975. The purpose of the policy is to provide consistent statewide water quality principles and guidance for adoption of discharge requirements, and implementation actions for powerplants which

depend upon inland waters for cooling. In addition, this policy is intended to protect the beneficial uses of the State's water resources by keeping the consumptive use of freshwater for powerplant cooling to a minimum. The Regional Board is responsible for the enforcement of this policy.

The policy is based on the seven principles listed below:

- (1) It is the State Board's position that from a water quantity and quality standpoint the source of powerplant cooling water should come from the following sources in this order of priority depending on site specifics such as environmental, technical, and economic feasibility consideration:
 - Wastewater being discharged to the ocean;
 - Ocean;
 - Brackish water from natural sources or irrigation return flow;
 - Inland wastewaters of low TDS; and
 - Other inland waters.
- (2) Where the State Board has jurisdiction, use of fresh inland waters for powerplant cooling will be approved by the Board only when it is demonstrated that the use of other water supply sources or other methods of cooling would be environmentally undesirable or economically unsound.
- (3) In considering issuance of a permit or license to appropriate water for powerplant cooling, the Board will consider the reasonableness of the proposed water use when compared with other present and future needs for the water source and when viewed in the context of alternative water sources that could be used for the purpose. The Board will give great weight to the results of studies made pursuant to the Warren-Alquist State Energy Resources Conservation and Development Act and carefully evaluate studies by the Department of Water Resources made pursuant to sections 237 and 462, Division 1 of the California Water Code.
- (4) The discharge of blowdown water from cooling towers or return flows from once-through cooling shall not cause a violation of water quality objectives or waste discharge requirements established by the Regional Boards.

- (5) The use of unlined evaporation ponds to concentrate salts from blowdown waters will be permitted only at salt sinks approved by the Regional and State Boards. Proposals to utilize unlined evaporation ponds for final disposal of blowdown waters must include studies of alternative methods of disposal. These studies must show that the geologic strata underlying the proposed ponds or salt sink will protect usable groundwater.
- (6) Studies of availability of inland waters for use in powerplant cooling facilities to be constructed in Central Valley basins, the South Coastal Basins or other areas which receive supplemental water from Central Valley streams as for all major new uses must include an analysis of the impact of such use on Delta outflow and Delta water quality objectives. The studies associated with powerplants should include an analysis of the cost and water use associated with the use of alternative cooling facilities employing dry, or wet/dry modes of operation.
- (7) The State Board encourages water supply agencies and power generating utilities and agencies to study the feasibility of using wastewater for powerplant cooling. The State Board encourages the use of wastewater for powerplant cooling where it is appropriate. Furthermore, section 25601(d) of the Warren-Alquist Energy Resources Conservation and Development Act directs the water and other advances in powerplant cooling and section 462 of the Waste Water Reuse Law directs the Department of Water Resources to "...conduct studies and investigations on the availability and quality of waste water and uses of reclaimed waste water for beneficial purposes including, but not limited to ... and cooling for thermal electric powerplants."

In addition, the policy contains three discharge prohibitions. The prohibitions are listed below:

- (1) The discharge to land disposal sites of blowdown waters from inland powerplant cooling facilities shall be prohibited except to salt sinks or to lined facilities approved by the Regional and State Boards for the reception of such wastes.
- (2) The discharge of wastewaters from once-through inland powerplant cooling facilities shall be prohibited unless the discharger can show that such a practice will maintain the existing water quality and aquatic environments of the State's water resources.

- (3) The Regional Boards may grant exceptions to these discharge prohibitions on a case-by-case basis in accordance with exception procedures included in the *Water Quality Control Plan for Control of Temperature In the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California*.

THERMAL PLAN (RESOLUTION NO. 75-89)

The *Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) was adopted by the State Board in 1971, revised in 1972 and revised again on September 18, 1975. The Thermal Plan specifies water quality objectives and general water quality provisions for new and existing discharges into enclosed bays, estuaries, cold interstate waters, warm interstate waters and coastal waters. The State and Regional Boards administer the plan by establishing waste discharge requirements for elevated temperature wastes. Existing and future dischargers of thermal waste are required to conduct studies to define the effect of the discharge on beneficial uses and, for existing discharges, determine design and operating changes which would be necessary to achieve compliance with the provisions of the Thermal Plan.

Existing waste discharge requirements are required to be reviewed to determine any necessary revisions, changes in monitoring programs and the need for studies of the effect of the thermal discharge on beneficial uses. Proposed thermal dischargers may be required to submit studies prior to the establishment of WDRs. Appropriate post discharge studies are also required by the Regional Board. The Thermal Plan specifies that the Regional Board shall outline the scope and design of any necessary studies to include the following as applicable:

- (1) Existing conditions in the aquatic environment;
- (2) Effects of the existing discharge on beneficial uses;
- (3) Predicted conditions in the aquatic environment with waste discharge facilities designed and operated in compliance with the provisions of the plan;
- (4) Predicted effects of the proposed discharge on beneficial uses;

- (5) An analysis of costs and benefits of various design alternatives; and
- (6) The extent to which intake and outfall structures are located and designed so that the intake of planktonic organisms is at a minimum, waste plumes are prevented from touching the ocean substrate or shorelines, and the waste is dispersed into an area of pronounced along-shore or offshore currents.

The Thermal Plan further specifies that WDRs adopted for discharges of thermal wastes shall be monitored in order to determine compliance with effluent or receiving water temperature requirements. For significant thermal discharges, the State or Regional Boards shall require expanded monitoring programs to assess whether the thermal discharge continues to provide adequate protection to the beneficial uses of the water. The State or Regional Board may require the discharger(s) to pay a public agency or other appropriate person an amount sufficient to carry out the expanded monitoring program if:

- (1) The discharger has previously failed to carry out a monitoring program satisfactory to the State or Regional Board; or
- (2) More than a single facility, under separate ownerships, may significantly affect the thermal characteristics of the body of water, and the owners of such facilities are unable to reach agreement on a cooperative program within a reasonable time period specified by the State or Regional Board.

**POLICY WITH RESPECT
TO WATER RECLAMATION
IN CALIFORNIA
(RESOLUTION NO. 77-1)**

The *Policy with Respect to Water Reclamation in California* (Reclamation Policy) was adopted by the State Board on January 6, 1977. The Reclamation Policy provides that the water resources of the State be put to beneficial use to the fullest extent of which they are capable. The policy provides that water resources shall not be wasted, nor be put to an unreasonable use, nor be used in an unreasonable method.

This policy commits both the State and Regional Board to support reclamation and to undertake all possible steps to encourage the development of water reclamation facilities to reclaim water to supplement existing surface and ground water supplies. It requires the Regional Board to conduct

reclamation surveys and specifies actions to be implemented by the State and Regional Board and other agencies.

The State Board adopted the four following principles in order to implement the Reclamation Policy. These principles are listed below:

- (1) The State and Regional Boards shall encourage, and consider or recommend for funding, water reclamation projects which meet the conditions below and which do not adversely impact vested water rights or unreasonably impair instream beneficial uses or place a unreasonable burden on present water supply systems:
 - (A) Beneficial use will be made of wastewaters that would otherwise be discharged to marine or brackish receiving waters or evaporation ponds,
 - (B) Reclaimed water will replace or supplement the use of fresh water or better quality water,
 - (C) Reclaimed water will be used to preserve, restore, or enhance instream beneficial uses which include, but are not limited to, fish, wildlife, recreation, and aesthetics associated with any surface water or wetlands.
- (2) The State and Regional Boards shall encourage reclamation and reuse of water in water-short areas of the State, encourage water conservation measures which further extend the water resources of the State, and encourage other agencies, in particular the Department of Water Resources, to assist in implementing this policy.
- (3) The State and Regional Boards recognize the need to protect the public health including potential vector problems and the environment in the implementation of reclamation projects.
- (4) In implementing these principles, the State and/or Regional Board shall take appropriate actions, recommend legislation, and recommend actions by other agencies in the areas of planning, project funding, water rights, regulation and enforcement, research and demonstration, and public involvement and information.

This resolution has been reprinted at the end of this Chapter.

POLICY ON THE DISPOSAL OF SHREDDER WASTE (RESOLUTION NO. ~~887-0622~~)

The *Policy on the Disposal of Shredder Wastes* (Shredder Waste Disposal Policy) was adopted on ~~February 8, 1988~~, ~~March 19, 1987~~. This policy permits the disposal of shredded wastes produced by the mechanical destruction of car bodies, old appliances and similar castoffs, into certain landfills under specific conditions designated and enforced by the Regional Boards. Hazardous and nonhazardous shredder waste may be disposed of in appropriate Class III landfills where doing so would not cause water quality impairment. —The policy specifies the shredder waste must not exceed PCB levels of 50 milligrams per kilogram (mg/kg). Also, the shredder waste must be disposed ~~on the last and highest lift in a closed disposal cell or~~ in an isolated cell solely designated for the disposal of shredder waste.



Drinking Water

SOURCES OF DRINKING WATER POLICY (RESOLUTION NO. 88-63)

The *Sources of Drinking Water Policy* was adopted by the State Board on May 19, 1988. The policy provides that all surface and ground waters of the State are considered to be suitable or potentially suitable for municipal or domestic water supply and should be so designated by the Regional Boards. Those waters excepted under the policy include the following:

- (1) Surface or ground waters where the total dissolved solids exceed 3,000 milligrams per liter (mg/l) and it is not reasonably expected by the Regional Boards to supply a public water system;
- (2) Surface or ground waters which have been contaminated and can not be reasonably treated for domestic use using either Best Management Practices or best economically achievable treatment practices;
- (3) Surface or ground waters which do not provide sufficient water for extraction of 200 gallons per day;
- (4) Surface waters which are in systems designed or modified to carry municipal,

industrial, agricultural or mining wastewaters, or storm water runoff.

- (5) Surface waters in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards.
- (6) Ground waters where the aquifer is regulated as a geothermal energy producing source or has been exempted administratively pursuant to 40 CFR, section 146.4 for the purpose of underground injection of fluids associated with the production of hydrocarbon or geothermal energy, provided that these fluids do not constitute a hazardous waste under 40 CFR, section 261.3. This resolution has been reprinted at the end of this Chapter.

NONPOINT SOURCE MANAGEMENT PLAN (RESOLUTION NO. 88-123)

The *Nonpoint Source Management Plan* was adopted by the State Board on November 15, 1988, pursuant to section 319 of the federal Clean Water Act. Section 319 requires each state to prepare a Nonpoint Source Management Plan and to conduct an assessment of the impact nonpoint sources have on the state's waterbodies. In response to these requirements, the State Board adopted the Nonpoint Source Management Plan (NPSMP) in 1988 and the Water Quality Assessment in 1990. The NPSMP established a statewide policy for managing polluted runoff in California. The plan identifies three management approaches which are used by the State and Regional Boards to address nonpoint source problems:

- (1) Voluntary implementation of best management practices;
- (2) Regulatory-based encouragement of best management practices; and
- (3) Effluent requirements.

The primary goal of the program is to measurably improve water quality and/or implementation of Best Management Practices by meeting several objectives specified in the plan.

The Nonpoint Source Management Plan outlines steps to initiate systematic management of nonpoint sources in California. These steps include:

- (1) An explicit long-term commitment by the State and Regional Board;
- (2) More effective coordination of existing State and Regional Board nonpoint-source related programs;
- (3) Greater use of Regional Board regulatory authorities coupled with non-regulatory programs;
- (4) Stronger links between the local, State and Federal agencies which have powers that can be used to manage nonpoint sources;
- (5) Development of new funding sources; and
- (6) Implementation of the requirements of the 1990 Reauthorization of the Coastal Zone Management Act (CZMA) which requires the State Board and the California Coastal Commission to develop and implement an enforceable nonpoint source program in the coastal zone.

The reauthorization of the CZMA, together with specific guidance from the USEPA and the National Oceanic & Atmospheric Administration (NOAA), requires coastal states to develop coastal nonpoint pollution control programs. These programs are to implement management measures for the control of land uses which contribute nonpoint source pollution to coastal waters. Management measures, which include specific measures for mitigating water quality impacts, are specified for the following land uses: agriculture; grazing; confined animal facilities; forestry; urban development; roads; marinas and recreational boating; hydromodification; and mines. The state's coastal program is to be considered for approval by the USEPA and NOAA in July 1995.

Revision of the State Nonpoint Source Management Plan (NPSMP) has been initiated. The State Board intends to consider the requirements of the Coastal Zone Act Reauthorization Amendments (CZARA) during the review and revision of the NPSMP. There will also be more of an emphasis placed on watershed based nonpoint source controls in the revised NPSMP. To develop these management measures, the State Board is forming Task Force Committees composed of experts in the various nonpoint source categories. The management measures developed by the Task Force Committees will be reviewed by an Oversight Committee made up of State and Regional Board staff prior to inclusion in the revised NPSMP. The anticipated date of completion of the revised NPSMP is in 1995.

The plan describes an implementation project entitled the "Southern California Coastal Lagoon Urban Runoff Management." This project requires land developers to incorporate low flow sand filters into project designs and to implement street sweeping programs. The performance of the filters and programs are monitored to incorporate design modifications as needed to improve performance.

Other implementation actions specified in the plan for Region 9 include the following regulatory and non-regulatory program(s):

Regulatory Programs

- **Dairies:** The Regional Board issues Waste Discharge Requirements which limit the amount of manure that can be applied per acre to agricultural land.
- **Erosion Control:** The Regional Board implements policies requiring cities and counties to adopt erosion control ordinances. Thus, the Regional Board adopted Resolution No. 92-21, A Resolution Concerning the Agreement Between the California Regional Water Quality Control Board, San Diego Region, and the Resource Conservation Districts of San Diego County Regarding the Erosion and Sediment Control Policy (Resource Conservation Districts of San Diego County Erosion and Sediment Control Policy. In addition, staff reviews ordinances and assists with enforcement.
- **Subsurface Disposal Policy:** Regional Board staff will develop criteria for minimum lot sizes for septic systems.

Non-regulatory program

- **San Diego Bay Study:** The Regional Board will continue a five year study to identify the sources and extent of water quality pollution in San Diego Bay. Possible nonpoint sources such as storm water runoff and past point source pollutants now bound to bottom sediments will be investigated.



Pacific Ocean, Scripps Pier

CALIFORNIA OCEAN PLAN (RESOLUTION NO. 90-27)

The *Water Quality Control Plan for Ocean Waters of California* (California Ocean Plan) was adopted

by the State Board in 1972, and later revised in 1978, 1983, 1988 and 1990. The revision in effect at the time of this writing is Resolution No. 90-27, which was adopted by the State Board on March 22, 1990. The California Ocean Plan is applicable to all point source discharges to the ocean.

The California Ocean Plan is designed to protect the quality of the ocean waters for use and enjoyment by the people through the control of waste discharges to the ocean. The plan sets forth water quality objectives for ocean waters which impose limits on bacteriological, physical, chemical, biological, toxic, and radioactive characteristics for ocean waters in numerical and descriptive terms to ensure the reasonable protection of beneficial uses and the prevention of nuisance. Also, the plan describes requirements for management and design of systems discharging wastewaters to the ocean and effluent quality requirements for discharges. Systems must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community. In addition, discharge prohibitions are placed on hazardous substances, warfare agents and high level radioactive wastes, sludge and digester supernatant, and bypassed untreated waste discharges. Furthermore, the plan states that "*Areas of Special Biological Significance*" shall be designated by the State Board. In these areas the maintenance of natural water quality conditions must be assured. Waste discharges to ASBS are prohibited unless the State Board finds that there would be no adverse impact to beneficial uses. Lastly, discharge requirements within the California Ocean Plan include the maximum allowable monthly mass emission rates for each effluent quality constituent included therein.

The California Ocean Plan declares the State Board's intent to require continual monitoring of the marine environment to assure that the California Ocean Plan reflects the latest available data and that the water quality objectives are adequate to fully protect indigenous marine species and to protect human health.

CALIFORNIA WETLANDS CONSERVATION POLICY

The California Wetlands Conservation Policy was established by the Governor on August 23, 1993. The goal of the California Wetlands Conservation Policy is to establish a policy framework and strategy that will:

- Ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and

permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property;

- Reduce procedural complexity in the administration of State and Federal wetlands conservation programs; and
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetlands conservation and restoration.

Three measures are identified to achieve these objectives, these include: (1) statewide policy initiatives; (2) regional strategies; and an (3) interagency wetlands task force.

Statewide policy initiatives: These policy initiatives include a statewide wetlands inventory, support for wetlands planning, improved administration of existing wetland's regulatory programs, development and adoption of a consistent wetlands definition for state regulatory programs, development and adoption of a state policy regarding Army Corps of Engineers nationwide permits, development and adoption of consistent wetlands standards and guidelines, enhancing efficiency of and coordination in the wetland permitting process, encouragement of regulatory flexibility in situations in which wetlands are created unintentionally or incidentally to other activities, encouragement of regulatory flexibility to allow public agencies and water districts to create wetlands but later remove them if the wetlands are found to conflict with the primary purpose to which the property is devoted, strengthened landowner incentives to protect wetlands, support for mitigation banking, development and expansion of other wetlands programs, and integration of wetlands policy and planning with other environmental and land use processes.

Regional strategies: These include three geographically based regional strategies in which wetlands programs can be implemented, refined, and combined in unique ways to achieve the goals and objectives of the wetlands policy. These three strategies are to be implemented in the Central Valley, the San Francisco Bay area, and Southern California. For Southern California, the regional strategy is to initiate better coordination and communication among diverse interests in southern California by establishing a "*Southern California Wetlands Joint Venture*." This group would set long-term goals and priorities for the conservation of wetlands and develop a policy to achieve those goals, and would encourage a variety of demonstration projects designed to enhance the

State's ability to constructively address regional wetlands issues.

Interagency wetlands task force: This task force is to be created to direct and coordinate administration and implementation of the Wetlands Policy. This task force will be advisory to the Governor and help resolve inter-agency conflicts on wetlands. The task force will appoint an advisory committee of stakeholders and may seek additional technical advice as necessary.

CLEANUP AND ABATEMENT POLICIES AND PROCEDURES (RESOLUTION NO. 92-49)

The *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code section 13304* (Cleanup and Abatement Policies and Procedures)(the Policy) was adopted by State Board Resolution No. 92-49 on June 18, 1992, and amended on April 21, 1994. The Policy describes the procedures the State Board and the Regional Board follow in making decisions on investigations to determine the vertical and horizontal extent of a discharge, and the appropriate cleanup and abatement methods. The Policy applies to all investigations and cleanup and abatement activities, for all types of discharges subject to California Water Code (Water Code) section 13304.

Section 13304 applies to any person who discharges or who has discharged waste into waters of the State in violation of any waste discharge requirement or other order or prohibition issued by a Regional Board or the State Board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the State and creates, or threatens to create, a condition of pollution or nuisance. Section 13304 authorizes the Regional Board to require complete cleanup of all waste discharged and to require restoration of affected water to background conditions (i.e., the water quality that existed before the discharge). The Policy requires dischargers to clean up and abate the effects of discharges in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable, if background levels of water quality cannot be restored. Cleanup levels prescribed by the State Board or Regional Boards must:

- Be consistent with maximum benefit to the people of the State; and

- Be established in a manner consistent with CCR, Title 23, Chapter 15 regulations.

Dischargers are required to carry out a phased investigation to determine the nature and extent of soil and ground water pollution at a site. The Policy describes various procedures to ensure that dischargers have the opportunity to select cost-effective methods, for detecting discharges, and for cleanup and abatement. The Policy also contains criteria for development of reasonable schedules for investigation and cleanup and abatement, or other remedial action at a site.

For further details about the Policy, the reader should refer to State Board Resolution No. 92-49.

WATER QUALITY ENFORCEMENT POLICY

The Water Quality Enforcement Policy became effective on May 20, 2010. This Policy addresses the enforcement component (i.e. actions that take place in response to a violation) of the Regional and State Boards' regulatory framework, which is a critical element of a successful regulatory program. Without a strong enforcement program to follow through on non-compliance, the entire regulatory framework would be in jeopardy. Enforcement is a critical ingredient in creating the deterrence needed to encourage the regulated community to anticipate, identify, and correct violations. The Policy includes a process for ranking of enforcement priorities, a methodology for calculating civil liability, and requires recording and reporting of enforcement data to the public and regulated community.

POLICY ON SUPPLEMENTAL ENVIRONMENTAL PROJECTS

The Policy on Supplemental Environmental Projects became effective on February 3, 2009. This Policy guides the process of the Regional or State Board accepting a Supplemental Environmental Project (SEP) that may allow a discharger to satisfy part of the monetary assessment imposed in an administrative civil liability (ACL). California Water Code section 13385(i) allows limited use of SEPs associated with mandatory minimum penalties and provides criteria and reporting requirements for qualifying SEPs.

ONSITE WASTEWATER TREATMENT SYSTEMS POLICY (RESOLUTION NO. 2012-0032)

The purpose of the Water Quality Control Policy for Siting, Design, and Maintenance of Onsite Wastewater Treatment Systems¹ (OWTS Policy) is to allow the continued use of OWTS, while protecting water quality and public health. The OWTS Policy was adopted by the State Board on June 19, 2012. The OWTS Policy recognizes that responsible local agencies can provide the most effective means to manage OWTS on a routine basis. It is the intent of the OWTS Policy to efficiently utilize and improve coordination between the State and local agencies to improve the implementation of the OWTS Policy for the protection of water quality. To accomplish this purpose, the OWTS Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements, and sets the level of performance and protection expected from OWTS. The OWTS Policy also allows Regional Boards to conditionally waive issuing Waste Discharge Requirements (WDRs) for OWTS that meet requirements specified in the Policy.

The regulation of OWTS is organized into five separate implementation tiers (tiers outlined in Chapter 4). An OWTS that meets the criteria of one of the five tiers is eligible for the conditional waiver of WDRs, with regulation of the qualifying OWTS deferred to the appropriate local agency.

RECYCLED WATER POLICY (RESOLUTION NO. 2009-0011)

The main goals of the Recycled Water Policy are to provide direction to the Regional Boards, proponents of recycled water projects, and the public regarding the appropriate criteria to be used in issuing permits for recycled water projects; increase the use of recycled water from municipal wastewater sources; and streamline and expedite permitting of recycled water projects by the Regional Boards. These goals will help promote long-term protection of regional groundwater supplies. The Recycled Water Policy² was adopted by the State Board on February 9, 2009 and amended on January 22, 2013.

¹ The OWTS Policy online at <http://www.waterboards.ca.gov/>

² Recycled Water Policy: <http://www.waterboards.ca.gov/>

The Policy requires that by May 2014 individual salt and nutrient management plans (SNMPs) be developed for every groundwater basin in California. The SNMPs required by the Recycled Water Policy are to be developed by local stakeholder driven processes led mainly local water purveyors and wastewater agencies. The development of SNMPs allows for a more comprehensive approach to management of all contributors of salt and nutrient loading to groundwater on a basin-wide or watershed-basis; and in a manner that ensures attainment of water quality objectives and protection of beneficial uses.

The Recycled Water Policy specifies permitting criteria for landscape irrigation and groundwater recharge projects, and includes criteria for streamlined permitting. Irrigation projects that meet criteria specified in the Recycled Water Policy are entitled to a streamlined permitting process. The Recycled Water Policy also establishes a program to evaluate the risks of constituents of emerging concern to public health and the environment; and promotes incentives to encourage and facilitate recycled water use.

REGIONAL BOARD RESOLUTIONS

The San Diego Regional Board has adopted many resolutions which, in addition to the State Board Resolutions described previously, are important to the Regional Board's implementation of the Basin Plan. The Regional Board Resolutions that implement, interpret, or make specific the Basin Plan are incorporated into the Basin Plan are listed below.

~~All of the Regional Board Resolutions which implement, interpret, or make specific the Basin Plan and which are listed below have been incorporated in this Basin Plan and are therefore superseded by this Basin Plan.~~

Resolution No. 78-6. Adopted February 27, 1978. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region. This resolution deleted water quality objectives and beneficial uses for certain portions of basins 1.10, 1.20, 1.30, 1.40, 1.50, 2.10, 3.10, 4.10, 4.20, 4.30, 4.40, 4.50, 4.60, 5.10, 6.10, 7.10, and 11.10.

Resolution No. 79-25. Adopted March 26, 1979. A Resolution Concerning the 'Agreement Between the California Regional Water Quality Control Board, San Diego Region and the Elsinore-Murrieta-Anza Resource Conservation District Regarding the Sediment Control Ordinance.'

Resolution No. 79-44. Adopted June 25, 1979. A Resolution Concerning 'Guidelines for New Community and Individual Sewerage Facilities.'

Resolution No. 80-48. Adopted September 22, 1980. A Resolution Concerning the San Diego County Department of Health Services Minimum Criteria for the Design and Construction of Evapotranspiration and Evapotranspiration-Infiltration Systems.

Resolution No. 81-16. Adopted March 23, 1981. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region. This resolution amended the beneficial uses and water quality objectives for the Aliso, Carlsbad, Agua Hedionda, Baticuitos and Telegraph hydrographic subareas.

Resolution No. 83-04. Adopted January 24, 1983. A Resolution Adopting an Amendment to the Comprehensive Water Quality Control Plan for the San Diego Region. This resolution amended the water quality objectives for nutrients in coastal lagoons.

~~**Resolution No. 83-21.** Adopted July 18, 1983. A Resolution Conditionally Waiving Adoption of Waste Discharge Requirements for Certain Specific Types of Discharges.~~

~~**Resolution No. 83-21, Addendum No 1.** Adopted November 15, 1993. An Addendum Conditionally Waiving Adoption of Waste Discharge Requirements for Temporary Discharge of Specified Contaminated Soils.~~

~~**Resolution No. 83-21, Addendum No 2.** Adopted November 15, 1993. An Addendum Conditionally Waiving Adoption of Waste Discharge Requirements for Disposal / Reuse of Dredge Spoils in Industrial or Commercial Applications.~~

~~**Resolution No. 83-21, Addendum No 3.** Adopted November 15, 1993. An Addendum Conditionally Waiving Adoption of Waste Discharge Requirements for Green Waste Composting Facilities.~~

Resolution No. 83-27. Adopted October 3, 1983. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, San Elijo Hydrographic Subarea.

Resolution No. 83-28. Adopted August 29, 1983. A Resolution Supporting the County of San Diego's Moratorium on Subsurface Disposal Systems in the Valley Center Area.

Resolution No. 84-20. Adopted August 27, 1984. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, Mission San Diego Hydrographic Subarea.

Resolution No. 85-89. Adopted December 16, 1985. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, Mission San Diego Hydrographic Subarea and Sycamore Canyon Subarea, and a portion of the Santee Hydrographic Subarea.

Resolution No. 85-92. Adopted December 16, 1985. Designation of Class III Landfills Within the San Diego Region to Accept Shredder Wastes as Required by Section 25143.6 of the Health and Safety Code.

Resolution No. 86-06. Adopted March 24, 1986. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region. This resolution established a goal and action plan for encouraging and promoting water reclamation.

Resolution No. 87-71. Adopted November 16, 1987. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region. This resolution established a policy on dairy waste management.

Resolution No. 87-91. Adopted December 21, 1987. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region. This resolution established a policy on erosion and sediment control.

Resolution No. 88-06. Adopted February 8, 1988. Policy on the Disposal of Shredder Waste. The policy specifies the shredder waste must not exceed PCB levels of 50 milligrams per kilogram (mg/kg). Also, the shredder waste must be disposed on the last and highest lift in a closed disposal cell or in an isolated cell solely designated for the disposal of shredder waste.

Resolution No. 88-25. Adopted March 14, 1988. A Resolution Regarding the Proposed State Water Resources Control Board Policy for Water Quality Control Defining 'Sources of Drinking Water' for the Purposes of Discharge Prohibitions.

Resolution No. 88-49. Adopted April 25, 1988. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region for a Portion of the Otay Hydrographic Subunit.

Resolution No. 88-97. Adopted October 3, 1988. A Resolution Supporting the Proposed Interim Solution to the Tijuana Sewage Problem Consisting of a Sewage Treatment Plant Within the United States and an Ocean Outfall.

Resolution No. 89-33. Adopted April 10, 1989. Incorporation of 'Sources of Drinking Water' Policy into the Water Quality Control Plan (Basin Plan) of the San Diego Region.

Resolution No. 89-53. Adopted July 10, 1989. Addition of Portions of the Otay Valley Hydrologic Area to the List of Waters Excepted From the 'Sources of Drinking Water' Policy.

Resolution No. 90-27. Adopted April 23, 1990. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, for the Mission San Diego and a Portion of the Santee Hydrologic Subareas. This resolution establishes a biostimulatory substances water quality compliance methodology for part of the San Diego River.

Resolution No. 90-28. Adopted March 12, 1990 April 23, 1990. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, for a Portion of the San Clemente Hydrologic Subunit.

Resolution No. 90-53. Adopted September 24, 1990. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for Portions of the Santa Margarita Hydrologic Unit (2.00), San Diego Region. This resolution establishes a biostimulatory substances water quality compliance methodology for part of the Santa Margarita River.

Resolution No. 90-61. Adopted November 5, 1990. A Resolution Amending Resolution No. 90-40, A Regionwide Groundwater Amendment to the Comprehensive Water quality Control Plan for the San Diego Region. This resolution revised the language regarding use of reclaimed water contained in Resolution No. 90-40, A Resolution Reconsidering and Amending Resolution No. 90-26, 'A Regionwide Groundwater Amendment to the Comprehensive Water Quality control Plan for the San Diego Region', and Resolution No. 90-26, A Resolution Adopting A Regionwide Groundwater Amendment to the Comprehensive Water Quality Control Plan for the San Diego Region.

Resolution No. 91-23. Adopted March 11, 1991. A Resolution Amending Resolution No. 90-27, 'A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the

San Diego Region, for the Mission San Diego and a Portion of the Santee Hydrologic Subareas.'

Resolution No. 91-46. Adopted May 20, 1991. A Resolution Rescinding and Replacing Resolution No. 88-91 and Addenda, and Establishing a Regional Board Drought Policy.

Resolution No. 91-79. Adopted December 9, 1991. A Resolution Amending Resolution No. 90-55, 'Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region.' This resolution establishes revised Basin Plan chapters for beneficial uses and water quality objectives.

Resolution No. 92-21. Adopted April 6, 1992. A Resolution Concerning the Agreement Between the California Regional Water Quality Control Board, San Diego Region, and the Resource Conservation Districts of San Diego County Regarding the Erosion and Sediment Control Policy.

Resolution No. 93-02. Adopted February 1, 1993. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region for the Escondido Hydrologic Subarea (4.62).

Resolution No. 94-09. Adopted February 10, 1994. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, Portions of the Pauba (2.51) and Wolf (2.52) Hydrologic Subareas.

Resolution No. 94-10. Adopted September 8, 1994. A Resolution Adopting an Update to the Water Quality Control Plan for the San Diego Basin.

Resolution No. 94-25. Adopted February 10, 1994. A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region for the Laguna (1.10), Mission Viejo (1.20), and San Clemente (1.30) Hydrologic Areas.

Resolution No. 94-139. Adopted October 13, 1994. A Resolution Adopting Amendments to the Water Quality Control Plan for a portion of the Poway Hydrologic Area (6.20).

~~**Regional Board Water Quality Management Policy.** This policy consists of five general water quality policy statements and is described in Chapter 1 of this Basin Plan.~~

Resolution No. 95-48. Adopted May 16, 1995. A Resolution Adopting Amendments to the Water Quality Control Plan for the Alluvial Aquifer of the Moosa (903.13) and the Valley Center (903.14) Hydrologic Subareas.

~~**Resolution No. 95-95.** Adopted October 12, 1995. A Resolution Adopting An Amendment to the Water Quality Control Plan, San Diego Region. Types of Discharges Identified for Conditional Waiver of Waste Discharge Requirements. (See Appendix D).~~

~~**Resolution No. 95-115.** Adopted October 12, 1995. A Resolution Adopting Amendments to the Water Quality Control Plan for the San Diego Basin (9), Table 4-4. Types of Discharges Identified for Conditional Waiver of Waste Discharge Requirements. (See Appendix D).~~

~~**Resolution No. 96-30.** Adopted May 9, 1996. A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Region Providing an Exception to the Prohibition of Discharges of Recycled Wastewater to Surface Water Bodies Used for Municipal Water Supply. (See pages 4-16 thru 4-17).~~

~~**Resolution No. 96-34.** Adopted August 8, 1996. A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Region, Table 4-4, Item 24, Composting and Processing, Mulching, or Grinding Waste Management Units. (See Appendix D).~~

~~**Resolution No. 97-04:** Adopted March 12, 1997. A Resolution Adopting Amendments to the Water Quality Control Plan for the San Diego Basin for the Designation of COLD and SPWN Beneficial Uses. (See pages 2-9, 2-11, and 2-16 thru 2-55).~~

~~**Resolution No. R9-2002-0123:** Adopted August 14, 2002. Total Maximum Daily Load (TMDL) for Diazinon in Chollas Creek Watershed, San Diego County. (See Chapter 7).~~

~~**Resolution No. R9-2002-0186:** Adopted September 11, 2002. Amendment to the Water Quality Control Plan for the San Diego Region (9) to Incorporate a Waste Discharge Requirement Waiver Policy for Certain Specific Types of Discharges. (See pages 4-11 thru 4-14).~~

~~**Resolution No. R9-2005-0019:** Adopted February 9, 2005. Total Maximum Daily Load for Dissolved Copper in the Shelter Island Yacht Basin, San Diego Bay. (See Chapter 7).~~

~~NEW REGIONAL BOARD RESOLUTIONS~~

~~The following Basin Plan amendments have been adopted since the September 8, 1994 update.~~

~~**Resolution No. R9-2005-0036:** Adopted February 9, 2005. A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Region (9) to Incorporate Total Maximum Daily Loads (TMDLs) for Total Nitrogen and Total Phosphorus in the Rainbow Creek Watershed, San Diego County.~~

~~**Resolution No. R9-2005-0238.** Adopted November 9, 2005. Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Authorization for Compliance Time Schedules in National Pollutant Discharge Elimination System Requirements (Basin Plan Issue No. 6).~~

~~**Resolution No. R9-2005-0239.** Adopted November 9, 2005. A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Add Unnamed or Unidentified Waterbodies to the Beneficial Use Tables and Make Water Quality Objective Table Corrections (Basin Plan Issue No. 3).~~

~~**Resolution No. R9-2006-0029.** Adopted April 12, 2006. Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Edit and Reformat Text, and Update Graphics; and Reinstating Text on "Controllable Water Quality Factors" (Basin Plan Issue No. 1)~~

~~**Resolution No. R9-2007-0043:** Adopted June 13, 2007. A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Total Maximum Daily Loads for Dissolved Copper, Lead and Zinc in Chollas Creek, Tributary to San Diego Bay, and to Revise the Toxic Pollutants Section of Chapter 3 to Reference the California Toxics Rule.~~

~~**Resolution No. R9-2008-0027:** Adopted June 11, 2008. A Resolution to Adopt an Amendment to the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay.~~

~~**Resolution No. R9-2008-0028.** Adopted May 14, 2008. A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Implementation Provisions for Indicator Bacteria Water Quality Objectives to Account for Loading from Natural Uncontrollable Sources within the Context of a Total Maximum Daily Load.~~

~~**Resolution No. R9-2010-0001:** Adopted February 10, 2010. A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Revised Total Maximum Daily~~

Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek).

Resolution No. R9-2012-0033: Adopted June 13, 2012. A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate the Total Maximum Daily Load for Sedimentation in Los Peñasquitos Lagoon.

REPRINT OF RESOLUTION NO. 77-1

STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 77-1 POLICY WITH RESPECT TO WATER RECLAMATION IN CALIFORNIA

WHEREAS:

1. The California Constitution provides that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that waste or unreasonable use or unreasonable method of use of water be prevented, and that conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare;
2. The California Legislature has declared that the State Water Resources Control Board and each Regional Water Quality Control Board shall be the principal state agencies with primary responsibility for the coordination and control of water quality;
3. The California Legislature has declared that the people of the State have a primary interest in the development of facilities to reclaim water containing waste to supplement existing surface and underground water supplies;
4. The California Legislature has declared that the State shall undertake all possible steps to encourage the development of water reclamation facilities so that reclaimed water may be made available to help meet the growing water requirements of the State;
5. The Board has reviewed the document entitled "*Policy and Action Plan for Water Reclamation in California*," dated December 1976. This document recommends a variety of actions to encourage the development of water reclamation facilities and the use of reclaimed water. Some of these actions require direct implementation by the Board; others require implementation by the Executive Officer and the Regional Boards. In addition, this document recognizes that action by many other state, local, and federal agencies and the California State Legislature would also encourage construction of water reclamation facilities and the use of reclaimed water. Accordingly, the Board recommends for its consideration a number of actions intended to coordinate with the program of this Board;
6. The Board must concentrate its efforts to encourage and promote reclamation in water-short areas of the State where reclaimed water can supplement or replace other water supplies without interfering with water rights or instream beneficial uses or placing an unreasonable burden on present water supply systems; and
7. In order to coordinate the development of reclamation potential in California, the Board must develop a data collection, research, planning, and implementation Program for water reclamation and reclaimed water uses.

THEREFORE, BE IT RESOLVED:

1. That the State Board adopts the following Principles:
 - I. The State Board and the Regional Boards shall encourage, and consider or recommend for funding, water reclamation projects which meet Condition 1, 2, or 3 below and which do not adversely impact vested water rights or unreasonably impair instream beneficial uses or place an unreasonable burden on present water supply systems;
 - (1) Beneficial use will be made of wastewaters that would otherwise be discharged to marine or brackish receiving waters or evaporation ponds,
 - (2) Reclaimed water will replace or supplement the use of fresh water or better quality water,
 - (3) Reclaimed water will be used to preserve, restore, or enhance instream beneficial uses which include, but are not limited to, fish, wildlife, recreation and esthetics associated with any surface water or wetlands.
 - II. The State Board and the Regional Boards shall (1) encourage reclamation and reuse of water in water-short areas of the State, (2) encourage water conservation measures which further extend

- the water resources of the State, and (3) encourage other agencies, in particular the Department of Water Resources, to assist in implementing this policy.
- III. The State Board and the Regional Boards recognize the need to protect the public health including potential vector problems and the environment in the implementation of reclamation projects.
 - IV. In implementing the foregoing Principles, the State Board or the Regional Boards, as the case may be, shall take appropriate actions, recommend legislation, and recommend actions by other agencies in the areas of (1) planning, (2) project funding, (3) water rights, (4) regulation and enforcement, (5) research and demonstration, and (6) public involvement and information.
2. That, in order to implement the foregoing Principles, the State Board:
 - (a) Approves Planning Program Guidance Memorandum No. 9, "*PLANNING FOR WASTEWATER RECLAMATION*,"
 - (b) Adopts amendments and additions to Title 23, California Administrative Code sections 654.4, 761, 764.9, 783, 2101, 2102, 2107, 2109, 2109.1, 2109.2, 2119, 2121, 2133(b)(2), and 2133(b)(3),
 - (c) Approves Grants Management Memorandum No. 9.01, "*WASTEWATER RECLAMATION*,"
 - (d) Approves the Division of Planning and Research, Procedures and Criteria for the Selection of Wastewater Reclamation Research and Demonstration Project,
 - (e) Approves "*GUIDELINES FOR REGULATION OF WATER RECLAMATION*,"
 - (f) Approves the Plan of Action contained in Part III of the document identified in Finding Five above,
 - (g) Directs the Executive Officer to establish an Interagency Water Reclamation Policy Advisory Committee. Such Committee shall examine trends, analyze implementation problems, and report annually to the Board the results of the implementation of this policy, and
 - (h) Authorizes the Chairperson of the Board and directs the Executive Officer to implement the foregoing Principles and the Plan of Action contained in Part III of the document identified in Finding Five above, as appropriate.
 3. That not later than July 1, 1978, the Board shall review this policy and actions taken to implement it, along with the report prepared by the Interagency Water Reclamation Policy Advisory Committee, to determine whether modifications to this policy are appropriate to more effectively encourage water reclamation in California.
 4. That the Chairperson of the Board shall transmit to the California Legislature a complete copy of the "*Policy and Action Plan for Water Reclamation in California*."

CERTIFICATION

The undersigned, Executive Officer of the State Water Resources Control Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a special meeting of the State Water Resources Control Board held on January 6, 1977.

Original signed by
Bill B. Dendy
Executive Officer
State Water Resources Control Board

REPRINT OF RESOLUTION NO. 88-63

STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 88-63 ADOPTION OF POLICY ENTITLED "SOURCES OF DRINKING WATER"

WHEREAS:

1. California Water Code section 13140 provides that the State Board shall formulate and adopt State Policy for Water Quality Control; and,
2. California Water Code section 13240 provides that Water Quality Control Plans "*shall conform*" to any State Policy for Water Quality Control; and,
3. The Regional Boards can conform the Water Quality Control Plans to this policy by amending the plans to incorporate the policy; and,
4. The State Board must approve any conforming amendments pursuant to Water Code section 13245; and,
5. "*Sources of drinking water*" shall be defined in Water Quality Control Plans as those water bodies with beneficial uses designated as suitable, or potentially suitable, for municipal or domestic water supply (MUN); and,
6. The Water Quality Control Plans do not provide sufficient detail in the description of water bodies designated MUN to judge clearly what is, or is not, a source of drinking water for various purposes.

THEREFORE BE IT RESOLVED:

All surface and ground waters of the state are considered to be suitable, or potentially suitable, for municipal or domestic water supply and should be so designated by the Regional Boards 1 with the exception of:

1. Surface and ground waters where:
 - a. The total dissolved solids (TDS) exceed 3,000 mg/l (5,000 µS/cm, electrical conductivity) and it is not reasonably expected by Regional Boards to supply a public water system, or
 - b. There is contamination, either by natural processes or by human activity (unrelated to a specific pollution incident), that cannot reasonably be treated for domestic use using either Best Management Practices or best economically achievable treatment practices, or
 - c. The water source does not provide sufficient water to supply a single well capable of producing an average sustained yield of 200 gallons per day.
2. Surface waters where:
 - a. The water is in systems designed or modified to collect or treat municipal or industrial wastewaters, process waters, mining wastewaters, or storm water runoff, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards; or,
 - b. The water is in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards.
3. Ground water where:

The aquifer is regulated as a geothermal energy producing source or has been exempted administratively pursuant to 40 CFR, section 146.4 for the purpose of underground injection of fluids associated with the production of hydrocarbon or geothermal energy, provided that these fluids do not constitute a hazardous waste under 40 CFR, section 261.3.

4. Regional Board Authority to Amend Use Designations:

Any body of water which has a current specific designation previously assigned to it by a Regional Board in Water Quality Control Plans may retain that designation at the Regional Board's discretion. Where a body of water is not currently designated as MUN but, in the opinion of a Regional Board, is presently or potentially suitable for MUN, the Regional Board shall include MUN in the beneficial use designation.

The Regional Boards shall also assure that the beneficial uses of municipal and domestic supply are designated for protection wherever those uses are presently being attained, and assure that any changes in beneficial use designations for waters of the State are consistent with all applicable regulations adopted by the Environmental Protection Agency.

The Regional Boards shall review and revise the Water Quality Control Plans to incorporate this policy.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a policy duly and regularly adopted at a meeting of the State Water Resources Control Board held on May 19, 1988.

Original signed by
Maureen Marche
Administrative Assistant to the Board

¹ This policy does not affect any determination of what is a potential source of drinking water for the limited purposes of maintaining a surface impoundment after June 30, 1988, pursuant to section 25208.4 of the Health and Safety Code.

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~~APPENDIX D~~

~~CONDITIONS FOR CONDITIONAL WAIVERS OF WASTE DISCHARGE REQUIREMENTS IN TABLE 4-4~~

~~In order for the conditional waivers to be consistent with the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan), the following general overall conditions apply to each specific type of discharge to be eligible for a conditional waiver:~~

- ~~• The discharge shall not create a nuisance¹ or pollution² as defined in the Porter-Cologne Water Quality Control Act (Water Code);~~
- ~~• The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), or the State Water Resources Control Board (State Water Board), as required by the Federal Water Pollution Control Act (Clean Water Act); and~~
- ~~• The discharge of any substance in concentrations toxic to animal or plant life is prohibited.~~

~~In addition to the general overall conditions listed above, the San Diego Water Board determined that it is consistent with the Basin Plan and in the public interest to issue conditional waivers under one or more of the following circumstances:~~

- ~~• The type of discharge is effectively regulated by other public agencies; or~~
- ~~• The type of discharge does not adversely affect the quality or the beneficial uses of the waters of the state; or~~
- ~~• The type of discharge is not readily amenable to regulation through adoption of waste discharge requirements (WDRs), but warrants San Diego Water Board oversight to ensure compliance with the mandated conditions (e.g., Basin Plan water quality objectives).~~

~~There are 35 specific types of discharge that are eligible for a conditional waiver of waste discharge requirements. However, in examining the specific types of discharge that are eligible for a conditional waiver, several of the discharge types are similar and/or related in terms of discharge setting, discharge source, and/or waiver conditions.~~

~~Instead of developing conditional waivers for each specific type of discharge, an integrated approach was employed to simplify the conditional waivers. Types of discharge that are similar in nature or originate from a common setting or operation were grouped together into a “discharge classification,” as shown in Table D-1. The grouping allows dischargers to easily identify all the waiver conditions that may apply to their operations.~~

~~For example, discharge types that typically require a Clean Water Act section 401 Water Quality Certification (401 Certification) were grouped together in Conditional Waiver No. 6. A type of discharge that typically requires a 401 Certification is one where dredged and/or fill material may be discharged to land and/or surface waters. These types of discharge include sand and gravel mining operations, dredging project wastes, and stream channel alterations. All of these types of discharge have similar waiver conditions.~~

~~There are several types of discharge classified as discharges from agricultural and/or nursery operations in Conditional Waiver No. 4. Discharges of plant crop residues, storm water runoff from agricultural lands, mulches and/or amendment applied to soil, agricultural return water or nursery irrigation return water, and green~~

¹ “Nuisance” is defined by Water Code section 13050(m) as anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and (3) Occurs during, or as a result of, the treatment or disposal of wastes.

² “Pollution” is defined by Water Code section 13050(l)(1) as an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects waters for beneficial uses or facilities which serve these beneficial uses. Pollution may include contamination.

wastes for composting can all occur on the same site. Many of the proposed waiver conditions are similar, and many, if not all, of these types of discharge are found on nursery or agricultural operations.

Therefore, as in the examples above, the types of discharge eligible for conditional waivers were grouped into 11 discharge classifications. One type of discharge may be included in more than one discharge classification. For example, discharges of plant crop residues are included in both Conditional Waiver No. 4 for discharges from agricultural and nursery operations, and Conditional Waiver No. 8 for discharges/disposal of solid wastes to land.

Table D-1 lists the discharge classifications and associated conditional waiver identification number, and groups the specific types of discharge according to those discharge classifications.

Table D-1 Conditional Waivers and Discharge Classifications

Conditional Waiver No.	Discharge Classification	Types of Discharge Included in Conditional Waiver Discharge Classification
1	Discharges from on-site disposal systems	<ul style="list-style-type: none"> a) Discharges from conventional septic tank/subsurface disposal systems for residential units b) Discharges from conventional septic tank/subsurface disposal systems for commercial/industrial establishments c) Discharges from alternative individual sewerage systems d) Discharges from conventional septic tank/subsurface disposal systems for campgrounds e)a) Discharges from on-site graywater disposal systems
2	"Low threat" discharges to land	<ul style="list-style-type: none"> a) Discharges from construction and test pumping of water wells to land b) Discharges of air conditioner condensate and non-contact cooling water to land c) Swimming pool discharges to land d) Discharges from short-term construction dewatering operations to land e) "Low Threat" discharges to land and/or groundwater including the following: <ul style="list-style-type: none"> - Groundwater pumped from drinking water wells - Groundwater from foundation drains, crawl space pumps, and footing drains - Discharges from flushing water lines - Discharges from washing vehicles, pavement, buildings, etc. - Infiltration from residential/commercial/industrial/recreational facility landscape and lawn irrigation using groundwater or municipal supply water - Infiltration from structural infiltration-based BMPs
3	Discharges from animal operations	<ul style="list-style-type: none"> a) Discharges from medium animal feeding operations (300-999 animal units, where 1 animal unit is equivalent to 1 cow or 1,000 animal pounds) b) Discharges from small animal feeding operations (less than 300 animal units) c) Discharges of storm water runoff d) Discharge/application of manure to soil as an amendment or mulch e)a) Discharges from grazing lands
4	Discharges from agricultural and nursery operations	<ul style="list-style-type: none"> a) Discharges of plant crop residues to land b) Discharges of storm water runoff c) Discharge/application of amendments or mulches to soil d) Discharges of agricultural irrigation return water e)a) Discharges of nursery irrigation return water
5	Discharges from silvicultural operations	<ul style="list-style-type: none"> a) Discharges of storm water runoff b) Discharges from timber harvesting projects c)a) Discharges from wildfire suppression and fuels management activities
6	Discharges of dredged or fill materials nearby or within surface	<ul style="list-style-type: none"> a) Discharges from sand and gravel mining operations b) Discharges from dredging projects c) Discharges from stream channel alternation projects

Table D-1 Conditional Waivers and Discharge Classifications

Conditional Waiver No.	Discharge Classification	Types of Discharge Included in Conditional-Waiver Discharge Classification
	waters	d)a) Other projects proposing to discharge dredged or fill material nearby or within surface waters of the state
7	Discharges of recycled water to land	a) Discharges from short-term recycled water projects (without permanent recycled water delivery and/or distribution systems, not to exceed 365 days) b)a) Discharges from permanent recycled water projects (with permanent recycled water delivery and/or distribution systems, limited to the period prior to the discharge being authorized and regulated under WDRs, WRRs, and/or MRPs, not to exceed 365 days)
8	Discharges/ disposal of solid wastes to land	a) Discharges of plant crop residues to land b) Discharge/application of amendments and mulches to soil c) Discharges of inert wastes to solid waste disposal facilities only accepting inert wastes d) Discharges of soils containing wastes to temporary waste piles e)a) Discharge/disposal/reuse of soils characterized as inert from contaminated sites to land
9	Discharges of slurries to land	a) Discharges of on-site drilling mud to land b)a) Discharges of concrete grinding residues to land
10	Discharges of emergency/ disaster related wastes	a) Incidental discharges of oil and oily water within a response area during an oil spill response in marine waters b) Discharges of disaster related wastes to temporary waste piles and surface impoundments c) Discharges of mass mortality waste to temporary waste piles and emergency landfills d)a) Other discharges of emergency/disaster related wastes
11	Aerially discharged wastes over land	a) Discharges of wastes related to fireworks displays over land b)a) Other wastes discharged aerially over land that may adversely affect the quality of the groundwaters of the state, but determined to be "low threat" by the San Diego Water Board

For each conditional waiver, General Waiver Conditions were developed that are applicable to a discharger or discharge operation, or all specific types of discharge within a discharge classification. Specific Waiver Conditions were developed that are applicable to specific types of discharge within a discharge classification, when specific conditions were determined to be necessary. The General and Specific Waiver Conditions for Conditional Waiver Nos. 1 through 11 are given in the following pages.

CONDITIONAL WAIVER NO. 1 – DISCHARGES FROM ON-SITE DISPOSAL SYSTEMS

Conditional Waiver No. 1 is for discharges of effluent from on-site disposal systems which are a source of pollutants that can infiltrate to groundwater. Discharges of effluent from on-site disposal systems include domestic wastewater (sewage) and graywater, but not industrial wastewater, which is discharged to the subsurface, located within the property that generated the waste stream.

The following types of discharge not regulated or authorized under waste discharge requirements (WDRs) may be eligible for Conditional Waiver No. 1:

- Discharges from conventional septic tank/subsurface disposal systems for residential units
- Discharges from conventional septic tank/subsurface disposal systems for commercial/industrial establishments
- Discharges from alternative individual sewerage systems
- Discharges from conventional septic tank/subsurface disposal systems for campgrounds
- Discharges from on-site graywater disposal systems

In order to be eligible for Conditional Waiver No. 1, discharges must comply with certain conditions to be protective of water quality. Waiver conditions applicable to discharges from on-site disposal systems include the following:

1.I.A.—General Waiver Conditions for On-site Disposal Systems

1.II.A.—Specific Waiver Conditions for On-site Septic and Sewerage Systems

1.II.B.—Specific Waiver Conditions for On-site Graywater Systems

Discharges from on-site disposal systems that comply with the general and specific waiver conditions in Conditional Waiver No. 1 are not expected to pose a significant threat to the quality of waters of the state.

1.I.A.—General Waiver Conditions for On-site Disposal Systems

1. Prevent the direct or indirect discharge of effluent from on-site disposal systems to any surface waters of the state (including ephemeral streams and vernal pools).
2. Effluent from on-site disposal systems must be discharged to the subsurface and cannot surface or pond.
3. Effluent from on-site disposal systems must not adversely affect the quality or beneficial uses underlying groundwater.
4. Effluent from on-site disposal systems must not cause or threaten to cause a condition of contamination, pollution, or nuisance.
5. Effluent from on-site disposal systems must be discharged at least 5 feet above highest known historical or anticipated groundwater level.
6. Effluent from on-site disposal systems must be discharged at least 100 feet away from any surface water body.
7. Effluent from on-site disposal systems must not adversely impact the quality or beneficial uses of groundwater in any water wells.
8. On-site disposal systems must be designed and operated in accordance with applicable regulatory requirements and/or standards as provided in the Specific Conditions.
9. The owner/operator of an on-site disposal system must comply with local, state, and federal ordinances and regulations and obtain any required approvals, permits, certifications, and/or licenses from authorized local agencies. Copies of any approvals, permits, certifications, and/or licenses must be available on site for inspection.
10. The owner/operator of an on-site disposal system must maintain and operate the system in accordance with the design approved by the authorized local agencies.
11. The San Diego Water Board and/or other local regulatory agencies must be allowed reasonable access to the site in order to perform inspections and conduct monitoring.
12. On-site disposal systems can only accept domestic wastes and/or wastewater.

1.II.A.—Specific Waiver Conditions for On-site Septic and Sewerage Systems

1. For existing on-site septic or sewerage systems, the following conditions apply:
 - a) Existing on-site septic or sewerage systems serving campgrounds must not allow connections from recreational vehicles.

- ~~b) Owners/operators of existing on-site septic or sewerage systems that cause a condition of contamination, pollution, or nuisance must cease the use of the system and repair or replace it with a compliant system, or permanently remove the system from operation.~~
- ~~c) After adoption of State Water Board on-site wastewater treatment system (OWTS) regulations, any existing on-site septic or sewerage systems that is replaced, requires major repair, pools or discharges to the surface of the ground, or has the reasonable potential to cause a violation of water quality objectives, to impair present or future beneficial uses of water, to cause pollution, nuisance, or contamination of waters of the state must be brought into compliance with new OWTS regulations. Owners/operators of on-site septic or sewerage systems that cannot bring their system into compliance must cease the use of the system and replace it with a compliant system, or permanently remove the system from operation.~~
- ~~2. For new on-site septic or sewerage systems, the following conditions apply:~~
 - ~~a) New on-site septic or sewerage systems installed at campgrounds must not allow connections from recreational vehicles.~~
 - ~~b) New on-site septic or sewerage systems must comply with the conditions set forth in the section entitled *Guidelines for New Community and Individual Sewerage Facilities* in Chapter 4 (Implementation) of the Basin Plan.~~
 - ~~c) New on-site septic or sewerage systems proposed to be constructed in areas where groundwater water quality objectives have been exceeded must be evaluated for potential adverse effects on groundwater quality and beneficial uses to determine if regulating the system with individual WDRs is more appropriate.~~
 - ~~d) New on-site septic or sewerage systems proposed to be constructed within areas designated as Zone A, as defined by the California Department of Public Health's Drinking Water Source Assessment and Protection Program, must be constructed with an adequate setback from the drinking water supply source that will be protective of drinking water quality.~~
 - ~~e) Six (6) months after adoption of State Water Board OWTS regulations, applications received by the authorized local agency for the construction of new on-site septic or sewerage systems must be in compliance with new OWTS regulations for design and installation.~~

~~**1.II.B. Specific Waiver Conditions for On-site Graywater Systems**~~

- ~~1. An on-site graywater system must be permitted by the city, county, or other authorized local agency that has jurisdiction over the installation. The on-site graywater system must be designed and installed, at a minimum, according to the California Plumbing Code (GPC) Graywater Standards.³ If the city, county, and/or other authorized local agencies have additional requirements, the graywater system must be designed and installed to comply with those requirements.~~
- ~~2. On-site graywater systems proposed to be constructed in areas where groundwater water quality objectives have been exceeded must be evaluated for potential adverse effects on groundwater quality and beneficial uses to determine if regulating the system with individual WDRs is more appropriate.~~
- ~~3. New on-site graywater systems proposed to be constructed within areas designated as Zone A, as defined by the California Department of Public Health's Drinking Water Source Assessment and Protection Program, must be constructed with an adequate setback from the drinking water supply source that will be protective of drinking water quality.~~

³ California Code of Regulations Title 24 (also known as the California Building Standards Administrative Code) Part 5 (also known as the California Plumbing Code) Appendix G

~~CONDITIONAL WAIVER NO. 2 – “LOW THREAT” DISCHARGES TO LAND~~

~~CONDITIONAL WAIVER NO. 2 IS FOR “LOW THREAT” DISCHARGES TO LAND, WHICH CAN PERCOLATE TO GROUNDWATER. “LOW THREAT” DISCHARGES INCLUDE LIQUID WASTES CONTAINING POLLUTANT CONCENTRATIONS THAT ARE NOT EXPECTED TO ADVERSELY IMPACT THE QUALITY OF WATERS OF THE STATE UNDER AMBIENT CONDITIONS. “LOW THREAT” DISCHARGES MAY INCLUDE POTABLE WATER OR UNCONTAMINATED GROUNDWATER. POTABLE WATER AND UNCONTAMINATED GROUNDWATER ARE NOT CONSIDERED WASTE WHEN INITIALLY DISCHARGED. HOWEVER, WHEN THIS WATER COMES INTO CONTACT WITH POLLUTANTS AND TRANSPORTS THOSE POLLUTANTS IN SURFACE RUNOFF OR LEACHES THOSE POLLUTANTS INTO THE SOIL AND GROUNDWATER, IT BECOMES A WASTE. “LOW THREAT” DISCHARGES TO LAND ARE NOT EXPECTED TO CONTAIN SIGNIFICANT CONCENTRATIONS OF POLLUTANTS THAT CAN ADVERSELY AFFECT THE QUALITY OF UNDERLYING GROUNDWATER.~~

~~THE FOLLOWING TYPES OF DISCHARGE NOT REGULATED OR AUTHORIZED UNDER WASTE DISCHARGE REQUIREMENTS (WDRS) MAY BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 2:~~

- ~~• DISCHARGES FROM THE CONSTRUCTION AND TEST PUMPING OF WATER WELLS TO LAND~~
- ~~• DISCHARGES OF AIR CONDITIONER CONDENSATE OR NON-CONTACT COOLING WATER TO LAND~~
- ~~• SWIMMING POOL DISCHARGES TO LAND~~
- ~~• DISCHARGES FROM SHORT-TERM CONSTRUCTION DEWATERING OPERATIONS TO LAND~~
- ~~• “LOW THREAT” DISCHARGES TO LAND AND/OR GROUNDWATER, WHICH MAY INCLUDE THE FOLLOWING:~~
 - ~~– GROUNDWATER PUMPED FROM DRINKING WATER WELLS~~
 - ~~– GROUNDWATER FROM FOUNDATION DRAINS, CRAWL SPACE PUMPS, AND FOOTING DRAINS~~
 - ~~– DISCHARGES FROM FLUSHING WATER LINES~~
 - ~~– DISCHARGES FROM WASHING VEHICLES, PAVEMENT, BUILDINGS, ETC.~~
 - ~~– INFILTRATION FROM RESIDENTIAL/COMMERCIAL/INDUSTRIAL/RECREATIONAL FACILITY LANDSCAPE AND~~
 - ~~– LAWN IRRIGATION USING GROUNDWATER OR MUNICIPAL SUPPLY WATER~~
 - ~~– INFILTRATION FROM STRUCTURAL INFILTRATION-BASED BEST MANAGEMENT PRACTICES (BMPS)~~

~~IN ORDER TO BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 2, DISCHARGES MUST COMPLY WITH CERTAIN CONDITIONS TO BE PROTECTIVE OF WATER QUALITY. WAIVER CONDITIONS APPLICABLE TO “LOW THREAT” DISCHARGES TO LAND INCLUDE THE FOLLOWING:~~

- ~~2.I.A. GENERAL WAIVER CONDITIONS FOR “LOW THREAT” DISCHARGES OF WATER TO LAND~~
- ~~2.II.A. SPECIFIC WAIVER CONDITIONS FOR AIR CONDITIONER CONDENSATE AND NON-CONTACT COOLING WATER DISCHARGES TO LAND~~
- ~~2.II.B. SPECIFIC WAIVER CONDITIONS FOR SWIMMING POOL DISCHARGES TO LAND~~
- ~~2.II.C. SPECIFIC WAIVER CONDITIONS FOR PUMPING OF GROUNDWATER FROM WELLS TO LAND~~
- ~~2.II.D. SPECIFIC WAIVER CONDITIONS FOR DEWATERING OPERATIONS DISCHARGED TO LAND~~
- ~~2.II.E. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES FROM WASHING VEHICLES, PAVEMENT, BUILDINGS, ETC. TO LAND~~
- ~~2.II.F. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES FROM IRRIGATED LAWNS AND LANDSCAPING USING GROUNDWATER OR MUNICIPAL SUPPLY WATER~~
- ~~2.II.G. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES FROM STRUCTURAL BMPS THAT REQUIRE INFILTRATION~~

~~“LOW THREAT” DISCHARGES TO LAND THAT COMPLY WITH THE GENERAL AND SPECIFIC WAIVER CONDITIONS IN CONDITIONAL WAIVER NO. 2 ARE NOT EXPECTED TO POSE A THREAT TO THE QUALITY OF WATERS OF THE STATE.~~

- ~~2.I.A. GENERAL WAIVER CONDITIONS FOR “LOW THREAT” DISCHARGES OF WATER TO LAND~~
 - ~~1. PREVENT THE DIRECT OR INDIRECT DISCHARGE OF “LOW THREAT” DISCHARGES TO ANY SURFACE WATERS OF THE STATE (INCLUDING EPHEMERAL STREAMS AND VERNAL POOLS).~~

- ~~2. "LOW THREAT" DISCHARGES MUST NOT CAUSE THE MIGRATION OF CONTAMINANTS SUCH AS CHLORINATED SOLVENTS, HYDROCARBONS, OR OTHER TOXIC OR HAZARDOUS SUBSTANCES TO GROUNDWATER.~~
- ~~3. "LOW THREAT" DISCHARGES MUST NOT COME IN CONTACT WITH ANY MATERIAL THAT CONSISTS OF OR IS CONTAMINATED WITH CHLORINATED SOLVENTS, HYDROCARBONS, OR OTHER TOXIC OR HAZARDOUS SUBSTANCES PRIOR TO DISCHARGE TO LAND.~~
- ~~4. ANY PRODUCTS USED TO CONDITION OR TREAT "LOW THREAT" DISCHARGES PRIOR TO DISCHARGING TO LAND MUST BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND GUIDELINES, AND MUST RELIABLY ATTENUATE BEFORE INFILTRATING TO UNDERLYING GROUNDWATER.~~
- ~~5. "LOW THREAT" DISCHARGES TO LAND MUST NOT ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF UNDERLYING GROUNDWATER.~~
- ~~6. "LOW THREAT" DISCHARGES TO LAND MUST NOT CAUSE OR THREATEN TO CAUSE A CONDITION OF CONTAMINATION, POLLUTION, OR NUISANCE.~~
- ~~7. "LOW THREAT" DISCHARGES TO LAND MUST NOT ADVERSELY IMPACT THE QUALITY OR BENEFICIAL USES OF GROUNDWATER IN ANY WATER WELLS.~~
- ~~8. THE SAN DIEGO WATER BOARD AND/OR OTHER LOCAL REGULATORY AGENCIES MUST BE ALLOWED REASONABLE ACCESS TO THE SITE IN ORDER TO PERFORM INSPECTIONS AND CONDUCT MONITORING.~~
- ~~9. DISCHARGER MUST SUBMIT A NOTICE OF INTENT OR TECHNICAL AND/OR MONITORING PROGRAM REPORTS WHEN DIRECTED BY THE SAN DIEGO WATER BOARD.~~

~~2.II.A. SPECIFIC WAIVER CONDITIONS FOR AIR CONDITIONER CONDENSATE AND NON-CONTACT COOLING WATER DISCHARGES TO LAND~~

- ~~1. DISCHARGES MUST NOT CONTAIN CONTACT COOLING WATER.~~
- ~~2. DISCHARGES OF AIR CONDITIONER CONDENSATE AND NON-CONTACT COOLING WATER TO LAND MUST NOT EXCEED AN AVERAGE OF 1,200 GALLONS PER DAY FOR ANY CONTINUOUS 365-DAY PERIOD, UNLESS THE DISCHARGER HAS FILED A NOTICE OF INTENT CONTAINING INFORMATION ABOUT THE OPERATOR, LOCATION, AND PLANNED PERIOD OF AND AVERAGE DAILY VOLUME OF DISCHARGE.~~

~~2.II.B. SPECIFIC WAIVER CONDITIONS FOR SWIMMING POOL DISCHARGES TO LAND~~

- ~~1. DISCHARGES OF WATER FROM EACH SWIMMING POOL TO LAND MUST NOT EXCEED 50,000 GALLONS DURING ANY CONTINUOUS 365-DAY PERIOD, UNLESS THE DISCHARGER HAS FILED A NOTICE OF INTENT CONTAINING INFORMATION ABOUT THE SWIMMING POOL LOCATION AND VOLUME, PLANNED PERIOD OF AND FREQUENCY OF DISCHARGE.~~

~~2.II.C. SPECIFIC WAIVER CONDITIONS FOR PUMPING OF GROUNDWATER FROM WELLS TO LAND~~

- ~~1. THE DISCHARGE OF GROUNDWATER PUMPED FROM ANY WELL THAT IS USED IN A SOIL AND/OR GROUNDWATER CONTAMINATION INVESTIGATION OR CORRECTIVE ACTION MAY NOT BE DISCHARGED TO LAND, UNLESS THE DISCHARGER HAS FILED A NOTICE OF INTENT CONTAINING MONITORING DATA DEMONSTRATING THAT THE QUALITY OF THE PROPOSED DISCHARGE WOULD NOT CAUSE THE GROUNDWATER AT THE DISPOSAL SITE TO EXCEED WATER QUALITY OBJECTIVES.~~
- ~~2. FOR MULTIPLE APPLICATIONS OF GROUNDWATER FROM WELLS PUMPED TO LAND OVER A 365-DAY PERIOD, OR A CONTINUOUS 24-HOUR (OR LONGER) APPLICATION OF GROUNDWATER FROM WELLS PUMPED TO LAND WITHIN A 365-DAY PERIOD, THE DISCHARGER MUST FILE A NOTICE OF INTENT CONTAINING INFORMATION ABOUT THE OPERATOR, LOCATION, PLANNED PERIOD OF AND FREQUENCY OF DISCHARGE, AND MEASURES THAT WILL BE TAKEN TO MINIMIZE OR ELIMINATE THE DISCHARGE OF POLLUTANTS THAT MIGHT AFFECT SURFACE WATER AND GROUNDWATER QUALITY. SUFFICIENT INFORMATION DEMONSTRATING COMPLIANCE WITH WAIVER CONDITIONS MUST BE SUBMITTED BEFORE THE DISCHARGE MAY BEGIN.~~
- ~~3. GROUNDWATER CANNOT ORIGINATE FROM AN AREA THAT CONTAINS ANY CONTAMINATED SOIL OR GROUNDWATER.~~

~~2.II.D. SPECIFIC WAIVER CONDITIONS FOR DEWATERING OPERATIONS DISCHARGED TO LAND~~

- ~~1. THE DISCHARGE OF GROUNDWATER PUMPED FROM ANY WELL OR EXCAVATION THAT IS USED IN A SOIL AND/OR GROUNDWATER CONTAMINATION INVESTIGATION OR CORRECTIVE ACTION MAY NOT BE DISCHARGED TO LAND, UNLESS THE DISCHARGER HAS FILED A NOTICE OF INTENT CONTAINING MONITORING DATA DEMONSTRATING THAT THE QUALITY OF THE PROPOSED DISCHARGE WOULD NOT CAUSE THE GROUNDWATER AT THE DISPOSAL SITE TO EXCEED WATER QUALITY OBJECTIVES.~~
- ~~2. FOR DEWATERING OPERATIONS THAT DISCHARGE AN AVERAGE OF 5,000 GALLONS PER DAY FOR ANY CONTINUOUS 180-DAY PERIOD, THE DISCHARGER MUST FILE A NOTICE OF INTENT CONTAINING INFORMATION ABOUT THE OPERATOR, LOCATION, PLANNED PERIOD AND RATE OF DISCHARGE, AND MEASURES THAT WILL BE TAKEN TO MINIMIZE OR ELIMINATE THE DISCHARGE OF POLLUTANTS THAT MIGHT AFFECT GROUNDWATER QUALITY. SUFFICIENT INFORMATION DEMONSTRATING COMPLIANCE WITH WAIVER CONDITIONS MUST BE SUBMITTED BEFORE THE DISCHARGE MAY BEGIN.~~
- ~~3. GROUNDWATER CANNOT ORIGINATE FROM AN AREA THAT CONTAINS ANY CONTAMINATED SOIL OR GROUNDWATER.~~

~~2.II.E. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES FROM WASHING VEHICLES, PAVEMENT, BUILDINGS, ETC. TO LAND~~

- ~~1. DISCHARGES OF WASH WATER AND SIMILAR INTERMITTENT DISCHARGES MUST NOT EXCEED AN AVERAGE OF 1,200 GALLONS PER DAY FOR ANY CONTINUOUS 30-DAY PERIOD, UNLESS THE DISCHARGER HAS FILED A NOTICE OF INTENT CONTAINING INFORMATION ABOUT THE OPERATOR, LOCATION, AND PLANNED PERIOD OF AND AVERAGE DAILY VOLUME OF DISCHARGE.~~

~~2.II.F. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES FROM IRRIGATED LAWNS AND LANDSCAPING USING GROUNDWATER OR MUNICIPAL SUPPLY WATER~~

- ~~1. PRODUCTS APPLIED TO LAWNS AND LANDSCAPING MUST BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND GUIDELINES, AND MUST RELIABLY ATTENUATE BEFORE INFILTRATING TO UNDERLYING GROUNDWATER.~~

~~2.II.G. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES FROM STRUCTURAL BMPs THAT REQUIRE INFILTRATION.~~

- ~~1. INSTALLATION OF STRUCTURAL BMP THAT UTILIZES INFILTRATION MUST COMPLY WITH THE DESIGN CRITERIA OF THE MUNICIPALITY REGULATED BY MS4 WDRS (NPDES STORM WATER PERMIT), OR, FOR ANY DISCHARGE THAT EXCEEDS AN AVERAGE OF 1,200 GALLONS PER DAY FOR ANY CONTINUOUS 365-DAY PERIOD, THE DISCHARGER MUST FILE A NOTICE OF INTENT CONTAINING DOCUMENTATION DEMONSTRATING THAT THE QUALITY OF THE PROPOSED DISCHARGE FROM INFILTRATION WILL NOT CAUSE THE GROUNDWATER AT THE DISPOSAL SITE TO EXCEED WATER QUALITY OBJECTIVES.~~
- ~~2. INSTALLATION OF STRUCTURAL BMPs THAT REQUIRE INFILTRATION MUST COMPLY WITH LOCAL, STATE, AND FEDERAL ORDINANCES AND REGULATIONS AND OBTAIN ANY REQUIRED APPROVALS, PERMITS, CERTIFICATIONS, AND/OR LICENSES FROM AUTHORIZED LOCAL AGENCIES.~~

CONDITIONAL WAIVER NO. 3 – DISCHARGES FROM ANIMAL OPERATIONS

~~CONDITIONAL WAIVER NO. 3 IS FOR DISCHARGES FROM ANIMAL OPERATIONS, WHICH CONTAIN POLLUTANTS THAT CAN PERCOLATE TO GROUNDWATER OR RUNOFF TO SURFACE WATERS. DISCHARGES FROM ANIMAL OPERATIONS INCLUDE DISCHARGES RESULTING FROM ANIMAL ACTIVITIES AND WASTES, AND STORM WATER RUNOFF WHICH CAN ALSO TRANSPORT POLLUTANTS FROM ANIMAL OPERATIONS TO SURFACE WATERS AND GROUNDWATER.~~

~~THE FOLLOWING TYPES OF DISCHARGE NOT REGULATED OR AUTHORIZED UNDER WASTE DISCHARGE REQUIREMENTS (WDRS) MAY BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 3:~~

- ~~• DISCHARGES FROM SMALL ANIMAL FEEDING OPERATIONS (LESS THAN 300 ANIMAL UNITS, WHERE 1 ANIMAL UNIT IS EQUIVALENT TO ONE COW OR 1,000 ANIMAL POUNDS)~~
- ~~• DISCHARGES FROM MEDIUM ANIMAL FEEDING OPERATIONS (300 TO 999 ANIMAL UNITS)~~
- ~~• DISCHARGES OF STORM WATER RUNOFF~~
- ~~• DISCHARGE/APPLICATION OF MANURE TO SOIL AS AN AMENDMENT OR MULCH~~
- ~~• DISCHARGES FROM GRAZING LANDS~~

~~IN ORDER TO BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 3, DISCHARGES MUST COMPLY WITH CERTAIN CONDITIONS TO BE PROTECTIVE OF WATER QUALITY. WAIVER CONDITIONS APPLICABLE TO DISCHARGES FROM ANIMAL OPERATIONS INCLUDE THE FOLLOWING:~~

- ~~3.I.A. GENERAL FACILITY DESIGN AND MANAGEMENT WAIVER CONDITIONS~~
- ~~3.I.B. GENERAL MANURE MANAGEMENT WAIVER CONDITIONS~~
- ~~3.I.C. GENERAL WAIVER CONDITIONS FOR APPLICATION OF MANURE FROM ANIMAL OPERATIONS AS A FERTILIZER, AMENDMENT, OR MULCH TO SOIL~~
- ~~3.I.D. GENERAL INSPECTION AND REPORTING WAIVER CONDITIONS~~
- ~~3.II.A. SPECIFIC WAIVER CONDITIONS FOR SMALL ANIMAL FEEDING OPERATIONS~~
- ~~3.II.B. SPECIFIC WAIVER CONDITIONS FOR MEDIUM ANIMAL FEEDING OPERATIONS~~
- ~~3.II.C. SPECIFIC WAIVER CONDITIONS FOR GRAZING OPERATIONS~~

~~DISCHARGES FROM ANIMAL OPERATIONS THAT COMPLY WITH THE GENERAL AND SPECIFIC WAIVER CONDITIONS IN CONDITIONAL WAIVER NO. 3 ARE NOT EXPECTED TO POSE A THREAT TO THE QUALITY OF WATERS OF THE STATE.~~

- ~~3.I.A. GENERAL FACILITY DESIGN AND MANAGEMENT WAIVER CONDITIONS~~
 - ~~1. ANIMAL OPERATIONS MUST COMPLY WITH ANY LOCAL, STATE, AND FEDERAL ORDINANCES AND REGULATIONS AND OBTAIN ANY REQUIRED APPROVALS, PERMITS, CERTIFICATIONS, AND/OR LICENSES FROM AUTHORIZED LOCAL AGENCIES.~~
 - ~~2. ANIMAL OPERATIONS MUST IMPLEMENT MANAGEMENT MEASURES (MMS) AND/OR BEST MANAGEMENT PRACTICES (BMPS) TO MINIMIZE OR ELIMINATE THE DISCHARGE OF POLLUTANTS THAT MAY ADVERSELY IMPACT THE QUALITY OR BENEFICIAL USES OF WATERS OF THE STATE. RECOMMENDED MMS/BMPS ARE PROVIDED IN EQUESTRIAN-RELATED WASTE QUALITY BEST MANAGEMENT PRACTICES AVAILABLE FROM THE COUNTY OF SAN DIEGO DEPARTMENT OF AGRICULTURE, WEIGHTS AND MEASURES, AND/OR THE FIELD OFFICE TECHNICAL GUIDE AVAILABLE FROM THE NATURAL RESOURCE CONSERVATION SERVICE (NRCS), OR OTHER SOURCES.~~
 - ~~3. ANIMAL OPERATIONS MUST PREVENT DIRECT CONTACT OF ANIMALS WITH SURFACE WATER BODIES. ANIMALS SHOULD NOT BE ALLOWED TO GRAZE DIRECTLY ADJACENT TO OR WITHIN STREAM BANKS. ANIMAL OPERATIONS SHOULD MAINTAIN A BUFFER ZONE OR RIPARIAN FILTER STRIP BETWEEN THE ANIMALS AND ANY SURFACE WATERS OF THE STATE. THE BUFFER ZONE MUST ADEQUATELY MINIMIZE THE DISCHARGE OF POLLUTANTS FROM AN ANIMAL OPERATION. THERE SHOULD BE NO DIRECT EXPOSURE OF A SURFACE WATER BODY TO AN ANIMAL.~~

~~3.I.B. GENERAL MANURE MANAGEMENT WAIVER CONDITIONS~~

- ~~1. ANIMAL OPERATIONS MUST PREVENT THE DIRECT OR INDIRECT DISCHARGE OF ANIMAL WASTES (MANURE, URINE, SOILED BEDDING) TO ANY SURFACE WATERS OF THE STATE (INCLUDING EPHEMERAL STREAMS AND VERNAL POOLS).~~
- ~~2. ANIMAL OPERATIONS MUST PROPERLY MANAGE THE WASTES (I.E., MANURE, URINE, SOILED BEDDING) GENERATED BY THE ANIMALS AT THE FACILITY IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:~~
 - ~~a) ANIMAL WASTES SHOULD BE COLLECTED AND DISPOSED OF REGULARLY (AT LEAST ONCE EVERY TWO WEEKS).~~
 - ~~b) ANIMAL WASTES CAN BE STORED TEMPORARILY (NO LONGER THAN TWO WEEKS) ON SITE UNTIL DISPOSAL, UNLESS ANIMAL WASTES ARE COMPOSTED ON SITE. THE AMOUNT OF ANIMAL WASTES STORED IN TEMPORARY STORAGE AREA MUST NOT EXCEED THE CAPACITY OF THE STORAGE AREA. IF ANIMAL WASTES EXCEED, OR THREATEN TO EXCEED THE CAPACITY OF THE TEMPORARY STORAGE AREA, THE ANIMAL WASTES SHOULD BE DISPOSED OF IMMEDIATELY.~~
 - ~~c) AREAS ADJACENT TO TEMPORARY STORAGE AREA FOR ANIMAL WASTES SHOULD BE GRADED TO PREVENT STORM WATER AND SURFACE RUNOFF FROM REACHING THE STORAGE AREA.~~
 - ~~d) TEMPORARY STORAGE AREA SHOULD BE ON AN IMPERVIOUS SURFACE (E.G., CONCRETE PAD OR PLASTIC TARP) TO PREVENT LEACHING OF POLLUTANTS TO GROUNDWATER.~~
 - ~~e) TEMPORARY STORAGE AREA SHOULD BE PROTECTED WITH A ROOF OR COVER, OR AT A MINIMUM BE COVERED WITH PLASTIC SHEETING IF PRECIPITATION IS FORECAST WITHIN THE NEXT 24 HOURS, TO PREVENT DIRECT CONTACT BETWEEN PRECIPITATION AND ANIMAL WASTES.~~
 - ~~f) A BUFFER ZONE OF AT LEAST 100 FEET SHOULD BE MAINTAINED BETWEEN THE TEMPORARY STORAGE AREA FOR ANIMAL WASTES AND ANY SURFACE WATER BODY UNLESS SUFFICIENT INFORMATION IS PROVIDED TO DEMONSTRATE THAT A PROPOSED ALTERNATIVE IS PROTECTIVE OF WATER QUALITY.~~
 - ~~g) IF ANIMAL WASTES ARE USED AS A FERTILIZER, SOIL AMENDMENT, OR MULCH ON GRAZING LANDS, APPLICATION OF ANIMAL WASTES TO SOIL MUST COMPLY WITH THE CONDITIONS IN 3.I.C.~~
- ~~3.I.C. GENERAL WAIVER CONDITIONS FOR APPLICATION OF MANURE FROM ANIMAL OPERATIONS AS A FERTILIZER, AMENDMENT, OR MULCH TO SOIL~~
 - ~~1. IF FRESH AND/OR UNCOMPOSTED MANURE IS APPLIED AS A FERTILIZER, AMENDMENT, OR MULCH TO SOIL, MANURE MUST BE APPLIED TO THE SAME PROPERTY WHERE THE MANURE WAS GENERATED.~~
 - ~~2. DRIED, PROCESSED, OR COMPOSTED MANURE MAY BE APPLIED AS A FERTILIZER, AMENDMENT, OR MULCH TO SOIL ON SITES OTHER THAN THE PROPERTY WHERE THE MANURE WAS GENERATED. DRIED, PROCESSED, OR COMPOSTED MANURE MAY ALSO BE APPLIED AS A FERTILIZER, AMENDMENT, OR MULCH TO SOIL ON THE SAME PROPERTY WHERE THE MANURE WAS GENERATED. USE OF DRIED, PROCESSED, OR COMPOSTED MANURE ON OR OFF THE PROPERTY WHERE THE MANURE WAS GENERATED MUST COMPLY WITH THE WAIVER CONDITIONS IN 3.I.C.~~
 - ~~3. A BUFFER ZONE OF AT LEAST 100 FEET SHOULD BE MAINTAINED BETWEEN THE MANURE APPLIED TO SOIL AND ANY SURFACE WATERS OF THE STATE, UNLESS SUFFICIENT INFORMATION IS PROVIDED TO DEMONSTRATE THAT A PROPOSED ALTERNATIVE IS PROTECTIVE OF WATER QUALITY.~~
 - ~~4. THE AMOUNT OF SOIL AMENDMENT OR MULCH MATERIALS THAT CAN BE APPLIED TO SOIL MUST BE REASONABLE FOR THE CROP OR PLANT, SOIL, CLIMATE, SPECIAL LOCAL SITUATIONS, MANAGEMENT SYSTEM, AND TYPE OF SOIL AMENDMENT OR MULCH. APPLICATION RATES MUST TAKE INTO ACCOUNT STORM EVENTS DURING THE RAINY SEASON (OCTOBER-MAY). APPLICATION RATES MUST NOT ALLOW SOIL AMENDMENT OR MULCH MATERIALS TO BE TRANSPORTED OFF THE PROPERTY IN STORM WATER RUNOFF DURING THE RAINY SEASON. RESOURCES ARE AVAILABLE FROM THE NRCS, UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION (UCCE), AND OTHER ORGANIZATIONS. A COPY OF THE CALCULATIONS AND/OR ESTIMATE OF THE APPLICATION RATE MUST BE AVAILABLE ON SITE FOR INSPECTION.~~

- ~~5. APPLY AMENDMENT OR MULCH MATERIALS TO SOIL AT SITE-SPECIFIC RATES APPROPRIATE TO THE SEASON (I.E., DRY VS. RAINY).~~
- ~~6. IMPLEMENT MMS/BMPS IN AREAS WITH SOIL AMENDMENT OR MULCH MATERIALS TO MINIMIZE OR ELIMINATE RUNOFF AND LEACHATE TO SURFACE WATERS AND GROUNDWATER.~~

~~3.I.D. GENERAL INSPECTION AND REPORTING WAIVER CONDITIONS~~

- ~~1. THE SAN DIEGO WATER BOARD AND/OR OTHER LOCAL REGULATORY AGENCIES MUST BE ALLOWED REASONABLE ACCESS TO THE SITE IN ORDER TO PERFORM INSPECTIONS AND CONDUCT MONITORING.~~
- ~~2. ANIMAL OPERATIONS MUST SUBMIT A NOTICE OF INTENT OR TECHNICAL AND/OR MONITORING PROGRAM REPORTS WHEN DIRECTED BY THE SAN DIEGO WATER BOARD.~~

~~3.II.A. SPECIFIC WAIVER CONDITIONS FOR SMALL ANIMAL FEEDING OPERATIONS~~

- ~~1. SMALL ANIMAL FEEDING OPERATIONS (AFOS) MUST NOT DISCHARGE ANY POLLUTANTS TO WATERS OF THE UNITED STATES THROUGH ANY MAN-MADE CONVEYANCE, OR DIRECTLY TO WATERS OF THE UNITED STATES WHICH ORIGINATE OUTSIDE OF AND PASS OVER, ACROSS OR THROUGH THE FACILITY OR OTHERWISE COME INTO DIRECT CONTACT WITH THE ANIMALS CONFINED IN THE OPERATION.~~
- ~~2. SMALL AFOS MUST BE OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REGULATIONS IN CALIFORNIA CODE OF REGULATIONS TITLE 27 SECTIONS 22562 THROUGH 22565.~~

~~3.II.B. SPECIFIC WAIVER CONDITIONS FOR MEDIUM ANIMAL FEEDING OPERATIONS~~

- ~~1. MEDIUM AFOS MUST NOT DISCHARGE ANY POLLUTANTS TO WATERS OF THE UNITED STATES THROUGH ANY MAN-MADE CONVEYANCE, OR DIRECTLY TO WATERS OF THE UNITED STATES WHICH ORIGINATE OUTSIDE OF AND PASS OVER, ACROSS OR THROUGH THE FACILITY OR OTHERWISE COME INTO DIRECT CONTACT WITH THE ANIMALS CONFINED IN THE OPERATION.~~
- ~~2. MEDIUM AFOS MUST BE OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REGULATIONS IN CALIFORNIA CODE OF REGULATIONS TITLE 27 SECTIONS 22562 THROUGH 22565.~~
- ~~3. MEDIUM AFO FACILITY OWNERS OR OPERATORS MUST FILE A NOTICE OF INTENT WITH THE SAN DIEGO WATER BOARD CONTAINING, AT A MINIMUM, THE FOLLOWING INFORMATION:
 - ~~a) PROPERTY OWNER NAME AND ADDRESS~~
 - ~~b) AFO OWNER/OPERATOR NAME AND ADDRESS~~
 - ~~c) NUMBER AND TYPES OF ANIMALS~~
 - ~~d) MAP OF THE AFO FACILITY SHOWING THE LOCATIONS OF MANURE STOCKPILES, NEARBY SURFACE WATER BODIES, AND/OR WATER WELLS~~
 - ~~e) DESCRIPTION OF EXISTING AND PLANNED MMS/BMPS FOR THE PREVENTION OF EROSION AND DISCHARGES OF ANIMAL WASTES THAT COULD AFFECT THE QUALITY OF WATERS OF THE STATE.~~~~

~~SUFFICIENT INFORMATION DEMONSTRATING COMPLIANCE WITH GENERAL AND SPECIFIC WAIVER CONDITIONS MUST BE SUBMITTED IN ORDER FOR THE MEDIUM AFO FACILITY TO BE ELIGIBLE FOR A CONDITIONAL WAIVER.~~

~~3.II.C. SPECIFIC WAIVER CONDITIONS FOR GRAZING OPERATIONS~~

- ~~1. GRAZING OPERATIONS MUST MANAGE GRAZING FIELDS TO ALLOW LANDS TO REVEGETATE AND MINIMIZE TOPSOIL EROSION.~~
- ~~2. OWNERS OF PASTURE AND RANGE LANDS USED FOR GRAZING, MUST IMPLEMENT MMS/BMPS TO MINIMIZE OR ELIMINATE ANY DISCHARGE THAT COULD ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF WATERS OF THE STATE.~~

~~LIST OF REFERENCES~~

~~THE FOLLOWING LIST OF REFERENCES PROVIDES ADDITIONAL INFORMATION THAT IS AVAILABLE REGARDING APPROPRIATE MMS/BMPS FOR MINIMIZING POLLUTANTS IN RUNOFF AND OTHER DISCHARGES FROM ANIMAL OPERATIONS.~~

1. ~~EQUESTRIAN-RELATED WASTE QUALITY BEST MANAGEMENT PRACTICES, COUNTY OF SAN DIEGO DEPARTMENT OF AGRICULTURE, WEIGHTS AND MEASURES
[HTTP://WWW.SDCOUNTY.CA.GOV/AWM/DOCS/EQUESTRIAN_BMP.PDF](http://www.sdcounty.ca.gov/awm/docs/equestrian_bmp.pdf)~~
2. ~~ELECTRONIC FIELD OFFICE TECHNICAL GUIDE (EFOTG), UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE
[HTTP://WWW.NRCS.USDA.GOV/TECHNICAL/EFOTG/](http://www.nrcs.usda.gov/technical/efotg/)~~
3. ~~AGRICULTURAL MANAGEMENT MEASURES, STATE WATER RESOURCES CONTROL BOARD
[HTTP://WWW.SWRCB.CA.GOV/NPS/DOCS/GUIDANCE/AGRICMMS.PDF](http://www.swrcb.ca.gov/nps/docs/guidance/agricmms.pdf)~~
4. ~~CALIFORNIA NONPOINT SOURCE ENCYCLOPEDIA, STATE WATER RESOURCE CONTROL BOARD
[HTTP://WWW.SWRCB.CA.GOV/NPS/DOCS/ENCYCLOPEDIA/AGRICULTURE.PDF](http://www.swrcb.ca.gov/nps/docs/encyclopedia/agriculture.pdf)~~

~~CONDITIONAL WAIVER NO. 4 – DISCHARGES FROM AGRICULTURAL AND NURSERY OPERATIONS~~

~~CONDITIONAL WAIVER NO. 4 IS FOR DISCHARGES FROM AGRICULTURAL AND NURSERY OPERATIONS, WHICH CONTAIN POLLUTANTS THAT CAN PERCOLATE TO GROUNDWATER OR RUNOFF TO SURFACE WATERS. DISCHARGES FROM AGRICULTURAL AND NURSERY OPERATIONS INCLUDE DISCHARGES RESULTING FROM GROWING OPERATIONS, IRRIGATION RETURN FLOWS, AND STORM WATER RUNOFF WHICH CAN ALSO TRANSPORT POLLUTANTS FROM AGRICULTURAL AND NURSERY OPERATIONS TO SURFACE WATERS AND GROUNDWATER.~~

~~THE FOLLOWING TYPES OF DISCHARGE NOT REGULATED OR AUTHORIZED UNDER WASTE DISCHARGE REQUIREMENTS (WDRS) MAY BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 4:~~

- ~~• DISCHARGES OF PLANT CROP RESIDUES TO LAND~~
- ~~• DISCHARGES OF STORM WATER RUNOFF~~
- ~~• DISCHARGE/APPLICATION OF AMENDMENTS OR MULCHES TO SOIL~~
- ~~• DISCHARGES OF AGRICULTURAL IRRIGATION RETURN WATER~~
- ~~• DISCHARGES OF NURSERY IRRIGATION RETURN WATER~~

~~IN ORDER TO BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 4, DISCHARGES MUST COMPLY WITH CERTAIN CONDITIONS TO BE PROTECTIVE OF WATER QUALITY. WAIVER CONDITIONS APPLICABLE TO DISCHARGES FROM AGRICULTURAL AND NURSERY OPERATIONS INCLUDE THE FOLLOWING:~~

- ~~4.I.A. GENERAL FACILITY DESIGN AND MANAGEMENT WAIVER CONDITIONS~~
- ~~4.I.B. GENERAL ENROLLMENT AND EDUCATION WAIVER CONDITIONS~~
- ~~4.I.C. GENERAL WAIVER CONDITIONS FOR APPLICATION OF COMPOST AS A FERTILIZER, AMENDMENT, OR MULCH TO SOIL~~
- ~~4.I.D. GENERAL WAIVER CONDITIONS FOR APPLICATION OF PRODUCTS USED IN AGRICULTURAL AND NURSERY OPERATIONS~~
- ~~4.I.E. GENERAL INSPECTION AND REPORTING REQUIREMENTS~~
- ~~4.II.A. SPECIFIC WAIVER CONDITIONS FOR AGRICULTURAL OPERATIONS~~
- ~~4.II.B. SPECIFIC WAIVER CONDITIONS FOR NURSERY OPERATIONS~~

~~DISCHARGES FROM AGRICULTURAL AND NURSERY OPERATIONS THAT COMPLY WITH THE GENERAL AND SPECIFIC WAIVER CONDITIONS IN CONDITIONAL WAIVER NO. 4 ARE NOT EXPECTED TO POSE A THREAT TO THE QUALITY OF WATERS OF THE STATE.~~

- ~~4.I.A. GENERAL FACILITY DESIGN AND MANAGEMENT WAIVER CONDITIONS~~
 - ~~1. AGRICULTURAL AND NURSERY OPERATIONS MUST COMPLY WITH ANY LOCAL, STATE, AND FEDERAL ORDINANCES AND REGULATIONS AND OBTAIN ANY REQUIRED APPROVALS, PERMITS, CERTIFICATIONS, AND/OR LICENSES.~~
 - ~~2. AGRICULTURAL AND NURSERY OPERATIONS MUST IMPLEMENT MANAGEMENT MEASURES (MMS) AND/OR BEST MANAGEMENT PRACTICES (BMPS) TO MINIMIZE OR ELIMINATE THE DISCHARGE OF POLLUTANTS THAT MAY ADVERSELY IMPACT THE QUALITY OR BENEFICIAL USES OF WATERS OF THE STATE. RECOMMENDED MMS/BMPS ARE AVAILABLE IN THE STATE WATER BOARD'S NONPOINT SOURCE (NPS) PROGRAM PLAN AND/OR AVAILABLE FROM UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION (UCCE), NATURAL RESOURCES CONSERVATION SERVICE (NRCS), AND/OR REGIONAL RESOURCE CONSERVATION DISTRICTS (RCDS).~~
- ~~4.I.B. GENERAL ENROLLMENT AND EDUCATION WAIVER CONDITIONS~~
 - ~~1. AGRICULTURAL AND NURSERY OPERATORS MUST PERFORM A SELF ASSESSMENT TO IDENTIFY THE POLLUTANTS PRESENT ON THE SITE AND ASSESS THE POTENTIAL FOR RUNOFF AND/OR INFILTRATION TO ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF THE WATERS OF THE STATE. ANNUAL SELF ASSESSMENTS MUST BE AVAILABLE ON SITE FOR INSPECTION. IF AN AGRICULTURAL OR NURSERY OPERATOR DOES NOT HAVE PROOF AVAILABLE DURING AN INSPECTION, THE OPERATOR MUST SUBMIT PROOF TO THE~~

- ~~INSPECTING AGENCY AND THE SAN DIEGO WATER BOARD WITHIN 45 DAYS FROM THE DATE OF INSPECTION. SELF ASSESSMENT QUESTIONNAIRES ARE AVAILABLE FROM THE UCCE.~~
- ~~2. AGRICULTURAL AND NURSERY OPERATORS MUST COMPLETE AT LEAST 2 HOURS OF WATER QUALITY MANAGEMENT RELATED TRAINING ANNUALLY. TRAINING MAY INCLUDE FORMAL CLASSROOM TRAINING OR MEETINGS WITH A TRAINING COMPONENT. PROOF OF TRAINING MUST BE AVAILABLE ON SITE FOR INSPECTION. AGRICULTURAL AND NURSERY OPERATORS WHO DO NOT HAVE PROOF AVAILABLE DURING AN INSPECTION MUST SUBMIT PROOF TO THE INSPECTING AGENCY AND THE SAN DIEGO WATER BOARD WITHIN 45 DAYS FROM THE DATE OF INSPECTION.~~
 - ~~3. AGRICULTURAL AND NURSERY OPERATORS MUST BE IN REGULAR CONTACT WITH THE LOCAL FARM BUREAU, UCCE, NRCS, AND/OR REGIONAL RCDS SO THEY CAN BE INFORMED OF THE LATEST MMS/BMPS AND DEVELOPMENTS WITH WATER QUALITY ISSUES. PROOF OF CONTACT (E.G., NEWSLETTER ADDRESSED TO FACILITY, NRCS CONSERVATION PLAN, UCCE SELF ASSESSMENT) MUST BE AVAILABLE ON SITE FOR INSPECTION. AGRICULTURAL AND NURSERY OPERATORS WHO DO NOT HAVE PROOF AVAILABLE DURING AN INSPECTION MUST SUBMIT PROOF TO THE INSPECTING AGENCY AND THE SAN DIEGO WATER BOARD WITHIN 45 DAYS FROM THE DATE OF INSPECTION.~~
 - ~~4. AGRICULTURAL AND NURSERY OPERATIONS MUST IMPLEMENT MMS/BMPS TO MINIMIZE OR ELIMINATE THE DISCHARGE OF POLLUTANTS THAT MAY ADVERSELY IMPACT THE QUALITY OR BENEFICIAL USES OF WATERS OF THE STATE. RECOMMENDED MMS/BMPS ARE AVAILABLE IN THE STATE WATER BOARD'S NPS PROGRAM PLAN AND/OR AVAILABLE FROM UCCE, NRCS, AND/OR REGIONAL RCDS.~~
 - ~~5. AGRICULTURAL AND NURSERY OPERATORS SHALL MAINTAIN RECORDS PERTAINING TO THE WATER QUALITY MANAGEMENT EFFORTS FOR THE OPERATION. THE RECORDS SHALL INCLUDE THE FOLLOWING INFORMATION:~~
 - ~~a) SITE MAP SHOWING LOCATIONS OF MMS/BMPS AND NEARBY SURFACE WATER BODIES AND/OR WATER WELLS~~
 - ~~b) LIST OF HAZARDOUS MATERIALS KEPT ON THE PROPERTY~~
 - ~~c) LOCATION AND AMOUNT OF WASTE MATERIALS (E.G., GREEN WASTES, TRASH) GENERATED AND COMPOSTED AND/OR REUSED ON SITE, OR DISPOSED OF OFF SITE~~
 - ~~d) PESTICIDE USE REPORTS AND RECORDS~~
 - ~~e) FERTILIZER, SOIL AMENDMENT, AND MULCH USE RECORDS~~
 - ~~f) IRRIGATION MANAGEMENT RECORDS (I.E., WATER USE, IRRIGATION SYSTEM, IRRIGATION SCHEDULE, ETC.)~~
 - ~~g) EQUIPMENT MAINTENANCE RECORDS~~
 - ~~h) LIST OF MMS/BMPS IMPLEMENTED TO MINIMIZE AND/OR ELIMINATE RUNOFF TO SURFACE WATERS AND/OR INFILTRATION TO GROUNDWATER~~
 - ~~i) OWNER, OPERATOR, AND EMPLOYEE EDUCATION AND TRAINING RECORDS~~
 - ~~j) INSPECTION REPORTS~~
 - ~~k) SELF ASSESSMENTS~~
 - ~~l) CONTACTS WITH FARM BUREAU, UCCE, NRCS, REGIONAL RCDS, AND/OR OTHER ORGANIZATIONS~~
 - ~~m) COPIES OF ANY PERMITS, LICENSES, AND CERTIFICATIONS REQUIRED FOR THE OPERATION~~
 - ~~n) WATER QUALITY MONITORING DATA (IF ANY)~~

~~RECOMMENDED WATER QUALITY RECORD KEEPING DOCUMENTATION IS AVAILABLE FROM THE UCCE. WATER QUALITY MANAGEMENT RECORDS MUST BE AVAILABLE ON SITE FOR INSPECTION.~~
 - ~~6. NO LATER THAN DECEMBER 31, 2010, AGRICULTURAL AND NURSERY OPERATIONS MUST FORM OR JOIN A MONITORING GROUP. THE FUNCTION OF THE MONITORING GROUP IS TO PERFORM WATER QUALITY MONITORING AND REPORT THE RESULTS TO THE SAN DIEGO WATER BOARD. MONITORING GROUPS WILL BE ALLOWED TO DIVIDE THE COSTS ASSOCIATED WITH THE WATER QUALITY MONITORING AND REPORTING REQUIREMENTS IN 4.I.E AMONG ITS MEMBERS. INDIVIDUAL OPERATIONS NOT IN A MONITORING GROUP WILL BE SOLELY RESPONSIBLE FOR THE COSTS ASSOCIATED WITH THE WATER QUALITY MONITORING AND REPORTING REQUIREMENTS IN 4.I.E.~~
 - ~~7. NO LATER THAN JANUARY 1, 2011, OWNERS/OPERATORS OF AGRICULTURAL AND NURSERY OPERATIONS MUST FILE A NOTICE OF INTENT, AS EITHER AN INDIVIDUAL OPERATION OR AS PART OF A MONITORING GROUP, WITH THE SAN DIEGO WATER BOARD.~~
 - ~~8. A NOTICE OF INTENT SUBMITTED BY A MONITORING GROUP ON BEHALF OF ITS MEMBERS MUST CONTAIN THE FOLLOWING INFORMATION:~~

- ~~a) IDENTIFY THE REPRESENTATIVE(S) AUTHORIZED TO SIGN REPORTS SUBMITTED ON BEHALF OF THE GROUP.~~
- ~~b) AN ELECTRONIC LIST OF LANDOWNERS AND/OR OPERATORS PARTICIPATING IN THE MONITORING GROUP INCLUDING: (A) ASSESSOR PARCEL NUMBER(S), (B) PARCEL SIZE, (C) PARCEL OWNER OR OPERATOR NAME, (D) TYPES OF CROPS GROWN ON EACH PARCEL, (E) NUMBER OF IRRIGATED ACRES, AND (F) PARCEL OWNER OR OPERATOR MAILING ADDRESS.~~
- ~~c) A DETAILED MAP OF THE AREA INCLUDED WITHIN THE MONITORING GROUP, PREFERABLY IN GIS FORMAT, IDENTIFYING INDIVIDUAL PARCELS AND/OR DISTRICTS THAT ARE PARTICIPATING IN THE MONITORING GROUP.~~
- ~~d) A DETAILED DESCRIPTION OF IRRIGATION, STORM WATER RUNOFF, NUTRIENT, PESTICIDE, EROSION CONTROL, COMPOSTING, AND OTHER SITE-SPECIFIC MMS/BMPS THAT HAVE BEEN IMPLEMENTED BY EACH PARTICIPANT IN THE MONITORING GROUP, WHICH MUST BE PROVIDED AS A WRITTEN DESCRIPTION, ON A MAP, AND/OR USING PICTURES.~~

~~MONITORING GROUP MEMBERS ARE NOT ELIGIBLE FOR THIS WAIVER UNTIL A COMPLETE NOTICE OF INTENT IS FILED. THE MONITORING GROUP MUST INFORM THE SAN DIEGO WATER BOARD WHEN ANY MEMBER CEASES TO PARTICIPATE IN THE MONITORING GROUP WITHIN 30 DAYS OF THE CESSATION OF PARTICIPATION. ANY MEMBER WHO CEASES TO PARTICIPATE IN A MONITORING GROUP MUST FILE A NOTICE OF INTENT AS AN INDIVIDUAL AGRICULTURAL OR NURSERY OPERATION, IN ACCORDANCE WITH WAIVER CONDITION 4.I.B.9, WITHIN 30 DAYS OF CEASING TO PARTICIPATE IN THE MONITORING GROUP.~~

~~9. A NOTICE OF INTENT FILED BY AN INDIVIDUAL AGRICULTURAL OR NURSERY OPERATION MUST CONTAIN THE FOLLOWING INFORMATION:~~

- ~~a) INFORMATION ABOUT THE AGRICULTURAL OR NURSERY OPERATION INCLUDING: (A) ASSESSOR PARCEL NUMBER(S), (B) PARCEL SIZE, (C) PARCEL OWNER AND OPERATOR NAME(S), (D) TYPES OF CROPS GROWN ON EACH PARCEL, (E) NUMBER OF IRRIGATED ACRES, AND (F) PARCEL OWNER AND OPERATOR MAILING ADDRESS(ES).~~
- ~~b) A DETAILED MAP OF THE OPERATION, PREFERABLY IN GIS FORMAT, WITH LOCATIONS OF OPERATION BOUNDARIES, NEARBY SURFACE WATERS AND WATER WELLS.~~
- ~~c) A DETAILED DESCRIPTION OF IRRIGATION, STORM WATER RUNOFF, NUTRIENT, PESTICIDE, EROSION CONTROL, COMPOSTING, AND OTHER SITE-SPECIFIC MMS/BMPS THAT HAVE BEEN IMPLEMENTED BY THE OPERATION, WHICH MUST BE PROVIDED AS A WRITTEN DESCRIPTION, ON A MAP, AND/OR USING PICTURES.~~

~~AN INDIVIDUAL AGRICULTURAL OR NURSERY OPERATION IS NOT ELIGIBLE FOR THIS WAIVER UNTIL A COMPLETE NOTICE OF INTENT IS FILED.~~

~~4.I.C. GENERAL WAIVER CONDITIONS FOR APPLICATION OF COMPOST AS A FERTILIZER, AMENDMENT, OR MULCH TO SOIL~~

- ~~1. PREVENT THE DIRECT OR INDIRECT DISCHARGE OF AMENDMENTS OR MULCHES TO ANY SURFACE WATERS OF THE STATE (INCLUDING EPHEMERAL STREAMS AND VERNAL POOLS).~~
- ~~2. PLANT CROP RESIDUES MAY BE UTILIZED AS SOIL AMENDMENT OR MULCH.~~
- ~~3. AMENDMENTS OR MULCHES APPLIED TO SOIL CANNOT INCLUDE ANY OF THE FOLLOWING ADDITIVES, UNLESS SUFFICIENT INFORMATION IS PROVIDED TO DEMONSTRATE THAT THE WASTE DOES NOT POSE A POTENTIAL THREAT TO WATER QUALITY: (A) MUNICIPAL SOLID WASTES; (B) SLUDGES, INCLUDING SEWAGE SLUDGE, WATER TREATMENT SLUDGE, AND INDUSTRIAL SLUDGE; (C) SEPTAGE; (D) LIQUID WASTES; (E) OIL AND GREASE; AND (F) HAZARDOUS, DESIGNATED, AND ANY OTHER WASTES DETERMINED BY THE SAN DIEGO WATER BOARD TO POSE A POTENTIAL THREAT TO WATER QUALITY.~~
- ~~4. THE AMOUNT OF SOIL AMENDMENT OR MULCH MATERIALS THAT CAN BE APPLIED TO SOIL MUST BE REASONABLE FOR THE CROP OR PLANT, SOIL, CLIMATE, SPECIAL LOCAL SITUATIONS, MANAGEMENT SYSTEM, AND TYPE OF SOIL AMENDMENT OR MULCH. APPLICATION RATES MUST TAKE INTO ACCOUNT STORM EVENTS DURING THE RAINY SEASON (OCTOBER-MAY). APPLICATION RATES MUST NOT ALLOW SOIL AMENDMENT OR MULCH MATERIALS TO BE TRANSPORTED OFF THE PROPERTY IN STORM WATER RUNOFF DURING THE RAINY SEASON. RESOURCES ARE AVAILABLE FROM THE NRCS, UCCE, AND OTHER ORGANIZATIONS. A COPY OF THE CALCULATIONS AND/OR ESTIMATE OF THE APPLICATION RATE MUST BE AVAILABLE ON-SITE FOR INSPECTION.~~
- ~~5. APPLY AMENDMENT OR MULCH MATERIALS TO SOIL AT SITE-SPECIFIC RATES APPROPRIATE TO THE SEASON (I.E., DRY VS. RAINY).~~

~~6. IMPLEMENT MMS/BMPS IN AREAS WITH SOIL AMENDMENT OR MULCH MATERIALS TO MINIMIZE OR ELIMINATE RUNOFF AND LEACHATE TO SURFACE WATERS AND GROUNDWATER.~~

~~4.I.D. GENERAL WAIVER CONDITIONS FOR APPLICATION OF PRODUCTS USED IN AGRICULTURAL AND NURSERY OPERATIONS~~

- ~~1. PREVENT THE DIRECT OR INDIRECT DISCHARGE OF PRODUCTS USED IN AGRICULTURAL OR NURSERY OPERATIONS TO ANY SURFACE WATERS OF THE STATE (INCLUDING EPHEMERAL STREAMS AND VERNAL POOLS).~~
- ~~2. THE APPLICATION OF ANY PRODUCTS USED IN AGRICULTURAL OR NURSERY OPERATIONS THAT CONTAIN POLLUTANTS THAT MAY BE TRANSPORTED IN SURFACE RUNOFF TO SURFACE WATERS OR MAY INFILTRATE TO GROUNDWATER MUST BE APPLIED IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS AND GUIDELINES, AND MUST NOT HAVE AN ADVERSE EFFECT ON THE QUALITY OF ANY WATERS OF THE STATE.~~
- ~~3. EXCESSIVE AMOUNTS OF ANY PRODUCTS USED IN AGRICULTURAL OR NURSERY OPERATIONS SPILLED TO LAND MUST BE CONTAINED AND PROPERLY DISPOSED.~~
- ~~4. ANY PRODUCTS USED IN AGRICULTURAL OR NURSERY OPERATIONS APPLIED TO LAND MUST NOT ADVERSELY IMPACT THE QUALITY OR BENEFICIAL USES OF GROUNDWATER IN ANY WATER WELLS.~~

~~4.I.E. GENERAL INSPECTION AND REPORTING WAIVER CONDITIONS~~

- ~~1. THE SAN DIEGO WATER BOARD AND/OR OTHER LOCAL REGULATORY AGENCIES MUST BE ALLOWED REASONABLE ACCESS TO THE SITE IN ORDER TO PERFORM INSPECTIONS AND CONDUCT MONITORING.~~
- ~~2. OWNERS/OPERATORS MUST SUBMIT A NOTICE OF INTENT OR TECHNICAL AND/OR MONITORING PROGRAM REPORTS WHEN DIRECTED BY THE SAN DIEGO WATER BOARD.~~
- ~~3. BY MARCH 31, 2011, EACH MONITORING GROUP AND EACH INDIVIDUAL OPERATION NOT PARTICIPATING IN A MONITORING GROUP MUST CONTACT THE SAN DIEGO WATER BOARD TO BEGIN DEVELOPING A MONITORING AND REPORTING PROGRAM PLAN (MRPP) AND A QUALITY ASSURANCE PROJECT PLAN (QAPP).~~
- ~~4. BY JANUARY 1, 2012, EACH MONITORING GROUP AND EACH INDIVIDUAL OPERATION NOT IN A MONITORING GROUP MUST SUBMIT ONE MRPP/QAPP TO THE SAN DIEGO WATER BOARD. THE MRPP/QAPP MUST INCLUDE THE MONITORING LOCATIONS, FREQUENCY OF MONITORING, CONSTITUENTS OF CONCERN TO BE MONITORED, DOCUMENTATION OF MONITORING PROTOCOLS, AND SUFFICIENT INFORMATION ABOUT THE AGRICULTURAL AND/OR NURSERY OPERATIONS TO DEMONSTRATE THAT THE PROPOSED MRPP/QAPP WILL ADEQUATELY DOCUMENT WATER QUALITY AND POLLUTANT LOADINGS, AND DEMONSTRATE COMPLIANCE WITH WAIVER CONDITIONS.~~
- ~~5. BY DECEMBER 31, 2012, EACH MONITORING GROUP AND EACH INDIVIDUAL OPERATION NOT PARTICIPATING IN A MONITORING GROUP MUST SUBMIT ONE MONITORING PROGRAM REPORT (MRP) TO THE SAN DIEGO WATER BOARD CONSISTENT WITH THE MRPP/QAPP.~~

~~4.II.A. SPECIFIC WAIVER CONDITIONS FOR AGRICULTURAL OPERATIONS~~

- ~~1. MINIMIZE OR ELIMINATE THE DISCHARGE OF ANY POLLUTANTS THAT COULD ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF ANY WATERS OF THE STATE.~~
- ~~2. AGRICULTURAL OPERATORS CANNOT ALTER SURFACE WATERS OF THE STATE ON OR OFF THE PROPERTY, UNLESS THE PROPOSED ALTERATION HAS RECEIVED A CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION, INDIVIDUAL WDRS, OR INDIVIDUAL WAIVER FROM THE SAN DIEGO WATER BOARD.~~

~~4.II.B. SPECIFIC WAIVER CONDITIONS FOR NURSERY OPERATIONS~~

- ~~1. PREVENT THE DIRECT OR INDIRECT DISCHARGE OF NURSERY IRRIGATION RETURN WATER TO ANY SURFACE WATERS OF THE UNITED STATES.~~
- ~~2. NURSERY OPERATIONS MUST MINIMIZE OR ELIMINATE THE DISCHARGE OF ANY POLLUTANTS THAT COULD ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF ANY WATERS OF THE STATE.~~
- ~~3. NURSERY OPERATORS CANNOT ALTER SURFACE WATERS OF THE STATE ON OR OFF THE PROPERTY, UNLESS THE PROPOSED ALTERATION HAS RECEIVED A CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION, INDIVIDUAL WDRS, OR INDIVIDUAL WAIVER FROM THE SAN DIEGO WATER BOARD.~~

LIST OF REFERENCES

~~THE FOLLOWING LIST OF REFERENCES PROVIDES ADDITIONAL INFORMATION THAT IS AVAILABLE REGARDING APPROPRIATE MMS/BMPS FOR MINIMIZING POLLUTANTS IN RUNOFF AND OTHER DISCHARGES FROM AGRICULTURAL AND NURSERY OPERATIONS.~~

- ~~1. INDUSTRIAL STORM WATER PROGRAM, STATE WATER RESOURCES CONTROL BOARD
[HTTP://WWW.SWRCB.CA.GOV/STORMWTR/INDUSTRIAL.HTML](http://www.swrcb.ca.gov/stormwtr/industrial.html)~~**
- ~~2. CONSTRUCTION STORM WATER PERMIT, STATE WATER RESOURCES CONTROL BOARD
[HTTP://WWW.SWRCB.CA.GOV/STORMWTR/GEN_CONST.HTML](http://www.swrcb.ca.gov/stormwtr/gen_const.html)~~**
- ~~3. AGRICULTURAL MANAGEMENT MEASURES, STATE WATER RESOURCES CONTROL BOARD
[HTTP://WWW.SWRCB.CA.GOV/NPS/DOCS/GUIDANCE/AGRICMMS.PDF](http://www.swrcb.ca.gov/nps/docs/guidance/agricmms.pdf)~~**
- ~~4. CALIFORNIA NONPOINT SOURCE ENCYCLOPEDIA, STATE WATER RESOURCE CONTROL BOARD
[HTTP://WWW.SWRCB.CA.GOV/NPS/DOCS/ENCYCLOPEDIA/AGRICULTURE.PDF](http://www.swrcb.ca.gov/nps/docs/encyclopedia/agriculture.pdf)~~**

5. ~~DEVELOPING A MANAGEMENT PLAN FOR IRRIGATION RUNOFF, DEPT. OF HORTICULTURAL SCIENCES, TEXAS A&M UNIVERSITY
[HTTP://AGGIE-HORTICULTURE.TAMU.EDU/GREENHOUSE/NURSERY/ENVIRON/WMPLAN1.HTML](http://aggie-horticulture.tamu.edu/greenhouse/nursery/environ/wmplan1.html)~~
6. ~~MANAGEMENT OPTIONS FOR NONPOINT SOURCE POLLUTION FOR GREENHOUSE AND CONTAINER CROPS, UC COOPERATIVE EXTENSION, SAN DIEGO
[HTTP://COMMSERV.UCDAVIS.EDU/CESANDIEGO/STORMWATER/INDEX.HTM](http://commserv.ucdavis.edu/cesandiego/stormwater/index.htm)~~
7. ~~BMPS NURSERIES AND GREENHOUSES, COUNTY OF ORANGE
[HTTP://WWW.OCWATERSHED.COM/STORMWATER/DOCUMENTS_BMP_EXISTING_DEVELOPMENT.ASP#IND](http://www.ocwatershed.com/stormwater/documents_bmp_existing_development.asp#ind)~~
8. ~~ELECTRONIC FIELD OFFICE TECHNICAL GUIDE (EFOTG), NATURAL RESOURCES CONSERVATION SERVICE [HTTP://WWW.NRCS.USDA.GOV/TECHNICAL/EFOTG/](http://www.nrcs.usda.gov/technical/efotg/)~~
9. ~~GROWER RESOURCES (INCLUDING SELF ASSESSMENT QUESTIONNAIRES AND WATER QUALITY RECORD KEEPING NOTEBOOK), SAN DIEGO COUNTY UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION
[HTTP://CESANDIEGO.UCDAVIS.EDU/CLEAN%5FWATER/GROWER_RESOURCES.HTM](http://cesandiego.ucdavis.edu/clean%5fwater/grower_resources.htm)~~

~~CONDITIONAL WAIVER NO. 5 – DISCHARGES FROM SILVICULTURAL OPERATIONS~~

~~CONDITIONAL WAIVER NO. 5 IS FOR DISCHARGES THAT ORIGINATE FROM FOREST LANDS, WHICH CONTAINS POLLUTANTS THAT CAN PERCOLATE TO GROUNDWATER OR RUNOFF TO SURFACE WATERS. DISCHARGES FROM FOREST LANDS INCLUDE DISCHARGES RESULTING FROM TIMBER OPERATIONS, AND STORM WATER RUNOFF WHICH CAN ALSO TRANSPORT POLLUTANTS FROM MANAGED FOREST LANDS AND TIMBER OPERATIONS TO SURFACE WATERS AND GROUNDWATER.~~

~~THE FOLLOWING TYPES OF DISCHARGE NOT REGULATED OR AUTHORIZED UNDER WASTE DISCHARGE REQUIREMENTS (WDRS) MAY BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 5:~~

- ~~• DISCHARGES OF STORM WATER RUNOFF~~
- ~~• DISCHARGES FROM TIMBER HARVESTING PROJECTS~~
- ~~• DISCHARGES FROM WILDFIRE SUPPRESSION AND FUELS MANAGEMENT ACTIVITIES~~

~~IN ORDER TO BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 5, DISCHARGES MUST COMPLY WITH CERTAIN CONDITIONS TO BE PROTECTIVE OF WATER QUALITY. WAIVER CONDITIONS APPLICABLE TO DISCHARGES FROM SILVICULTURAL OPERATIONS INCLUDE THE FOLLOWING:~~

~~5.I.A. GENERAL WAIVER CONDITIONS FOR SILVICULTURAL OPERATIONS~~

~~5.II.A. SPECIFIC WAIVER CONDITIONS FOR TIMBER OPERATIONS ON FEDERAL LANDS~~

~~5.II.B. SPECIFIC WAIVER CONDITIONS FOR TIMBER OPERATIONS ON NON-FEDERAL LANDS~~

~~DISCHARGES FROM SILVICULTURAL OPERATIONS THAT COMPLY WITH THE GENERAL AND SPECIFIC WAIVER CONDITIONS IN CONDITIONAL WAIVER NO. 5 ARE NOT EXPECTED TO POSE A THREAT TO THE QUALITY OF WATERS OF THE STATE.~~

~~5.I.A. GENERAL WAIVER CONDITIONS FOR SILVICULTURAL OPERATIONS~~

- ~~1. SILVICULTURAL OPERATIONS (INCLUDING TIMBER HARVESTING, TIMBER MANAGEMENT, VEGETATIVE MANIPULATION, FUELS MANAGEMENT, ROAD CONSTRUCTION, AND WATERSHED MANAGEMENT) MUST MINIMIZE OR ELIMINATE THE DISCHARGE OF ANY POLLUTANTS THAT COULD ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF WATERS OF THE STATE.~~
- ~~2. SILVICULTURAL OPERATIONS (INCLUDING TIMBER HARVESTING, TIMBER MANAGEMENT, VEGETATIVE MANIPULATION, FUELS MANAGEMENT, ROAD CONSTRUCTION, AND WATERSHED MANAGEMENT) MUST COMPLY WITH ANY FEDERAL, STATE, OR LOCAL, STATE, AND FEDERAL PERMITTING, LICENSING, OR CERTIFICATION REQUIREMENTS AND APPLICABLE REGULATIONS AND ORDINANCES.~~
- ~~3. THE SAN DIEGO WATER BOARD AND/OR OTHER LOCAL REGULATORY AGENCIES MUST BE ALLOWED REASONABLE ACCESS TO THE SITE IN ORDER TO PERFORM INSPECTIONS AND CONDUCT MONITORING.~~

~~5.II.A. SPECIFIC WAIVER CONDITIONS FOR TIMBER OPERATIONS ON FEDERAL LANDS~~

- ~~1. THE STATE WATER BOARD AND US ENVIRONMENTAL PROTECTION AGENCY (USEPA) MUST CONTINUE TO CERTIFY THE WATER QUALITY MANAGEMENT PLAN FOR NATIONAL FOREST SYSTEM LANDS IN CALIFORNIA.~~
- ~~2. THE US FOREST SERVICE (USFS) MUST MAINTAIN: (A) A WATER QUALITY PROGRAM CONSISTENT WITH THE BASIN PLAN, AND (B) A PROGRAM TO MONITOR THE IMPLEMENTATION AND EFFECTIVENESS OF MANAGEMENT MEASURES (MMS) AND/OR BEST MANAGEMENT PRACTICES (BMPs).~~
- ~~3. THE USFS MUST PROVIDE THE SAN DIEGO WATER BOARD COPIES OF THE ENVIRONMENTAL AND DECISION DOCUMENTS CONTAINING INFORMATION DOCUMENTING THAT A MULTI-DISCIPLINARY REVIEW OF THE TIMBER HARVEST PROPOSAL HAS BEEN CONDUCTED, AND THE PROPOSED MMS/BMPs AND ADDITIONAL CONTROL MEASURES THAT WILL BE IMPLEMENTED TO PROTECT WATER QUALITY.~~
- ~~4. THE USFS MUST SUBMIT A NOTICE OF INTENT OR TECHNICAL AND/OR MONITORING PROGRAM REPORTS WHEN DIRECTED BY THE SAN DIEGO WATER BOARD.~~

~~5.II.B. SPECIFIC WAIVER CONDITIONS FOR TIMBER OPERATIONS ON NON-FEDERAL LANDS~~

- ~~1. THE STATE WATER BOARD MUST CONTINUE TO CERTIFY THE WATER QUALITY MANAGEMENT PLAN FOR TIMBER OPERATIONS ON NONFEDERAL LANDS.~~
- ~~2. TIMBER OPERATIONS WITHIN 150 FEET OF EXISTING STRUCTURES (I.E., "FIRESAFE" TREATMENTS) THAT ARE CONDUCTED PURSUANT TO A NOTICE OF EXEMPTION APPROVED BY THE CALIFORNIA DEPARTMENT OF FORESTRY (CDF) ARE NOT REQUIRED TO PROVIDE NOTICE TO THE SAN DIEGO WATER BOARD, BUT MUST KEEP A COPY OF THE APPROVED NOTICE OF EXEMPTION FOR AT LEAST ONE YEAR (FROM THE APPROVAL DATE) ON-SITE FOR INSPECTION.~~
- ~~3. FOR TIMBER OPERATIONS APPROVED BY THE CDF PURSUANT TO A NOTICE OF EXEMPTION OR NOTICE OF EMERGENCY, A COPY OF THE NOTICE MUST BE PROVIDED TO THE SAN DIEGO WATER BOARD.~~
- ~~4. FOR TIMBER OPERATIONS WITH A TIMBER HARVEST PLAN (THP) OR NON-INDUSTRIAL TIMBER MANAGEMENT PLAN (NTMP) APPROVED BY THE CDF, A COPY OF THE PLAN MUST BE PROVIDED TO THE SAN DIEGO WATER BOARD.~~
- ~~5. OWNERS/OPERATORS OF NON-FEDERAL FOREST LANDS MUST SUBMIT A NOTICE OF INTENT OR TECHNICAL AND/OR MONITORING PROGRAM REPORTS WHEN DIRECTED BY THE SAN DIEGO WATER BOARD.~~

~~CONDITIONAL WAIVER NO. 6 – DISCHARGES OF DREDGED OR FILL MATERIALS NEARBY OR WITHIN SURFACE WATERS~~

~~CONDITIONAL WAIVER NO. 6 IS FOR DISCHARGES OF DREDGED OR FILL MATERIALS NEARBY OR WITHIN SURFACE WATERS OF THE STATE. DREDGED OR FILL MATERIALS ARE SOURCES OF POLLUTANTS THAT CAN ADVERSELY AFFECT THE QUALITY OF WATERS OF THE STATE.~~

~~THE FOLLOWING TYPES OF DISCHARGE NOT REGULATED OR AUTHORIZED UNDER WASTE DISCHARGE REQUIREMENTS (WDRS) MAY BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 6:~~

- ~~• DISCHARGES FROM SAND AND GRAVEL MINING OPERATIONS~~
- ~~• DISCHARGES FROM DREDGING PROJECTS~~
- ~~• DISCHARGES FROM STREAM CHANNEL ALTERATION PROJECTS~~
- ~~• OTHER PROJECTS PROPOSING TO DISCHARGE DREDGED OR FILL MATERIALS NEARBY OR WITHIN SURFACE WATERS OF THE STATE.~~

~~IN ORDER TO BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 6, DISCHARGES MUST COMPLY WITH CERTAIN CONDITIONS TO BE PROTECTIVE OF WATER QUALITY. WAIVER CONDITIONS APPLICABLE TO DISCHARGES OF DREDGED OR FILL MATERIALS NEARBY OR WITHIN SURFACE WATERS INCLUDE THE FOLLOWING:~~

~~6.I.A. GENERAL WAIVER CONDITIONS FOR PROJECTS THAT DISCHARGE DREDGED OR FILL MATERIAL NEARBY OR WITHIN SURFACE WATERS REQUIRED TO OBTAIN A SURFACE MINING PERMIT AND/OR FEDERAL PERMIT (RIVER AND HARBORS ACT SECTION 10 OR CLEAN WATER ACT SECTION 404 PERMIT), AND CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION~~

~~6.II.A. SPECIFIC WAIVER CONDITIONS FOR SAND AND GRAVEL MINING OPERATIONS~~

~~DISCHARGES OF DREDGED OR FILL MATERIALS NEARBY OR WITHIN SURFACE WATERS THAT COMPLY WITH THE GENERAL AND SPECIFIC WAIVER CONDITIONS IN CONDITIONAL WAIVER NO. 6 ARE NOT EXPECTED TO POSE A THREAT TO THE QUALITY OF WATERS OF THE STATE.~~

~~6.I.A. GENERAL WAIVER CONDITIONS FOR PROJECTS THAT DISCHARGE DREDGED OR FILL MATERIAL NEARBY OR WITHIN SURFACE WATERS REQUIRED TO OBTAIN A SURFACE MINING PERMIT AND/OR FEDERAL PERMIT (RIVER AND HARBORS ACT SECTION 10 OR CLEAN WATER ACT SECTION 404 PERMIT) AND CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION⁴~~

- ~~1. OPERATORS MUST COMPLY WITH MEASURES INCLUDED IN THE SURFACE MINING PERMIT AND/OR FEDERAL PERMIT AND CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION TO PROTECT SURFACE WATER AND GROUNDWATER QUALITY.~~
- ~~2. THE SAN DIEGO WATER BOARD AND/OR OTHER LOCAL REGULATORY AGENCIES MUST BE ALLOWED REASONABLE ACCESS TO THE SITE IN ORDER TO PERFORM INSPECTIONS AND CONDUCT MONITORING.~~
- ~~3. AT LEAST ONE COPY OF ANY PERMITS, LICENSES, AND CERTIFICATIONS MUST BE AVAILABLE FOR ON-SITE INSPECTION.~~
- ~~4. OPERATORS MUST MINIMIZE OR ELIMINATE THE DISCHARGE OF ANY POLLUTANTS THAT COULD ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF WATERS OF THE STATE.~~

~~6.II.A. SPECIFIC WAIVER CONDITIONS FOR SAND AND GRAVEL MINING OPERATIONS~~

- ~~1. SAND AND GRAVEL MINING OPERATIONS CANNOT BE CONDUCTED IN FLOWING STREAMS OR OTHER WATER BODIES.~~

⁴ For projects that discharge dredged or fill material nearby or within surface waters NOT required to obtain a Surface Mining Permit or Federal Permit (River and Harbors Act section 10 or Clean Water Act section 404 Permit) and Clean Water Act section 401 Water Quality Certification, the discharger must file a Report of Waste Discharge (RoWD) with the San Diego Water Board.

~~CONDITIONAL WAIVER NO. 7 – DISCHARGES OF RECYCLED WATER TO LAND~~

~~CONDITIONAL WAIVER NO. 7 IS FOR DISCHARGES OF RECYCLED WATER TO LAND. DISCHARGES OF RECYCLED WATER MAY CONTAIN POLLUTANTS THAT CAN ADVERSELY AFFECT THE QUALITY OF WATERS OF THE STATE. THE APPLICATION OF RECYCLED WATER TO LAND MAY RESULT IN POLLUTANTS BEING CONCENTRATED IN SOILS, WHICH MAY ADVERSELY IMPACT THE QUALITY OF THE WATERS OF THE STATE WHEN THOSE CONCENTRATED POLLUTANTS ARE LEACHED OUT DURING RAINFALL EVENTS AND/OR OVERUSE OF IRRIGATION WATER. THIS WAIVER IS NOT AVAILABLE OR APPLICABLE TO RECYCLED WATER PROJECTS AND USERS SUBJECT TO RULES AND REGULATIONS ESTABLISHED BY MASTER RECLAMATION PERMITS (MRPS), ISSUED PURSUANT TO WATER CODE SECTION 13523.1, OR OTHERWISE REGULATED UNDER WASTE DISCHARGE REQUIREMENTS (WDRS) OR WATER RECLAMATION REQUIREMENTS (WRRS), ISSUED PURSUANT TO WATER CODE SECTIONS 13260 AND 13523, RESPECTIVELY.~~

~~THE FOLLOWING TYPES OF DISCHARGE NOT REGULATED OR AUTHORIZED UNDER WDRS, WRRS, AND/OR MRP MAY BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 7:~~

- ~~• DISCHARGES TO LAND FROM SHORT-TERM RECYCLED WATER PROJECTS (WITHOUT PERMANENT RECYCLED WATER DELIVERY AND/OR DISTRIBUTION SYSTEMS, NOT TO EXCEED 365 DAYS)~~
- ~~• DISCHARGES TO LAND FROM PERMANENT RECYCLED WATER PROJECTS (WITH PERMANENT RECYCLED WATER DELIVERY AND/OR DISTRIBUTION SYSTEMS, LIMITED TO THE PERIOD PRIOR TO THE DISCHARGE BEING AUTHORIZED AND REGULATED UNDER WDRS, WRRS, AND/OR MRP, NOT TO EXCEED 365 DAYS)~~

~~IN ORDER TO BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 7, DISCHARGES MUST COMPLY WITH CERTAIN CONDITIONS TO BE PROTECTIVE OF WATER QUALITY. WAIVER CONDITIONS APPLICABLE TO DISCHARGES OF RECYCLED WATER TO LAND INCLUDE THE FOLLOWING:~~

- ~~7.I.A. GENERAL WAIVER CONDITIONS FOR RECYCLED WATER PROJECTS~~
- ~~7.II.A. SPECIFIC WAIVER CONDITIONS FOR SHORT-TERM RECYCLED WATER PROJECTS~~
- ~~7.II.B. SPECIFIC WAIVER CONDITIONS FOR PERMANENT RECYCLED WATER PROJECTS~~

~~DISCHARGES OF RECYCLED WATER TO LAND THAT COMPLY WITH THE GENERAL AND SPECIFIC WAIVER CONDITIONS IN CONDITIONAL WAIVER NO. 7 ARE NOT EXPECTED TO POSE A THREAT TO THE QUALITY OF WATERS OF THE STATE.~~

- ~~7.I.A. GENERAL WAIVER CONDITIONS FOR RECYCLED WATER PROJECTS~~
 - ~~1. PREVENT ALL WINDBLOWN SPRAY AND SURFACE RUNOFF OF RECYCLED WATER ON TO PROPERTY NOT OWNED OR CONTROLLED BY THE DISCHARGER BY IMPLEMENTATION OF MANAGEMENT MEASURES (MMS) AND/OR BEST MANAGEMENT PRACTICES (BMPs).~~
 - ~~2. RECYCLED WATER DISCHARGED TO LAND MUST NOT ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF UNDERLYING GROUNDWATER.~~
 - ~~3. THE SAN DIEGO WATER BOARD AND/OR OTHER LOCAL REGULATORY AGENCIES MUST BE ALLOWED REASONABLE ACCESS TO THE SITE IN ORDER TO PERFORM INSPECTIONS AND CONDUCT MONITORING.~~
 - ~~4. THE USE OF RECYCLED WATER MUST COMPLY WITH THE REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS TITLE 22 SECTION 60310(A) THROUGH (J), UNLESS SUFFICIENT INFORMATION IS PROVIDED TO DEMONSTRATE THAT A PROPOSED ALTERNATIVE IS PROTECTIVE OF WATER QUALITY AND HUMAN HEALTH.~~
 - ~~5. RECYCLED WATER CANNOT BE USED FOR GROUNDWATER RECHARGE UNLESS SUFFICIENT INFORMATION IS PROVIDED TO DEMONSTRATE THAT IT WILL BE PROTECTIVE OF WATER QUALITY AND HUMAN HEALTH.~~

- ~~7.II.A. SPECIFIC WAIVER CONDITIONS FOR SHORT-TERM RECYCLED WATER PROJECTS~~
 - ~~1. THE OPERATOR OF A SHORT-TERM PROJECT PROPOSING TO DISCHARGE RECYCLED WATER MUST FILE A NOTICE OF INTENT CONTAINING INFORMATION ABOUT THE OPERATOR, LOCATION OF THE PROJECT, SOURCE OF THE RECYCLED WATER, PLANNED PERIOD OF~~

~~AND FREQUENCY OF DISCHARGE OF RECYCLED WATER, AND THE MMS/BMPS OR OTHER MEASURES THAT WILL BE TAKEN TO ELIMINATE OR MINIMIZE THE DISCHARGE OF POLLUTANTS THAT MIGHT AFFECT SURFACE WATER AND GROUNDWATER QUALITY.~~

- ~~2. THE NOTICE OF INTENT MUST INCLUDE A LETTER FROM THE PERMITTED RECYCLED WATER AGENCY SUPPLYING THE RECYCLED WATER STATING THAT THE PROJECT WILL COMPLY WITH RECYCLED WATER REGULATIONS IN CALIFORNIA CODE OF REGULATIONS TITLE 22, DIVISION 4, CHAPTER 3, ARTICLES 1 THROUGH 10. THE LETTER SHALL ALSO SPECIFY ANY MONITORING AND/OR REPORTING REQUIRED BY THE RECYCLED WATER AGENCY TO DEMONSTRATE COMPLIANCE WITH CALIFORNIA CODE OF REGULATIONS TITLE 22, DIVISION 4, CHAPTER 3, RECLAMATION CRITERIA, ARTICLES 2, 3, 4, 5, AND 5.1.~~
- ~~3. SUFFICIENT INFORMATION DEMONSTRATING THAT THE OPERATOR WILL COMPLY WITH WAIVER CONDITIONS AND APPLICABLE RECYCLED WATER REGULATIONS MUST BE SUBMITTED BEFORE THE DISCHARGE MAY BEGIN.~~
- ~~4. THE NOTICE OF INTENT IS VALID FOR 365 DAYS AFTER THE SUBMITTAL OF A COMPLETE NOTICE OF INTENT. A NEW NOTICE OF INTENT MUST BE FILED WITH THE SAN DIEGO WATER BOARD IF THE SHORT-TERM PROJECT WILL EXCEED 365 DAYS. A NEW NOTICE OF INTENT MUST BE RECEIVED BY THE SAN DIEGO WATER BOARD AT LEAST 60 DAYS PRIOR TO THE EXPIRATION OF THE PREVIOUS NOTICE OF INTENT. IF NO NEW NOTICE OF INTENT IS RECEIVED 60 DAYS PRIOR TO THE EXPIRATION OF THE PREVIOUS NOTICE OF INTENT, THE SHORT-TERM RECYCLED WATER PROJECT MUST CEASE OPERATION 365 DAYS AFTER A COMPLETE NOTICE OF INTENT HAS BEEN SUBMITTED.~~

~~7.II.B. SPECIFIC WAIVER CONDITIONS FOR PERMANENT RECYCLED WATER PROJECTS~~

- ~~1. A RECYCLED WATER AGENCY PROPOSING TO SUPPLY AND/OR DISTRIBUTE RECYCLED WATER THROUGH PERMANENTLY INSTALLED FACILITIES OR STRUCTURES BEFORE RECEIVING WDRS MUST FILE A REPORT OF WASTE DISCHARGE (ROWD) PURSUANT TO WATER CODE SECTIONS 13260 AND 13522.5 CONTAINING THE FOLLOWING:~~
 - ~~a) SUFFICIENT INFORMATION FOR THE SAN DIEGO WATER BOARD TO DETERMINE THAT THE PROJECT WILL BE CONSISTENT WITH THE WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO BASIN AND ANY STATE WATER RESOURCES CONTROL BOARD RECYCLED WATER POLICIES, AND WILL COMPLY WITH ALL APPLICABLE RECYCLED WATER REGULATIONS.~~
 - ~~b) A LETTER FROM THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH) STATING THAT THE PROJECT WILL COMPLY WITH RECYCLED WATER REGULATIONS IN CALIFORNIA CODE OF REGULATIONS TITLE 22, DIVISION 4, CHAPTER 3, ARTICLES 1 THROUGH 10. THE LETTER SHALL ALSO SPECIFY ANY PROVISIONS, MONITORING, AND/OR REPORTING REQUIRED BY THE CDPH TO DEMONSTRATE COMPLIANCE WITH CALIFORNIA CODE OF REGULATIONS TITLE 22, DIVISION 4, CHAPTER 3, RECLAMATION CRITERIA, ARTICLES 2, 3, 4, 5, AND 5.1.~~
 - ~~c) A LIST OF RECYCLED WATER END USERS THAT WILL BE REGULATED BY THE RECYCLED WATER AGENCY, AND THE PROPOSED MONITORING AND REPORTING PROGRAM THE RECYCLED WATER AGENCY WILL IMPLEMENT TO DEMONSTRATE THAT THE END USERS ARE COMPLYING WITH THE WAIVER CONDITIONS AND APPLICABLE RECYCLED WATER REGULATIONS.~~
- ~~2. THE RECYCLED WATER AGENCY MUST SUBMIT SUFFICIENT INFORMATION DEMONSTRATING THAT THE RECYCLED WATER AGENCY AND ITS END USERS WILL COMPLY WITH WAIVER CONDITIONS AND APPLICABLE RECYCLED WATER REGULATIONS BEFORE THE DISCHARGE MAY BEGIN.~~
- ~~3. THE CONDITIONAL WAIVER ISSUED TO THE RECYCLED WATER AGENCY IS VALID FOR 365 DAYS AFTER A COMPLETED ROWD HAS BEEN SUBMITTED, OR UNTIL WDRS ARE ADOPTED FOR THE PROJECT, WHICHEVER OCCURS FIRST. THE SAN DIEGO WATER BOARD WILL ADOPT WDRS AT THE EARLIEST POSSIBLE OPPORTUNITY. IF THE WDRS CANNOT BE ADOPTED WITHIN 365 DAYS AFTER THE COMPLETED ROWD HAS BEEN SUBMITTED, THE RECYCLED WATER AGENCY MUST REQUEST AN EXTENSION OF THE CONDITIONAL WAIVER AT LEAST 60 DAYS PRIOR TO THE EXPIRATION OF THE PREVIOUS CONDITIONAL WAIVER. IF NO REQUEST FOR AN EXTENSION IS RECEIVED 60 DAYS PRIOR TO THE EXPIRATION OF THE PREVIOUS CONDITIONAL WAIVER, THE PERMANENT RECYCLED WATER PROJECT MUST CEASE THE DISCHARGE OF RECYCLED WATER 365 DAYS AFTER THE COMPLETED ROWD WAS SUBMITTED.~~
- ~~4. IF A RECYCLED WATER AGENCY THAT OBTAINS A WAIVER IN ACCORDANCE WITH THE WAIVER CONDITIONS IN 7.II.B PROPOSES TO SIGNIFICANTLY ADD TO OR MODIFY THE TREATMENT PROCESS (E.G., CHANGE THE DISINFECTION OR FILTRATION PROCESSES),~~

~~THEN THE DISCHARGER SHALL SUBMIT A NEW ROWD CONTAINING THE INFORMATION LISTED IN 7.II.B.1 ABOVE.~~

~~CONDITIONAL WAIVER NO. 8 – DISCHARGES/DISPOSAL OF SOLID WASTES TO LAND~~

~~CONDITIONAL WAIVER NO. 8 IS FOR DISCHARGES OF SOLID WASTES TO LAND, WHICH MAY BE A SOURCE OF POLLUTANTS THAT CAN ADVERSELY AFFECT THE QUALITY OF WATERS OF THE STATE.~~

~~THE FOLLOWING TYPES OF DISCHARGE NOT REGULATED OR AUTHORIZED UNDER WASTE DISCHARGE REQUIREMENTS (WDRS) MAY BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 8:~~

- ~~● DISCHARGES OF PLANT CROP RESIDUES TO LAND~~
- ~~● DISCHARGE/APPLICATION OF AMENDMENTS AND/OR MULCHES TO SOIL~~
- ~~● DISCHARGES/DISPOSAL OF INERT WASTES TO SOLID WASTE DISPOSAL FACILITIES ONLY ACCEPTING INERT WASTES~~
- ~~● DISCHARGES OF SOILS CONTAINING WASTES TO TEMPORARY WASTE PILES~~
- ~~● DISCHARGES/DISPOSAL/REUSE OF SOILS CHARACTERIZED AS INERT FROM KNOWN CONTAMINATED SITES TO LAND~~

~~IN ORDER TO BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 8, DISCHARGES MUST COMPLY WITH CERTAIN CONDITIONS TO BE PROTECTIVE OF WATER QUALITY. WAIVER CONDITIONS APPLICABLE TO DISCHARGES OF SOLID WASTES TO LAND INCLUDE THE FOLLOWING:~~

- ~~8.I.A. GENERAL WAIVER CONDITIONS FOR DISCHARGES OF SOLID WASTES TO LAND~~
- ~~8.II.A. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES OF PLANT CROP RESIDUES TO LAND~~
- ~~8.II.B. SPECIFIC WAIVER CONDITIONS FOR APPLICATION OF AMENDMENTS AND MULCHES TO SOIL~~
- ~~8.II.C. SPECIFIC WAIVER CONDITIONS FOR THE DISCHARGE OF SOILS CONTAINING WASTES TO TEMPORARY WASTE PILES~~
- ~~8.II.D. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES OF INERT WASTES TO SOLID WASTE DISPOSAL FACILITIES ONLY ACCEPTING INERT WASTES~~
- ~~8.II.E. SPECIFIC WAIVER CONDITIONS FOR THE DISCHARGE/DISPOSAL/REUSE OF INERT SOILS AND MATERIALS FROM CONTAMINATED SITES TO LAND~~

~~DISCHARGES OF SOLID WASTES TO LAND THAT COMPLY WITH THE GENERAL AND SPECIFIC WAIVER CONDITIONS IN CONDITIONAL WAIVER NO. 8 ARE NOT EXPECTED TO POSE A THREAT TO THE QUALITY OF WATERS OF THE STATE.~~

- ~~8.I.A. GENERAL WAIVER CONDITIONS FOR DISCHARGES OF SOLID WASTES TO LAND~~
 - ~~1. PREVENT THE DIRECT OR INDIRECT DISCHARGE OF SOLID WASTES TO ANY SURFACE WATERS OF THE STATE (INCLUDING EPHEMERAL STREAMS AND VERNAL POOLS).~~
 - ~~2. OPERATIONS OR FACILITIES THAT ACCEPT AND/OR DISCHARGE SOLID WASTES TO LAND MUST COMPLY WITH LOCAL, STATE, AND FEDERAL ORDINANCES AND REGULATIONS AND OBTAIN ANY REQUIRED PERMITS, CERTIFICATIONS, AND/OR LICENSES.~~
 - ~~3. SOLID WASTES MUST NOT CAUSE OR THREATEN TO CAUSE A CONDITION OF CONTAMINATION, POLLUTION, OR NUISANCE.~~
 - ~~4. THE DISCHARGER MUST MINIMIZE OR ELIMINATE THE DISCHARGE OF ANY POLLUTANTS THAT COULD ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF WATERS OF THE STATE.~~
 - ~~5. THE SAN DIEGO WATER BOARD AND/OR OTHER LOCAL REGULATORY AGENCIES MUST BE ALLOWED REASONABLE ACCESS TO THE SITE IN ORDER TO PERFORM INSPECTIONS AND CONDUCT MONITORING.~~
 - ~~6. DISCHARGER MUST SUBMIT A NOTICE OF INTENT OR TECHNICAL AND/OR MONITORING PROGRAM REPORTS WHEN DIRECTED BY THE SAN DIEGO WATER BOARD.~~
- ~~8.II.A. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES OF PLANT CROP RESIDUES TO LAND~~
 - ~~1. PLANT CROP RESIDUES MUST BE MANAGED TO PREVENT TRANSPORT OF POLLUTANTS TO WATERS OF THE STATE.~~
 - ~~2. PLANT CROP RESIDUES MAY BE USED AS FEEDSTOCK FOR COMPOSTING.~~
 - ~~3. PLANT CROP RESIDUES CANNOT BE BURNED AND APPLIED TO LAND.~~

- ~~4. APPLICATION OF ANY PRODUCTS (E.G., FERTILIZERS, PESTICIDES) TO PLANTS OR SOIL MUST BE USED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND MUST NOT HAVE AN ADVERSE EFFECT ON THE QUALITY OF ANY WATERS OF THE STATE.~~
- ~~5. CONCENTRATIONS OF PESTICIDES AND/OR HERBICIDES OR ANY OTHER POLLUTANTS ASSOCIATED WITH THE PLANT CROP RESIDUES MUST NOT ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF UNDERLYING GROUNDWATER.~~
- ~~6. IMPLEMENT MANAGEMENT MEASURES (MMS) AND/OR BEST MANAGEMENT PRACTICES (BMPs) AROUND AREAS WHERE PLANT CROP RESIDUES HAVE BEEN DISCHARGED TO LAND TO MINIMIZE OR ELIMINATE RUNOFF AND LEACHATE TO SURFACE WATERS AND GROUNDWATER.~~

~~8.II.B. SPECIFIC WAIVER CONDITIONS FOR APPLICATION OF AMENDMENTS AND MULCHES TO SOIL~~

- ~~1. AMENDMENTS OR MULCHES APPLIED TO SOIL CANNOT INCLUDE ANY OF THE FOLLOWING ADDITIVES, UNLESS SUFFICIENT INFORMATION IS PROVIDED TO DEMONSTRATE THAT THE WASTE DOES NOT POSE A POTENTIAL THREAT TO WATER QUALITY: (A) MUNICIPAL SOLID WASTES; (B) SLUDGES, INCLUDING SEWAGE SLUDGE, WATER TREATMENT SLUDGE, AND INDUSTRIAL SLUDGE; (C) SEPTAGE; (D) LIQUID WASTES; (E) OIL AND GREASE; AND (F) HAZARDOUS, DESIGNATED, AND ANY OTHER WASTES DETERMINED BY THE SAN DIEGO WATER BOARD TO POSE A POTENTIAL THREAT TO WATER QUALITY.~~
- ~~2. THE AMOUNT OF SOIL AMENDMENT OR MULCH MATERIALS THAT CAN BE APPLIED TO SOIL MUST BE REASONABLE FOR THE CROP OR PLANT, SOIL, CLIMATE, SPECIAL LOCAL SITUATIONS, MANAGEMENT SYSTEM, AND TYPE OF SOIL AMENDMENT OR MULCH. APPLICATION RATES MUST TAKE INTO ACCOUNT STORM EVENTS DURING THE RAINY SEASON (OCTOBER-MAY). APPLICATION RATES MUST NOT ALLOW SOIL AMENDMENT OR MULCH MATERIALS TO BE TRANSPORTED OFF THE PROPERTY IN STORM WATER RUNOFF DURING THE RAINY SEASON. RESOURCES ARE AVAILABLE FROM THE NATURAL RESOURCE CONSERVATION SERVICE (NRCS), UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION (UCCE), AND OTHER ORGANIZATIONS. A COPY OF THE CALCULATIONS AND/OR ESTIMATE OF THE APPLICATION RATE MUST BE AVAILABLE ON SITE FOR INSPECTION.~~
- ~~3. APPLY AMENDMENT OR MULCH MATERIALS TO SOIL AT SITE-SPECIFIC RATES APPROPRIATE TO THE SEASON (I.E., DRY VS. RAINY).~~
- ~~4. IMPLEMENT MMS/BMPs IN AREAS WITH SOIL AMENDMENT OR MULCH MATERIALS TO MINIMIZE OR ELIMINATE RUNOFF AND LEACHATE TO SURFACE WATERS AND GROUNDWATER.~~

~~8.II.C. SPECIFIC WAIVER CONDITIONS FOR THE DISCHARGE OF SOILS CONTAINING WASTES TO TEMPORARY WASTE PILES~~

- ~~1. FOR ANY SOILS CONTAINING WASTES TEMPORARILY STORED IN WASTE PILES, THE FOLLOWING CONDITIONS APPLY:
 - ~~a) THE DISCHARGER MUST SUBMIT A SIGNED/COMPLETED SECTION A OF THE TEMPORARY WASTE PILE CERTIFICATION FORM WITHIN 30 DAYS OF THE INITIAL DISCHARGE OF ANY WASTE PILES TO BE ELIGIBLE FOR THIS WAIVER. THE PROPERTY OWNER MUST APPROVE AND ACKNOWLEDGE THE PLACEMENT OF THE WASTE AT THE SITE.~~
 - ~~b) THE DISCHARGER MUST SUBMIT A SIGNED/COMPLETED SECTION B OF THE TEMPORARY WASTE PILE CERTIFICATION FORM WITHIN 10 WORKING DAYS OF COMPLETING REMOVAL OF ALL WASTE AND RESTORING THE SITE TO ITS ORIGINAL CONDITION.~~
 - ~~c) UNLESS OTHERWISE SPECIFIED IN THE APPLICABLE CONDITIONS, NO TEMPORARY WASTE PILES MAY REMAIN ON A SITE FOR LONGER THAN 6 MONTHS OR 180 DAYS.~~
 - ~~d) THE TEMPORARY DISCHARGE OF WASTE MUST NOT (A) CAUSE THE OCCURRENCE OF COLIFORM OR PATHOGENIC ORGANISMS IN WATERS PUMPED FROM THE BASIN; (B) CAUSE THE OCCURRENCE OF OBJECTIONABLE TASTES AND ODORS IN WATER PUMPED FROM BASIN; (C) CAUSE WATERS PUMPED FROM THE BASIN TO FOAM; (D) CAUSE THE PRESENCE OF TOXIC MATERIALS IN WATERS PUMPED FROM THE BASIN; (E) CAUSE THE PH OF WATERS PUMPED FROM THE BASIN TO FALL BELOW 6.0 OR RISE ABOVE 9.0; (F) CAUSE POLLUTION, CONTAMINATION OR NUISANCE OR ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF GROUNDWATER OR SURFACE WATERS OF THE HYDROLOGIC SUBAREAS ESTABLISHED IN THE BASIN PLAN; AND/OR, (G) CAUSE A VIOLATION OF ANY DISCHARGE PROHIBITIONS IN THE BASIN PLAN FOR THE SAN DIEGO REGION.~~~~

- e) ~~THE DISCHARGER MUST CONDUCT REGULAR INSPECTIONS OF TEMPORARY WASTE PILES AND ASSOCIATED MMS/BMPS AT LEAST ONCE PER WEEK. CORRECTIVE ACTIONS MUST BE TAKEN AS NECESSARY TO ENSURE COMPLIANCE WITH THE CONDITIONS OF THIS WAIVER.~~
- f) ~~SURFACE DRAINAGE MUST BE DIVERTED AWAY FROM THE TEMPORARY WASTE PILES. FOR ALL TEMPORARY WASTE PILES, THE DISCHARGER MUST IMPLEMENT EFFECTIVE MMS/BMPS TO PREVENT SURFACE WATER RUNON AND RUNOFF FROM CONTACTING WASTES AND TO PREVENT EROSION AND TRANSPORT OF WASTES BY SURFACE RUNOFF.~~
- g) ~~TEMPORARY WASTE PILES MUST BE PLACED AT LEAST 5 FEET ABOVE THE HIGHEST HISTORICALLY KNOWN OR ANTICIPATED LEVEL OF GROUNDWATER, AND MORE THAN 100 FEET FROM ANY SURFACE WATER OF THE STATE, UNLESS SUFFICIENT INFORMATION IS PROVIDED TO DEMONSTRATE THAT A PROPOSED ALTERNATIVE IS PROTECTIVE OF WATER QUALITY.~~
- h) ~~TEMPORARY WASTE PILES MUST BE PROTECTED AGAINST 100-YEAR PEAK STREAM FLOWS AS DEFINED BY THE COUNTY FLOOD CONTROL AGENCY.~~
- i) ~~TEMPORARY WASTE PILES MUST BE COVERED BY PLASTIC SHEETING (NOT LESS THAN 10 MILS THICK, UNLESS OTHERWISE SPECIFIED UNDER THE APPLICABLE SPECIAL CONDITIONS) TO ADEQUATELY PREVENT RAINWATER INFILTRATION, CONTROL FUGITIVE DUST, AND OTHER NUISANCES.~~
- j) ~~TEMPORARY WASTE PILES MUST BE UNDERLAIN BY EITHER PLASTIC SHEETING (NOT LESS THAN 10 MILS THICK, UNLESS OTHERWISE SPECIFIED UNDER THE APPLICABLE CONDITIONS) OR A LINER OF LOW PERMEABILITY THAT WILL PREVENT LEACHATE FROM INFILTRATING TO GROUNDWATER.~~
- k) ~~SOLID WASTES DISCHARGED TO TEMPORARY WASTE PILES, TOGETHER WITH ANY CONTAINMENT MATERIALS USED AT THE TEMPORARY WASTE PILE, AND ANY UNDERLYING GEOLOGIC MATERIALS IMPACTED BY THE DISCHARGE, SHALL BE REMOVED WITHIN 180 DAYS, UNLESS OTHERWISE SPECIFIED UNDER THE APPLICABLE SPECIAL CONDITIONS. SUBSEQUENTLY, THE DISCHARGER MUST REMOVE ALL WASTES, TREATMENT FACILITIES, RELATED EQUIPMENT, AND DISPOSE OF THOSE ITEMS IN ACCORDANCE WITH APPLICABLE REGULATIONS. THE SITE MUST BE RESTORED TO ITS ORIGINAL STATE WITHIN 30 DAYS AFTER THE TEMPORARY WASTE PILE IS REMOVED, UNLESS OTHERWISE SPECIFIED UNDER THE APPLICABLE SPECIAL CONDITIONS.~~
- l) ~~THE DISCHARGER MUST POST AT LEAST ONE CLEARLY VISIBLE SIGN LISTING THE FOLLOWING MINIMUM INFORMATION: A) PROJECT NAME, B) NAME AND ADDRESS OF DISCHARGER, C) BRIEF PROJECT DESCRIPTION, AND D) 24-HOUR CONTACT INFORMATION—NAME, ADDRESS, FACSIMILE, AND TELEPHONE NUMBER FOR THE PROJECT FOR AS LONG AS THE TEMPORARY WASTE PILE REMAINS ON THE SITE.~~
- 2. ~~FOR SOILS CONTAINING PETROLEUM HYDROCARBONS TEMPORARILY STORED IN WASTE PILES, THE FOLLOWING CONDITIONS APPLY:~~
 - a) ~~SOILS AND ASSOCIATED SOLID WASTE CONTAINING PETROLEUM HYDROCARBONS DISCHARGED INTO TEMPORARY WASTE PILES SHALL BE LIMITED TO A MAXIMUM TIME PERIOD OF 3 MONTHS OR 90 DAYS ON A SITE.~~
 - b) ~~SOILS AND ASSOCIATED SOLID WASTE CONTAINING PETROLEUM HYDROCARBONS DISCHARGED INTO TEMPORARY WASTE PILES UNDER AN INITIAL CERTIFICATION REPORT MUST BE DERIVED FROM ONLY ONE SOURCE (E.G., ONE UNAUTHORIZED RELEASE SITE).~~
 - c) ~~TEMPORARY WASTE PILES MUST BE COVERED BY PLASTIC SHEETING (NOT LESS THAN 10 MILS THICK) TO ADEQUATELY PREVENT RAINWATER INFILTRATION, CONTROL FUGITIVE DUST, AND OTHER NUISANCES.~~
 - d) ~~TEMPORARY WASTE PILES MUST BE UNDERLAIN BY EITHER PLASTIC SHEETING (NOT LESS THAN 10 MILS THICK) OR A LINER OF LOW PERMEABILITY THAT WILL PREVENT LEACHATE FROM INFILTRATING TO GROUNDWATER.~~
 - e) ~~IN ADDITION TO THE CONDITIONS STATED HEREIN, TEMPORARY WASTE PILES MUST CONFORM TO APPLICABLE PROVISIONS IN THE STATE'S LOCAL OVERSIGHT PROGRAM (LOP) FOR ORANGE, RIVERSIDE, OR SAN DIEGO COUNTIES.~~
 - f) ~~THE SITE MUST BE RESTORED TO ITS ORIGINAL STATE WITHIN 30 DAYS AFTER REMOVAL OF THE TEMPORARY WASTE PILE FROM THE SITE.~~
- 3. ~~FOR DREDGED SPOILS CONTAINING HEAVY METALS TEMPORARILY STORED IN WASTE PILES, THE FOLLOWING CONDITIONS APPLY:~~
 - a) ~~DREDGED SPOILS AND ASSOCIATED SOLID WASTE CONTAINING HEAVY METALS DISCHARGED INTO TEMPORARY WASTE PILES SHALL BE LIMITED TO A MAXIMUM TIME PERIOD OF 9 MONTHS OR 270 DAYS ON A SITE.~~

- b) ~~TEMPORARY WASTE PILES MUST BE COVERED BY EITHER A PLASTIC SHEETING TO ADEQUATELY PREVENT RAINWATER INFILTRATION, CONTROL FUGITIVE DUST, AND OTHER NUISANCES. ALTERNATIVE CONTROL METHODS MAY BE UTILIZED IF SUFFICIENT INFORMATION IS PROVIDED TO DEMONSTRATE THAT THE PROPOSED ALTERNATIVE IS PROTECTIVE OF WATER QUALITY AND HUMAN HEALTH.~~
- c) ~~TEMPORARY WASTE PILES MUST BE UNDERLAIN BY PLASTIC SHEETING (NOT LESS THAN 20 MILS THICK) OR A LINER OF LOWER PERMEABILITY THAT WILL PREVENT LEACHATE FROM INFILTRATING TO GROUNDWATER. SUFFICIENT INFORMATION MUST BE PROVIDED TO THE SAN DIEGO WATER BOARD DEMONSTRATING THAT THE LINER AND CONTAINMENT FACILITY HAS BEEN DESIGNED TO CONTAIN ALL SOLID WASTES AND FLUIDS.~~
- d) ~~MATERIALS USED IN CONTAINMENT STRUCTURES MUST HAVE THE APPROPRIATE CHEMICAL AND PHYSICAL PROPERTIES TO ENSURE THAT SUCH STRUCTURES DO NOT FAIL TO CONTAIN WASTE BECAUSE OF: THE STRESS OF INSTALLATION, PRESSURE GRADIENTS, PHYSICAL CONTACT WITH THE WASTE OR LEACHATE, OR CHEMICAL REACTIONS WITH SOIL AND ROCK.~~
- e) ~~THE SITE MUST BE RESTORED TO ITS ORIGINAL STATE WITHIN 60 DAYS AFTER REMOVAL OF THE TEMPORARY WASTE PILE FROM THE SITE.~~

~~8.II.D. SPECIFIC WAIVER CONDITIONS FOR SOLID WASTE DISPOSAL FACILITIES ACCEPTING ONLY INERT WASTES⁵~~

- 1. ~~INERT SOLID WASTE MUST NOT CONTAIN HAZARDOUS WASTE, OR SOLUBLE OR DECOMPOSABLE CONSTITUENTS TO BE CONSIDERED INERT WASTE.~~
- 2. ~~INERT WASTE CANNOT CONTAIN ANY "FREE LIQUIDS."⁶~~
- 3. ~~OWNER/OPERATOR OF DISPOSAL FACILITY MUST SECURE THE DISPOSAL SITE AND PREVENT UNAUTHORIZED DISPOSAL BY THE PUBLIC.~~
- 4. ~~INERT WASTES EXCLUDE ANY WASTES DETERMINED BY THE SAN DIEGO WATER BOARD TO POTENTIALLY HAVE AN ADVERSE AFFECT ON THE QUALITY OR BENEFICIAL USES OF WATERS OF THE STATE, EVEN IF CLASSIFIED AS INERT WASTE.~~

~~8.II.E. SPECIFIC WAIVER CONDITIONS FOR THE DISCHARGE/REUSE OF INERT SOILS AND MATERIALS FROM CONTAMINATED SITES~~

- 1. ~~FOR ALL WASTE SOILS CHARACTERIZED AS INERT (TIER 1 OR TIER 2), THE FOLLOWING CONDITIONS APPLY:~~
 - a) ~~INERT WASTE SOILS FROM KNOWN CONTAMINATED SITES CANNOT BE TRANSPORTED OFF SITE AND DISCHARGED/DISPOSED/REUSED DIRECTLY OR INDIRECTLY TO ANY SURFACE WATERS OF THE STATE (INCLUDING EPHEMERAL STREAMS AND VERNAL POOLS).~~
 - b) ~~INERT WASTE SOILS FROM KNOWN CONTAMINATED SITES CANNOT CONTAIN SIGNIFICANT QUANTITIES OF DECOMPOSABLE WASTE.~~
 - c) ~~INERT WASTE SOILS FROM KNOWN CONTAMINATED SITES CANNOT CONTAIN ANY "FREE LIQUIDS."⁷~~
 - d) ~~INERT WASTE SOILS THAT ARE DISCHARGED/DISPOSED/REUSED AT ANY SITE CANNOT HAVE ANY HYDROCARBON, CHLORINATED SOLVENT, OR OTHER CONTAMINANT-BASED ODOR.~~
 - e) ~~SITES THAT EXPORT OR IMPORT SOILS CHARACTERIZED AS INERT FROM KNOWN CONTAMINATED SITES FOR USE AS FILL MATERIAL OR ANY OTHER PURPOSE MUST COMPLY WITH AN APPLICABLE FEDERAL, STATE, OR LOCAL PERMITTING REQUIREMENTS, REGULATIONS, AND/OR ORDINANCES PERTAINING TO THE USE OF IMPORTED SOIL.~~
 - f) ~~SITES THAT EXPORT OR IMPORT SOILS CHARACTERIZED AS INERT FROM KNOWN CONTAMINATED SITES FOR USE AS FILL MATERIAL OR ANY OTHER PURPOSE MUST IMPLEMENT MMS/BMPS TO ELIMINATE THE POTENTIAL FOR EROSION AND TRANSPORT OF SEDIMENT OFF THE SITE.~~
 - g) ~~THIS CONDITIONAL WAIVER DOES NOT AUTHORIZE THE DISCHARGE/DISPOSAL/REUSE OF SOIL CHARACTERIZED AS INERT FROM KNOWN CONTAMINATED SITES OUTSIDE THE BOUNDARIES OF THE SAN DIEGO REGION.~~

⁵ According to California Code of Regulations Title 27 section 20230(a) "Inert waste" is defined as "that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste."

⁶ "Free liquids" defined by California Code of Regulations Title 27 section 20164 as "liquid which readily separates from the solid portions of waste under ambient temperature and pressure."

⁷ "Ibid."

- ~~h) PRIOR TO EXPORTING SOIL CHARACTERIZED AS INERT FROM A KNOWN CONTAMINATED SITE, THE OWNER/OPERATOR OF THE EXPORT SITE MUST FILE A NOTICE OF INTENT WITH THE SAN DIEGO WATER BOARD. THE NOTICE OF INTENT MUST BE FILED NO LESS THAN 3 DAYS PRIOR TO THE BEGINNING OF EXPORT SHIPMENTS. THE NOTICE OF INTENT MUST INCLUDE INFORMATION ABOUT THE SITE OWNER/OPERATOR, MAP OF THE SITE SHOWING THE LOCATIONS OF EXCAVATIONS, BORINGS AND/OR STOCKPILES, MMS/BMPS THAT WILL BE TAKEN TO PREVENT DISCHARGES OF WASTE SOIL THAT COULD AFFECT SURFACE WATER AND GROUNDWATER QUALITY, ESTIMATED VOLUMES (CAN BE A RANGE OF VOLUMES) OF INERT WASTE SOIL THAT WILL BE GENERATED FOR USE OFF THE SITE, ESTIMATED NUMBER (CAN BE A RANGE) AND LOCATIONS OF SAMPLES THAT WILL BE COLLECTED FOR CHARACTERIZATION, AND NAME OF THE CERTIFIED ENVIRONMENTAL ANALYTICAL LABORATORY THAT WILL PERFORM THE ANALYSIS.~~
- ~~i) WASTE SOILS FROM A SITE WITH A KNOWN OR DISCOVERED UNAUTHORIZED RELEASE MUST BE CHARACTERIZED AND CERTIFIED AS INERT IN ORDER FOR THE SOIL TO BE REUSED OFF SITE. CHARACTERIZATION AND CERTIFICATION MUST INCLUDE THE FOLLOWING MINIMUM REQUIREMENTS:~~
 - ~~i) ALL WASTE SOILS GENERATED DURING REMEDIATION OR CORRECTIVE ACTION MUST BE STOCKPILED ON THE SITE IN ACCORDANCE WITH THE WAIVER CONDITIONS FOR THE DISCHARGE OF SPECIFIED SOILS CONTAINING WASTES TO TEMPORARY WASTE PILES. OR, WASTE SOILS MAY BE SAMPLED AND CHARACTERIZED IN-SITU PRIOR TO TRANSPORT AND DISPOSAL OR REUSE OFF SITE~~
 - ~~ii) WASTE SOIL MUST BE SEGREGATED INTO 2 CATEGORIES:~~
 - ~~(A) SOIL THAT IS IMPACTED BY THE UNAUTHORIZED RELEASE MUST BE CHARACTERIZED AS HAZARDOUS, DESIGNATED, AND/OR NON-HAZARDOUS WASTE AND HANDLED IN ACCORDANCE WITH REGULATORY REQUIREMENTS FOR THE DISPOSAL OF SOLID WASTES. WASTE SOILS THAT DO NOT VISUALLY APPEAR IMPACTED, BUT SMELLS IMPACTED, MUST BE TREATED AS IMPACTED SOIL AND CANNOT BE CHARACTERIZED AS INERT.~~
 - ~~(B) SOIL THAT DOES NOT APPEAR TO BE IMPACTED BY THE UNAUTHORIZED RELEASE, BY VISUAL INSPECTION AND ODOR, MUST BE SAMPLED AND ANALYZED TO CONFIRM THE SOIL CAN BE CHARACTERIZED AS INERT WASTE SOIL.~~
 - ~~iii) SAMPLES MUST BE COLLECTED FROM THE WASTE SOIL SUSPECTED TO BE INERT FOR LABORATORY ANALYSIS. THE MINIMUM NUMBER IS SAMPLES REQUIRED TO CHARACTERIZE THE SOIL IS AS FOLLOWS:~~

VOLUME OF SOIL	REQUIRED NUMBER OF SAMPLES ANALYZED
0 TO <500 CY	4 SAMPLES PER 100 CY (12 MINIMUM)
500 TO <5,000 CY	1 ADDITIONAL SAMPLE PER ADDITIONAL 500 CY
5,000 CY OR MORE	1 ADDITIONAL SAMPLE PER ADDITIONAL 1,000 CY⁸

~~CY = CUBIC YARDS~~

- ~~iv) SAMPLES MUST BE ANALYZED BY A STATE-CERTIFIED ANALYTICAL LABORATORY USING USEPA APPROVED ANALYTICAL METHODS FOR THE FOLLOWING CONSTITUENTS:~~
 - ~~(A) TOTAL CONCENTRATIONS OF THOSE TITLE 22 METALS IDENTIFIED AS CONTAMINANTS OF CONCERN FOR THE EXPORT SITE. FOR SITES IDENTIFIED WITH BURN ASH (I.E., A SITE WHERE SOLID WASTE HAS BEEN BURNED AT LOW TEMPERATURE AND THE RESIDUAL BURN ASH PITS AND BURN ASH LAYERS ARE PRESENT IN SOIL), THE SITE SHALL BE INVESTIGATED AND THE BURN ASH WILL BE CHARACTERIZED FOR DISPOSAL PURPOSES ACCORDING TO THE PROTOCOL ESTABLISHED BY THE LEAD REGULATORY AGENCY (E.G., DEPARTMENT OF TOXIC SUBSTANCES CONTROL, CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD, OR OTHERS) TO IDENTIFY CONTAMINANTS OF CONCERN AT THE SITE. THE SOIL OUTSIDE OF THE AREA OF IMPACT OF THE BURN ASH SHALL BE TESTED FOR THE TOTAL CONCENTRATION OF THOSE METALS IDENTIFIED AS CONTAMINANTS OF CONCERN BASED ON THE FINDINGS OF THE BURN ASH INVESTIGATION TECHNICAL STUDY.~~

⁸ Volumes greater than 10,000 cubic yards may rely on fewer samples than 1 per each additional 1,000 cubic yards if characterization complies with SW846 methods for selecting appropriate numbers of samples for waste characterization and statistical analyses. The appropriate number of samples is the least number of samples required to generate a sufficiently representative estimate of the true mean concentration of a chemical contaminant of a waste.

- ~~(B) TOTAL PETROLEUM HYDROCARBONS (BY USEPA METHOD 8015— FULL SCAN IF EXPORT SITE INCLUDES OIL OR FUEL AS POTENTIAL OR ACTUAL CONTAMINANTS OF CONCERN)~~
- ~~(C) POLYCHLORINATED BIPHENYLS (IF EXPORT SITE INCLUDES PCBS AS POTENTIAL OR ACTUAL CONTAMINANTS OF CONCERN)~~
- ~~(D) VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS (IF EXPORT SITE INCLUDES VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS AS POTENTIAL OR ACTUAL CONTAMINANTS OF CONCERN)~~
- ~~(E) PESTICIDES (IF EXPORT SITE INCLUDES A KNOWN AGRICULTURAL AREA, OR PESTICIDES AS POTENTIAL OR ACTUAL CONTAMINANTS OF CONCERN)~~
- ~~(F) OTHER CONSTITUENTS (IF CONTAMINATED PORTION OF THE EXPORT SITE IS FOUND TO CONTAIN OTHER POLLUTANTS OR CONTAMINANTS)~~
- ~~j) IF ANALYTICAL RESULTS INDICATE DETECTABLE CONCENTRATIONS OF CONSTITUENTS OTHER THAN TITLE 22 METALS, WASTE SOIL CANNOT BE CHARACTERIZED AS INERT.~~

- ~~2. FOR REUSE OF TIER 1 INERT WASTE SOILS (FULL UNRESTRICTED REUSE WITHIN THE SAN DIEGO REGION), THE FOLLOWING CONDITIONS APPLY:~~
- ~~a) SOIL CANNOT CONTAIN ANY DETECTABLE CONCENTRATIONS OF CONTAMINANTS OTHER THAN TITLE 22 METALS.~~
- ~~b) FOR THOSE TITLE 22 METALS THAT HAVE BEEN IDENTIFIED AS CONTAMINANTS OF CONCERN FOR THE EXPORT SITE, SAMPLES SHALL BE ANALYZED BY AN SW846 METHOD USING THE REPORTING LIMITS SET FORTH IN THE TABLE PROVIDED IN ATTACHMENT 1. FROM THESE DATA, THE 90 PERCENT UPPER CONFIDENCE LEVEL (UCL) SHALL BE DETERMINED. PRIOR TO CALCULATING THE 90 PERCENT UCL, ONE MUST DETERMINE WHETHER THE SAMPLE SET IS NORMALLY, LOGNORMALLY OR NON-NORMALLY DISTRIBUTED. IF LOGNORMALLY DISTRIBUTED, ONE MUST DETERMINE THE 90 PERCENT UCL ON THE LOGNORMAL MEAN. IF NON-NORMALLY DISTRIBUTED, BUT SUFFICIENTLY SYMMETRICAL, CALCULATE THE 90 PERCENT UCL ON THE MEDIAN (50TH PERCENTILE), INSTEAD OF THE MEAN. SEE USEPA SW846 CHAPTER 9 AND THE USEPA GUIDANCE FOR DATA QUALITY ASSESSMENT FOR A DISCUSSION OF WASTE CHARACTERIZATION AND STATISTICAL ANALYSIS; IN PARTICULAR THE GUIDANCE ON TESTING FOR NORMALITY, CALCULATING A 90 PERCENT UCL, AND HANDLING OF NON-DETECTED VALUES.⁹~~

⁹ See U.S. Environmental Protection Agency, Office of Solid Waste. 1986. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*; <http://www.epa.gov/epaoswer/hazwaste/test/pdfs/chap9.pdf>; and USEPA 2002, RCRA Waste Sampling Draft Technical Guidance, EPA 530-D-02-002 (Appendix F). Office of Solid Waste.

TIER 1 SOIL SCREENING LEVELS

TITLE 22 METALS	INERT WASTE TARGET ^A (MG/KG)	RESIDENTIAL CHHSL ^B (MG/KG)	E-PRG ^C (MG/KG)	BACKGROUND ^D MEAN (MG/KG)	TIER 1 SSL ^{E,F} (MG/KG)
ANTIMONY	6.0	30	5.0	0.60	5.0
ARSENIC	50	0.07	9.9	3.5	3.5
BARIUM	1,000	5,200	283	509	509
BERYLLIUM	4.0	150	10	1.28	4.0
CADMIUM	5.0	1.7	4.0	0.36	1.7
CHROMIUM, TOTAL	50	NA	0.4	122	50
CHROMIUM, HEXAVALENT	50	17	NA	NA	17
COBALT	NA	660	20	14.9	20
COPPER	1,300	3,000	60	28.7	60
LEAD	15	150	40.5	23.9	15
MERCURY	2.0	18	0.00051	0.26	0.26
MOLYBDENUM	NA	380	2.0	1.3	2.0
NICKEL	100	1,600	30	57	57
SELENIUM	50	380	0.21	0.058	0.21
SILVER	NA	380	2.0	0.80	2.0
THALLIUM	2.0	5.0	1.0	0.56	1.0
VANADIUM	50	530	2.0	112	50
ZINC	NA	23,000	8.5	149	149

- A. CALCULATED USING CENTRAL VALLEY WATER BOARD DESIGNATED LEVEL METHODOLOGY, WHERE THE WATER QUALITY GOAL IS THE LOWER VALUE OF THE FEDERAL OR STATE DRINKING WATER PRIMARY MAXIMUM CONTAMINANT LEVEL, THE ENVIRONMENTAL ATTENUATION FACTOR IS 10, AND THE LEACHABILITY FACTOR IS 100.
- B. VALUES TAKEN FROM THE CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY'S USE OF CALIFORNIA HUMAN HEALTH SCREENING LEVELS (CHHSL) IN EVALUATION OF CONTAMINATED PROPERTIES (CALEPA 2005).
- C. TAKEN FROM OAK RIDGE NATIONAL LABORATORY'S PRELIMINARY REMEDIATION GOALS FOR ECOLOGICAL ENDPOINTS (EFROYMSON, ET AL 1997)
- D. TAKEN FROM KEARNEY FOUNDATION OF SOIL SCIENCE DIVISION OF AGRICULTURE AND NATURAL RESOURCES, UNIVERSITY OF CALIFORNIA BACKGROUND CONCENTRATIONS OF TRACE AND MAJOR ELEMENTS IN CALIFORNIA SOIL – SPECIAL REPORT (BRADFORD, ET AL 1996).
- E. TIER 1 SOIL SCREENING LEVEL FOR INERT WASTE SOILS THAT CAN BE REUSED WITHOUT RESTRICTION. TIER 1 SSLS SELECTED BASED ON THE FOLLOWING STEPS: STEP 1) SELECT LOWER VALUE OF RESIDENTIAL CHHSL OR E-PRG; STEP 2) SELECT LOWER VALUE OF STEP 1 OR INERT WASTE TARGET; AND, STEP 3) SELECT HIGHER VALUE OF STEP 2 AND ARITHMETIC MEAN BACKGROUND.
- F. THESE VALUES ARE NOT INTENDED TO PROVIDE CLEAN UP LEVELS FOR SOIL REMAINING ON-SITE. SUCH VALUES SHOULD BE ESTABLISHED BASED ON THE CONTAMINANTS OF CONCERN, THE SITE USE, AND IN CONJUNCTION WITH THE REGULATORY AGENCY PROVIDING OVERSIGHT FOR THE REMEDIATION EFFORT.

- e) ~~AN INERT WASTE CERTIFICATION MUST BE FILED WITH THE SAN DIEGO WATER BOARD BY THE OWNER/OPERATOR OF THE EXPORT SITE WITHIN 30 DAYS FOLLOWING COMPLETION OF EXPORT ACTIVITIES. THE INERT WASTE CERTIFICATION MUST INCLUDE THE FOLLOWING INFORMATION:~~
- i) ~~GENERATOR NAME AND CONTACT INFORMATION~~
 - ii) ~~EXPORT SITE LOCATION, OWNER NAME AND CONTACT INFORMATION~~
 - iii) ~~MAP OF THE EXPORT SITE SHOWING THE LOCATION OF THE EXCAVATION, BORINGS, STOCKPILES, AND/OR SAMPLES COLLECTED~~
 - iv) ~~APPROXIMATE VOLUME OF INERT WASTE SOIL EXPORTED FROM THE SITE~~
 - v) ~~DESCRIPTION OF BMPS IMPLEMENTED TO PREVENT DISCHARGE OF WASTE SOIL OFF THE EXPORT SITE DURING EXCAVATION AND TRANSPORT.~~
 - vi) ~~LABORATORY ANALYTICAL DATA, INCLUDING NUMBER OF SAMPLES COLLECTED, EPA APPROVED ANALYTICAL METHODS USED, THE 90 PERCENT UCL OF THE DATA FOR THE CONTAMINANTS OF CONCERN, AND NAME OF CERTIFIED ENVIRONMENTAL ANALYTICAL LABORATORY THAT PERFORMED THE ANALYSIS.~~
 - vii) ~~THE EXPORT SITE OWNER, PRINCIPAL EXECUTIVE OFFICER, OR AUTHORIZED REPRESENTATIVE, AND A CALIFORNIA REGISTERED PROFESSIONAL ENGINEER OR GEOLOGIST MUST SIGN AND CERTIFY THE INERT WASTE CERTIFICATION. THE INERT WASTE CERTIFICATION MUST INCLUDE THE STATEMENT, "I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT."~~
3. ~~FOR REUSE OF TIER 2 INERT WASTE SOILS (ONLY FOR COMMERCIAL OR INDUSTRIAL DEVELOPMENT PURPOSES WITHIN THE SAN DIEGO REGION), THE FOLLOWING CONDITIONS APPLY:~~
- a) ~~SOIL CANNOT CONTAIN ANY DETECTABLE CONCENTRATIONS OF CONTAMINANTS OTHER THAN TITLE 22 METALS.~~
 - b) ~~SAMPLES SHALL BE ANALYZED BY AN SW846 METHOD USING THE REPORTING LIMITS SET FORTH IN THE TABLE PROVIDED IN ATTACHMENT 1. FROM THESE DATA, THE 90 PERCENT UCL SHALL BE DETERMINED. PRIOR TO CALCULATING THE 90 PERCENT UCL, ONE MUST DETERMINE WHETHER THE SAMPLE SET IS NORMALLY, LOGNORMALLY OR NON-NORMALLY DISTRIBUTED. IF LOGNORMALLY DISTRIBUTED, ONE MUST DETERMINE THE 90 PERCENT UCL ON THE LOGNORMAL MEAN. IF NON-NORMALLY DISTRIBUTED, BUT SUFFICIENTLY SYMMETRICAL, CALCULATE THE 90 PERCENT UCL ON THE MEDIAN (50TH PERCENTILE), INSTEAD OF THE MEAN. SEE USEPA SW846 CHAPTER 9 AND THE USEPA GUIDANCE FOR DATA QUALITY ASSESSMENT FOR A DISCUSSION OF WASTE CHARACTERIZATION AND STATISTICAL ANALYSIS; IN PARTICULAR THE GUIDANCE ON TESTING FOR NORMALITY, CALCULATING A 90 PERCENT UCL, AND HANDLING OF NON-DETECTED VALUES.¹⁰~~

¹⁰ See U.S. Environmental Protection Agency, Office of Solid Waste. 1986. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*; <http://www.epa.gov/epaoswer/hazwaste/test/pdfs/chap9.pdf>; and USEPA-2002, RCRA Waste Sampling Draft Technical Guidance, EPA-530-D-02-002 (Appendix F). Office of Solid Waste.

TIER 2 SOIL SCREENING LEVELS

POLLUTANT	INERT WASTE TARGET ^A (MG/KG)	INDUSTRIAL HEALTH SUBELEMENT ^B (MG/KG)	BACKGROUND ^D		TTLC ^E (MG/KG)	TIER 2 SSL ^{F,G} (MG/KG)
			MAX (MG/KG)	½ MAX (MG/KG)		
ANTIMONY	6.0	380	1.95	0.98	500	6.0
ARSENIC	50	0.24	11	5.5	500	5.5
BARIUM	1,000	63,000	1,400	700	10,000	1,000
BERYLLIUM	4.0	1,700	2.7	1.4	75	4
CADMIUM	5.0	7.5	1.70	0.85	100	5
CHROMIUM, TOTAL	50	100,000	1,579	790	2,500	790
CHROMIUM, HEXAVALENT	50	37	NA	NA	500	37
COBALT	NA	3,200	46.9	23.5	8,000	3,200
COPPER	1,300	38,000	96.4	48.2	2,500	1,300
LEAD	15	3,500	97.1	48.6	1,000	49
MERCURY	2.0	180	0.90	0.45	20	2
MOLYBDENUM	NA	4,800	9.6	4.8	3,500	3,500*
NICKEL	100	16,000	509	255	2,000	255
SELENIUM	50	4,800	0.43	0.22	100	50
SILVER	NA	4,800	8.30	4.2	500	500*
THALLIUM	2.0	63	1.10	0.55	700	2
VANADIUM	50	6,700	288	144	2,400	144
ZINC	NA	100,000	236	118	5,000	5,000*

- * NONE OF THE ANALYTICAL RESULTS FROM ANY SAMPLES COLLECTED TO CHARACTERIZE THE WASTE SOIL CAN EXCEED THE TIER 2 SOIL SCREENING LEVEL FOR THIS POLLUTANT.
- A. CALCULATED USING CENTRAL VALLEY WATER BOARD DESIGNATED LEVEL METHODOLOGY, WHERE THE WATER QUALITY GOAL IS THE LOWER VALUE OF THE FEDERAL OR STATE DRINKING WATER PRIMARY MAXIMUM CONTAMINANT LEVEL, THE ENVIRONMENTAL ATTENUATION FACTOR IS 10, AND THE LEACHABILITY FACTOR IS 100.
- B. VALUES TAKEN FROM THE CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY'S USE OF CALIFORNIA HUMAN HEALTH SCREENING LEVELS (CHHSL) IN EVALUATION OF CONTAMINATED PROPERTIES (CALEPA 2005).
- C. TAKEN FROM OAK RIDGE NATIONAL LABORATORY'S PRELIMINARY REMEDIATION GOALS FOR ECOLOGICAL ENDPOINTS (EFROYMSON, ET AL 1997).
- D. TAKEN FROM KEARNEY FOUNDATION OF SOIL SCIENCE DIVISION OF AGRICULTURE AND NATURAL RESOURCES, UNIVERSITY OF CALIFORNIA BACKGROUND CONCENTRATIONS OF TRACE AND MAJOR ELEMENTS IN CALIFORNIA SOIL - SPECIAL REPORT (BRADFORD, ET AL 1996).
- E. TOTAL THRESHOLD LIMIT CONCENTRATION. CONCENTRATIONS ABOVE THE TTLC WOULD BE CLASSIFIED AS HAZARDOUS WASTE.
- F. TIER 2 SOIL SCREENING LEVEL FOR INERT WASTE SOILS THAT CAN BE REUSED ONLY FOR COMMERCIAL OR INDUSTRIAL LAND USE DESIGNATION. TIER II SSLS SELECTED BASED ON THE FOLLOWING STEPS: STEP 1) SELECT LOWER VALUE OF INDUSTRIAL CHHSL OR INERT WASTE TARGET; STEP 2) SELECT HIGHER VALUE OF STEP 1 OR ½ MAXIMUM BACKGROUND; AND, STEP 3) SELECT LOWER VALUE OF STEP 2 AND TOTAL THRESHOLD LIMIT CONCENTRATION.

~~G. THESE VALUES ARE NOT INTENDED TO PROVIDE CLEAN UP LEVELS FOR SOIL REMAINING ON-SITE. SUCH VALUES SHOULD BE ESTABLISHED BASED ON THE CONTAMINANTS OF CONCERN, THE SITE USE, AND IN CONJUNCTION WITH THE REGULATORY AGENCY PROVIDING OVERSIGHT FOR THE REMEDIATION EFFORT.~~

- e) ~~AN INERT WASTE CERTIFICATION MUST BE FILED WITH THE SAN DIEGO WATER BOARD BY THE OWNER/OPERATOR OF THE EXPORT SITE WITHIN 30 DAYS FOLLOWING EXPORT AND PLACEMENT OF THE SOIL. THE INERT WASTE CERTIFICATION MUST INCLUDE THE FOLLOWING INFORMATION:~~
 - i) ~~GENERATOR NAME AND CONTACT INFORMATION~~
 - ii) ~~EXPORT SITE LOCATION, OWNER NAME AND CONTACT INFORMATION~~
 - iii) ~~APPROXIMATE VOLUME OF INERT WASTE SOIL EXPORTED FROM THE SITE~~
 - iv) ~~DESCRIPTION OF BMPS IMPLEMENTED TO PREVENT DISCHARGE OF WASTE SOIL OFF THE EXPORT SITE DURING EXCAVATION AND TRANSPORT.~~
 - v) ~~LABORATORY ANALYTICAL DATA, INCLUDING NUMBER OF SAMPLES COLLECTED, EPA APPROVED ANALYTICAL METHODS USED, THE 90 PERCENT UCL OF THE DATA FOR THE CONTAMINANTS OF CONCERN, AND NAME OF CERTIFIED ENVIRONMENTAL ANALYTICAL LABORATORY PERFORMING ANALYSIS~~
 - vi) ~~IMPORT SITE OWNER NAME AND CONTACT INFORMATION, WITH A MAP OF THE SITE LOCATION SHOWING NEARBY SURFACE WATER BODIES, APPROXIMATE DEPTH TO GROUNDWATER, AND BMPS THAT WILL BE IMPLEMENTED TO ELIMINATE THE POTENTIAL FOR DISCHARGE OF INERT WASTE SOILS TO SURFACE WATERS.~~
 - vii) ~~THE IMPORT SITE OWNER, PRINCIPAL EXECUTIVE OFFICER, OR AUTHORIZED REPRESENTATIVE MUST PROVIDE A SIGNATURE ACKNOWLEDGING THE RECEIPT OR PLANNED RECEIPT OF THE INERT WASTE SOIL.~~
 - viii) ~~THE EXPORT SITE OWNER, PRINCIPAL EXECUTIVE OFFICER, OR AUTHORIZED REPRESENTATIVE, AND A CALIFORNIA REGISTERED PROFESSIONAL ENGINEER OR GEOLOGIST MUST SIGN AND CERTIFY THE INERT WASTE CERTIFICATION. THE INERT WASTE CERTIFICATION MUST INCLUDE THE STATEMENT, "I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT."~~
- d) ~~TIER 2 INERT WASTE SOIL REUSED AT COMMERCIAL OR INDUSTRIAL DEVELOPMENT SITES MUST COMPLY WITH THE FOLLOWING CONDITIONS:~~
 - i) ~~TIER 2 INERT WASTE SOIL MAY ONLY BE REUSED ON COMMERCIAL OR INDUSTRIAL SITES. IT MAY NOT BE REUSED AT RESIDENTIAL, SCHOOL, OR PARK SITES.~~
 - ii) ~~TIER 2 INERT WASTE SOIL MUST BE PLACED AT LEAST 5 FEET ABOVE THE HIGHEST HISTORICALLY KNOWN OR ANTICIPATED LEVEL OF GROUNDWATER. THE SOIL THAT SEPARATES THE INERT WASTE SOIL FROM GROUNDWATER SHALL HAVE A SIGNIFICANT CLAY CONTENT (GREATER THAN 5 PERCENT CLAY MATERIAL) OR AN IN-SITU PERMEABILITY OF LESS THAN 10^{-5} CM/SEC.~~
 - iii) ~~TIER 2 INERT WASTE SHALL BE PLACED AT LEAST 100 FEET FROM THE NEAREST SURFACE WATER BODY.~~
 - iv) ~~TIER 2 INERT WASTE SHALL BE PROTECTED AGAINST 100-YEAR PEAK STREAM FLOWS AS DEFINED BY THE COUNTY FLOOD CONTROL AGENCY.~~
 - v) ~~TIER 2 INERT WASTE SHALL BE COVERED BY EITHER: 1) ENGINEERED MATERIALS (E.G. USED AS ROAD BASE, FILL BENEATH BUILDINGS, BRIDGE ABUTMENTS), OR 2) NOT LESS THAN 2 FEET OF NONCONTAMINATED, CLEAN FILL. THE COVER SHALL HAVE A PERMEABILITY OF NO MORE THAN 10^{-5} CM/SEC. PLACEMENT OF A COVER ON THE INERT WASTE SOILS SHALL BE COMPLETED WITH 30 DAYS OF DISCHARGING THE FINAL LOAD OF INERT WASTE SOILS AT THE IMPORT SITE.~~

~~CONDITIONAL WAIVER NO. 9 – DISCHARGES OF SLURRIES TO LAND~~

~~CONDITIONAL WAIVER NO. 9 IS FOR DISCHARGES OF SLURRIES TO LAND, WHICH MAY BE A SOURCE OF POLLUTANTS THAT CAN ADVERSELY AFFECT THE QUALITY OF WATERS OF THE STATE. A SLURRY TYPICALLY CONSISTS OF WATER AND SOME MATERIAL TO FORM A LIQUID MIXTURE.~~

~~THE FOLLOWING TYPES OF DISCHARGE NOT REGULATED OR AUTHORIZED UNDER WASTE DISCHARGE REQUIREMENTS (WDRS) MAY BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 9:~~

- ~~• DISCHARGES OF DRILLING MUDS TO LAND~~
- ~~• DISCHARGES OF CONCRETE GRINDING RESIDUES TO LAND~~

~~IN ORDER TO BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 9, DISCHARGES MUST COMPLY WITH CERTAIN CONDITIONS TO BE PROTECTIVE OF WATER QUALITY. WAIVER CONDITIONS APPLICABLE TO DISCHARGES OF SLURRIES TO LAND INCLUDE THE FOLLOWING:~~

~~9.I.A. GENERAL WAIVER CONDITIONS FOR SLURRIES DISCHARGED TO LAND~~

~~9.II.A. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES OF DRILLING MUD TO LAND~~

~~DISCHARGES OF SLURRIES TO LAND THAT COMPLY WITH THE GENERAL AND SPECIFIC WAIVER CONDITIONS IN CONDITIONAL WAIVER NO. 9 ARE NOT EXPECTED TO POSE A THREAT TO THE QUALITY OF WATERS OF THE STATE.~~

~~9.I.A. GENERAL WAIVER CONDITIONS FOR SLURRIES DISCHARGED TO LAND~~

- ~~1. PREVENT THE DIRECT OR INDIRECT DISCHARGE OF SLURRIES TO ANY SURFACE WATERS OF THE STATE (INCLUDING EPHEMERAL STREAMS AND VERNAL POOLS).~~
- ~~2. SLURRIES MUST BE CONTAINED TO ELIMINATE THE POTENTIAL FOR RUNOFF FROM THE SITE.~~
- ~~3. IF SLURRIES ARE DISCHARGED TO LAND FOR STORAGE, THE STORAGE AREA OR SUMP MUST BE DESIGNED TO BE FULLY CONTAINED AND ENSURE NO OVERFLOW DURING DISCHARGE WITH AT LEAST 2 FEET OF FREEBOARD.~~
- ~~4. THE FLOOR OF THE STORAGE AREA OR SUMP MUST BE AT LEAST 5 FEET ABOVE THE HIGHEST KNOWN HISTORICAL OR ANTICIPATED GROUNDWATER LEVEL.~~
- ~~5. THE WALLS OF THE STORAGE AREA OR SUMP MUST BE AT LEAST 100 FEET AWAY FROM ANY SURFACE WATER BODY OR MUNICIPAL WATER WELL.~~
- ~~6. SLURRIES CANNOT CONTAIN ANY TOXIC OR HAZARDOUS CONSTITUENTS.~~
- ~~7. SLURRIES DISCHARGED TO LAND MUST NOT ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF UNDERLYING GROUNDWATER.~~
- ~~8. SLURRIES MUST BE REMOVED AND DISPOSED OF AT AN APPROPRIATE DISPOSAL FACILITY PRIOR TO RESTORING THE STORAGE AREA OR SUMP TO PRE-DISCHARGE CONDITIONS.~~
- ~~9. THE STORAGE AREA OR SUMP MUST BE FILLED IN AND RESTORED TO PRE-DISCHARGE CONDITIONS.~~
- ~~10. DISCHARGER MUST SUBMIT A NOTICE OF INTENT OR TECHNICAL AND/OR MONITORING PROGRAM REPORTS WHEN DIRECTED BY THE SAN DIEGO WATER BOARD.~~

~~9.II.A. SPECIFIC WAIVER CONDITIONS FOR DISCHARGE OF DRILLING MUDS~~

- ~~1. DRILLING MUD CANNOT BE FROM BORINGS ADVANCED FOR A SOIL OR GROUNDWATER CONTAMINATION INVESTIGATION.~~

~~CONDITIONAL WAIVER NO. 10 – DISCHARGES OF EMERGENCY/DISASTER RELATED WASTES~~

~~CONDITIONAL WAIVER NO. 10 IS FOR DISCHARGES OF WASTES RESULTING FROM AN EMERGENCY OR DISASTER, WHICH MAY BE A SOURCE OF POLLUTANTS THAT CAN ADVERSELY AFFECT THE QUALITY OF WATERS OF THE STATE.~~

~~THE FOLLOWING TYPES OF DISCHARGE NOT REGULATED OR AUTHORIZED UNDER WASTE DISCHARGE REQUIREMENTS (WDRS) MAY BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 10:~~

- ~~● INCIDENTAL DISCHARGES OF OIL AND OILY WATER WITHIN A RESPONSE AREA DURING AN OIL SPILL RESPONSE IN MARINE WATERS~~
- ~~● DISCHARGES OF DISASTER RELATED WASTES TO TEMPORARY WASTE PILES AND SURFACE IMPOUNDMENTS~~
- ~~● DISCHARGES OF MASS MORTALITY WASTES TEMPORARY WASTE PILES AND EMERGENCY LANDFILLS~~
- ~~● OTHER DISCHARGES OF EMERGENCY/DISASTER RELATED WASTES~~

~~IN ORDER TO BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 10, DISCHARGES MUST COMPLY WITH CERTAIN CONDITIONS TO BE PROTECTIVE OF WATER QUALITY. WAIVER CONDITIONS APPLICABLE TO EMERGENCY/DISASTER RELATED WASTE DISCHARGES INCLUDE THE FOLLOWING:~~

~~10.I.A. GENERAL WAIVER CONDITIONS FOR DISCHARGES OF EMERGENCY/DISASTER RELATED WASTES~~

~~10.II.A. SPECIFIC WAIVER CONDITIONS FOR INCIDENTAL DISCHARGES DURING AN OIL SPILL RESPONSE~~

~~10.II.B. SPECIFIC WAIVER CONDITIONS FOR DISASTER RELATED AND MASS MORTALITY WASTES DISPOSED AT REGULATED WASTE DISPOSAL FACILITIES~~

~~10.II.C. SPECIFIC WAIVER CONDITIONS FOR DISASTER RELATED AND MASS MORTALITY WASTES DISCHARGED TO TEMPORARY WASTE PILES LOCATED AT REGULATED WASTE DISPOSAL FACILITIES~~

~~10.II.D. SPECIFIC WAIVER CONDITIONS FOR DISASTER RELATED WASTES DISCHARGED TO TEMPORARY WASTE PILES NOT LOCATED AT REGULATED WASTE DISPOSAL FACILITIES~~

~~10.II.E. SPECIFIC WAIVER CONDITIONS FOR DISASTER RELATED WASTES DISCHARGED TO TEMPORARY SURFACE IMPOUNDMENTS NOT LOCATED AT REGULATED WASTE DISPOSAL FACILITIES~~

~~10.II.F. SPECIFIC WAIVER CONDITIONS FOR MASS MORTALITY WASTES DISCHARGED TO EMERGENCY LANDFILLS NOT LOCATED AT REGULATED WASTE DISPOSAL FACILITIES~~

~~DISCHARGES OF EMERGENCY/DISASTER RELATED WASTES THAT COMPLY WITH THE GENERAL AND SPECIFIC WAIVER CONDITIONS IN CONDITIONAL WAIVER NO. 10 SHOULD MINIMIZE THE POTENTIAL IMPACT AND SHOULD NOT POSE A SIGNIFICANT THREAT TO THE QUALITY OF WATERS OF THE STATE.~~

~~10.I.A. GENERAL WAIVER CONDITIONS FOR DISCHARGES OF EMERGENCY/DISASTER RELATED WASTES~~

~~1. THIS CONDITIONAL WAIVER DOES NOT BECOME ACTIVE AND AVAILABLE UNTIL ONE OF THE FOLLOWING OCCURS:~~

~~a) THE GOVERNOR OF CALIFORNIA ISSUES A PROCLAMATION, PURSUANT TO GOVERNMENT CODE SECTIONS 8625 AND 8558(B), IDENTIFYING A PORTION OF THE SAN DIEGO REGION AS BEING IN A STATE OF EMERGENCY, AND APPLIES ONLY TO DISASTER RELATED WASTE STREAMS FROM DISASTER IMPACTED AREAS; OR~~

~~b) AN OIL SPILL INCIDENT OCCURS IN THE MARINE WATERS OF THE SAN DIEGO REGION REQUIRING A RESPONSE AUTHORIZED BY THE ADMINISTRATOR OF THE OFFICE OF SPILL PREVENTION AND RESPONSE; OR~~

~~c) A DISCHARGE OCCURS RESULTING FROM EMERGENCY ACTIVITIES THAT ARE WAIVED OF THE REQUIREMENTS OF WATER CODE SECTIONS 13260(A) AND (C), 13263(A), AND 13264(A), WHICH ARE DESCRIBED IN WATER CODE SECTION 13269(C)(1) AND (2).~~

- ~~2. THIS CONDITIONAL WAIVER IS ONLY IN EFFECT TEMPORARILY AND SHALL EXPIRE UNDER THE FOLLOWING CONDITIONS:~~
- ~~a) THE STATE OF EMERGENCY DECLARED BY THE GOVERNOR EXPIRES, OR~~
 - ~~b) THE SAN DIEGO WATER BOARD TAKES ACTION TO TERMINATE ENROLLMENT OF INDIVIDUAL OR ALL DISCHARGERS/UNITS TEMPORARILY GRANTED A WAIVER, OR~~
 - ~~c) SIX (6) MONTHS HAS ELAPSED SINCE THE GOVERNOR ISSUED A DECLARATION OF THE STATE OF EMERGENCY FOR ANY PORTION OF THE SAN DIEGO REGION, OR THE OIL SPILL INCIDENT OCCURRED, OR EMERGENCY ACTIVITIES BEGAN, UNLESS OTHERWISE DIRECTED BY THE SAN DIEGO WATER BOARD.~~
- ~~3. EMERGENCY/DISASTER RELATED WASTE MANAGEMENT AND CLEANUP ACTIVITIES MUST MINIMIZE OR ELIMINATE THE DISCHARGE OF ANY POLLUTANTS THAT COULD ADVERSELY AFFECT THE QUALITY OR BENEFICIAL USES OF THE WATERS OF THE STATE.~~
- ~~4. FOR ALL TEMPORARY WASTE PILES AND SURFACE IMPOUNDMENTS USED TO MANAGE EMERGENCY/DISASTER RELATED WASTE, THE FOLLOWING CONDITIONS APPLY:~~
- ~~a) PREVENT THE DIRECT OR INDIRECT DISCHARGE OF EMERGENCY/DISASTER RELATED WASTES TO ANY SURFACE WATERS OF THE STATE (INCLUDING EPHEMERAL STREAMS AND VERNAL POOLS).~~
 - ~~b) EMERGENCY/DISASTER RELATED WASTE MANAGEMENT OPERATIONS SHALL NOT BE PERFORMED IN A MANNER THAT CREATES, OR CONTRIBUTES TO A CONDITION OF POLLUTION OR NUISANCE.~~
 - ~~c) EMERGENCY/DISASTER RELATED WASTE MANAGEMENT OPERATIONS SHALL NOT BE PERFORMED IN A MANNER THAT CREATES, OR CONTRIBUTES TO CONDITIONS WHICH VIOLATE THE WASTE DISCHARGE PROHIBITIONS PROMULGATED IN THE BASIN PLAN.~~
 - ~~d) EMERGENCY/DISASTER RELATED WASTES SHALL NOT BE MANAGED IN A MANNER THAT CAUSES CORROSION, DECAY, OR OTHERWISE REDUCES OR IMPAIRS THE INTEGRITY OF CONTAINMENT STRUCTURES AT ANY WASTE MANAGEMENT UNIT.¹⁴~~
 - ~~e) EMERGENCY/DISASTER RELATED WASTES SHALL NOT BE MANAGED IN A MANNER THAT MIXES OR COMMINGLES OTHER WASTES THAT CAN PRODUCE A VIOLENT REACTION (INCLUDING HEAT, PRESSURE, FIRE OR EXPLOSION), THAT CAN PRODUCE TOXIC BYPRODUCTS, OR THAT CAN PRODUCE ANY REACTION PRODUCTS REQUIRING A HIGHER LEVEL OF CONTAINMENT, OR RESULTS IN THE MIXTURE BEING CLASSIFIED AS A RESTRICTED WASTE.¹²~~
 - ~~f) LIQUID HAZARDOUS WASTES OR "RESTRICTED HAZARDOUS WASTES"¹³ CANNOT BE DISCHARGED TO MUNICIPAL SOLID WASTE (MSW) LANDFILLS, TEMPORARY WASTE PILES, OR TEMPORARY SURFACE IMPOUNDMENTS.~~
 - ~~g) TEMPORARY WASTE PILES MUST BE COVERED TO ADEQUATELY PREVENT RAINWATER INFILTRATION AND RUNOFF, AND CONTROL FUGITIVE DUST, VECTORS, ODORS, BLOWING LITTER AND SCAVENGING. THE COVER SHALL NOT CONSIST OF OR CONTAIN MATERIAL CLASSIFIED AS A DESIGNATED WASTE.¹⁴~~
 - ~~h) INERT WASTES¹⁵ THAT ARE SUITABLE FOR REUSE OR RECYCLING DO NOT REQUIRE PERMANENT DISPOSAL AT A CLASSIFIED WASTE MANAGEMENT OR DISPOSAL FACILITY (I.E., PERMITTED LANDFILL).~~
 - ~~i) WASTE STREAMS MUST ONLY ORIGINATE FROM DISASTER-IMPACTED AREAS OF THE SAN DIEGO REGION. THESE WASTE STREAMS SHALL BE DISCHARGED FOR TREATMENT AND PERMANENT DISPOSAL ONLY INTO:~~
 - ~~i) WASTE MANAGEMENT OR TREATMENT UNITS (E.G., LIQUID WASTES INTO WASTEWATER TREATMENT PLANTS) AS ALLOWED BY WASTE DISCHARGE REQUIREMENTS (WDRS) ISSUED BY THE SAN DIEGO WATER BOARD, OR~~
 - ~~ii) SOLID WASTE MANAGEMENT UNITS OR DISPOSAL FACILITIES (E.G., SOLID WASTES INTO CLASS III MSW LANDFILLS UNDERLAIN WITH ENGINEERED COMPOSITE LINERS AND LEACHATE COLLECTION SYSTEMS AND THAT SATISFY THE REQUIREMENTS OF STATE WATER BOARD RESOLUTION NO. 93-62); OR~~
 - ~~iii) EMERGENCY LANDFILLS ESTABLISHED IN ACCORDANCE WITH THE CONDITIONS OF THIS WAIVER; AND~~

¹⁴ Pursuant to California Code of Regulations Title 27 section 20200(b)(1)

¹² Pursuant to California Code of Regulations Title 27 section 20200(b)(2)

¹³ Defined in California Health and Safety Code section 25122.7

¹⁴ Defined in California Code of Regulations Title 27 section 20210

¹⁵ Defined in California Code of Regulations Title 27 section 20230

~~iv) AS ALLOWED BY VALID WDRS ISSUED BY THE SAN DIEGO WATER BOARD FOR OTHER CATEGORIES OF WASTE MANAGEMENT UNITS.~~

~~10.II.A. SPECIFIC WAIVER CONDITIONS FOR INCIDENTAL DISCHARGES DURING AN OIL SPILL RESPONSE~~

- ~~1. INCIDENTAL DISCHARGES¹⁶ ARE CONFINED TO THE RESPONSE AREA WHICH IS DEFINED BY THE DAILY WORK PLAN APPROVED UNDER THE INCIDENT COMMAND SYSTEM OR UNIFIED COMMAND STRUCTURE BY THE ADMINISTRATOR, FEDERAL ON-SCENE COORDINATOR, OR STATE ON-SCENE COORDINATOR.~~
- ~~2. OIL SPILL RESPONSE MUST BE IN MARINE WATERS.¹⁷~~

~~10.II.B. SPECIFIC WAIVER CONDITIONS FOR DISASTER RELATED AND MASS MORTALITY WASTES DISPOSED AT REGULATED WASTE DISPOSAL FACILITIES~~

- ~~1. WASTE (NOT OTHERWISE SUITABLE FOR RECYCLING OR REUSE) DERIVED FROM CLEANUP OF EMERGENCY/DISASTER IMPACTED AREAS IN THE SAN DIEGO REGION AND MANAGED UNDER PROVISIONS OF THIS WAIVER SHALL ONLY BE DISCHARGED FOR PERMANENT DISPOSAL INTO UNITS THAT ARE UNDERLAIN WITH AN ENGINEERED COMPOSITE LINER SYSTEM AND A LEACHATE COLLECTION MEETING THE REQUIREMENTS OF STATE WATER BOARD RESOLUTION NO. 93-62.~~
- ~~2. WASTES DERIVED FROM CLEANUP OF DISASTER IMPACTED AREAS IN THE SAN DIEGO REGION AND DISCHARGED INTO REGULATED WASTE DISPOSAL FACILITIES MUST BE ISOLATED, TO THE EXTENT PRACTICABLE, FROM AREAS OF THE FACILITY THAT ARE NOT LINED.~~
- ~~3. FOOD WASTES, ANIMAL CARCASSES, AND OTHER PUTRESCIBLE WASTES DERIVED FROM CLEANUP OF DISASTER IMPACTED AREAS IN THE SAN DIEGO REGION SHALL BE DISCHARGED FOR DISPOSAL IN COMPLIANCE WITH CONDITIONS OF THIS WAIVER AND COVERED EXPEDITIOUSLY.~~
- ~~4. INERT WASTES CONTAINED IN MIXED EMERGENCY WASTES DERIVED FROM CLEANUP OF DISASTER IMPACTED AREAS IN THE SAN DIEGO REGION, SHALL BE SEPARATED AND RECYCLED WHEN APPROPRIATE AND PRACTICABLE.~~
- ~~5. THE DISCHARGER IS RESPONSIBLE FOR ACCURATELY CLASSIFYING DISASTER RELATED WASTE STREAMS IN ACCORDANCE WITH THE APPLICABLE REGULATORY REQUIREMENTS.¹⁸~~
- ~~6. THE REGULATED WASTE DISPOSAL FACILITY OWNER/OPERATOR IS RESPONSIBLE FOR PROPERLY IDENTIFYING DISASTER RELATED WASTE STREAMS¹⁹ AND IDENTIFYING WASTES THAT MAY BE SUITABLE FOR USE AS ALTERNATIVE DAILY COVER (ADC). SOLID WASTES THAT MAY BE USED AS ADC AT A REGULATED DISPOSAL FACILITY ARE AS FOLLOWS:~~
 - ~~a) SOLID WASTES THAT ARE CLASSIFIED AS INERT WASTES.~~
 - ~~b) SOLID WASTES THAT MEET THE CRITERIA FOR ADC AS PRESCRIBED IN CALIFORNIA CODE OF REGULATIONS TITLE 27 SECTIONS 20690 TO 20705, AND.~~
 - ~~c) OTHER SOLID WASTES IDENTIFIED BY THE LOCAL ENFORCEMENT AGENCY (LEA) AS BEING SUITABLE FOR USE AS ADC; SO LONG AS THE WASTE COULD BE ACCEPTED AT A CLASS III MSW LANDFILL WITHOUT SPECIAL PERMISSION FROM THE SAN DIEGO WATER BOARD.~~
- ~~7. DISPOSAL OF LARGE NUMBERS OF ANIMAL CARCASSES, AND OTHER HIGH MOISTURE WASTE STREAMS FROM MASS MORTALITY (E.G., NATURAL DISASTER, AGRICULTURAL DISEASE, ETC.), MAY CAUSE WASTES TO EXCEED MOISTURE HOLDING CAPACITY AT REGULATED MSW LANDFILLS. TO LIMIT THE IMPACTS FROM SUCH A LARGE AN ADDITIONAL MOISTURE CONTENT ASSOCIATED WITH A MASS MORTALITY WASTE LOAD, THE OWNER/OPERATOR RESPONSIBLE FOR THE REGULATED WASTE DISPOSAL FACILITY SHOULD IMPLEMENT THE FOLLOWING PROCEDURES:~~
 - ~~a) DISCHARGE HIGH MOISTURE WASTES (ANIMAL CARCASSES, ANIMAL RELATED WASTES, ETC.) ONLY IN AREAS OF THE COMPOSITE LINED UNIT WITH A CONSIDERABLE THICKNESS OF OTHER WASTE.~~

¹⁶ "Incidental discharge" is defined as "the release of oil and/or oily water within the response area in or proximate to the area in which the oil recovery activities are taking place during and attendant to oil spill response activities. Incidental discharges include, but are not limited to, the decanting of oily water; in order to conserve oil storage capacity, and the wash down of vessels, facilities, and equipment used in the response."

¹⁷ "Marine waters" defined in Government Code section 8670.3(i) as "those waters subject to tidal influence."

¹⁸ Requirements are provided in California Code of Regulations Title 27, Title 23 Chapter 15, and/or Title 22 Division 4.5.

¹⁹ Pursuant to California Code of Regulations Title 27 section 20200(c)

- ~~b) OWNER/OPERATOR MUST LIMIT THE THICKNESS OF THE HIGH-MOISTURE WASTE STREAM (E.G., ANIMAL CARCASSES, ANIMAL RELATED WASTES, ETC.) TO NO MORE THAN 2 FEET.~~
- ~~c) OWNER/OPERATOR MUST COVER EACH LAYER OF HIGH-MOISTURE WASTES (E.G., ANIMAL CARCASSES, ANIMAL RELATED WASTES, ETC.) WITH AN EVEN THICKER LAYER OF ABSORBENT WASTES OR SOIL.~~
- ~~d) FOR DISASTER RELATED MASS MORTALITY WASTES STREAMS THAT ARE IN A LIQUID FORM (E.G. RAW EGGS, ETC.) REDUCE THE MOISTURE CONTENT PRIOR TO DISCHARGE BY MIXING WITH AN ABSORBENT MATERIAL (E.G., SAW DUST, MULCH, SOIL, ETC.).~~
- ~~8. WITHIN 60 DAYS AFTER THE EXPIRATION OF THIS WAIVER (SEE 10.I.A) THE OWNER/OPERATOR OF THE A REGULATED WASTE DISPOSAL FACILITY THAT ACCEPTED WASTE FROM DISASTER-IMPACTED AREAS IN THE SAN DIEGO REGION MUST SUBMIT AN AMENDMENT TO THEIR REPORT OF WASTE DISCHARGE (ROWD) (JOINT TECHNICAL DOCUMENT) DESCRIBING THE MATERIAL CHANGE TO THEIR DISCHARGE, PERTAINING TO THE TEMPORARY ACCEPTANCE, MANAGEMENT, AND DISPOSAL OF WASTE DERIVED FROM CLEANUP OF DISASTER-IMPACTED AREAS OF THE SAN DIEGO REGION.~~

~~10.II.C. SPECIFIC WAIVER CONDITIONS FOR DISASTER RELATED AND MASS MORTALITY WASTES DISCHARGED TO TEMPORARY WASTE PILES LOCATED AT REGULATED WASTE DISPOSAL FACILITIES~~

- ~~1. OWNERS/OPERATORS OF REGULATED WASTE MANAGEMENT OR DISPOSAL FACILITIES PROPOSING TO ACCEPT DISCHARGES OF WASTE FROM DISASTER-IMPACTED AREAS IN THE SAN DIEGO REGION TO A TEMPORARY WASTE STAGING AREA LOCATED AT A REGULATED FACILITY MUST SUBMIT A NOTICE OF INTENT TO THE SAN DIEGO WATER BOARD WITHIN 30 DAYS OF THE INITIAL DISCHARGE OF ANY DISASTER RELATED WASTES. THE NOTICE OF INTENT MUST CONTAIN THE NAME AND CONTACT INFORMATION OF THE OWNER/OPERATOR OF THE REGULATED WASTE MANAGEMENT OR DISPOSAL FACILITY PROPERTY, FACILITY ADDRESS AND CONTACT INFORMATION, DESCRIPTION OF TEMPORARY WASTE MANAGEMENT UNIT, CERTIFICATION, AND SIGNATURE OF THE OWNER, OPERATOR, AND/OR AUTHORIZED REPRESENTATIVE. THE CERTIFICATION MUST INCLUDE THE STATEMENT, "I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT."~~
- ~~2. OWNERS/OPERATORS OF REGULATED WASTE MANAGEMENT OR DISPOSAL FACILITIES MUST PREVENT SURFACE RUNOFF/RUNON FROM CONTACTING WASTES DERIVED FROM CLEANUP OF DISASTER-IMPACTED AREAS IN THE SAN DIEGO REGION AND SHALL PREVENT EROSION AND TRANSPORT OF SOILS CONTAINING DISASTER RELATED WASTES OR WASTE CONSTITUENTS BY SURFACE RUNOFF FROM ALL TEMPORARY WASTE PILES. THE FACILITY OWNER/OPERATOR MUST IMPLEMENT MANAGEMENT MEASURES (MMS) AND/OR BEST MANAGEMENT PRACTICES (BMPs) FOR STORM WATER CONVEYANCE AND CONTROL.~~
- ~~3. ALL WASTES DERIVED FROM DISASTER-IMPACTED AREAS IN THE SAN DIEGO REGION MUST BE PLACED AT LEAST 5 FEET ABOVE THE HIGHEST HISTORICALLY KNOWN OR ANTICIPATED LEVEL OF GROUNDWATER, AND MORE THAN 100 FEET FROM, AND AT AN ELEVATION THAT IS HIGHER THAN, ANY SURFACE WATER OF THE STATE.~~
- ~~4. ALL WASTE DERIVED FROM DISASTER-IMPACTED AREAS IN THE SAN DIEGO REGION MUST BE PROTECTED FROM FLOODING AND INUNDATION, IN COMPLIANCE WITH THE CURRENT WDRS FOR THE AFFECTED UNIT, OR UNITS, AT THE REGULATED FACILITY.~~
- ~~5. OWNERS/OPERATORS OF REGULATED WASTE MANAGEMENT OR DISPOSAL FACILITIES MUST MANAGE TEMPORARY WASTE PILES FOR DISASTER RELATED MASS MORTALITY WASTES AS FOLLOWS:~~
 - ~~a) TEMPORARY WASTE PILES OF MASS MORTALITY WASTES CAN ONLY BE LOCATED IN AREAS UNDERLAIN BY A COMPOSITE LINER SYSTEM (OR APPROVED ENGINEERING ALTERNATIVE) AND A SIGNIFICANT THICKNESS OF OTHER TYPES OF SOLID WASTES.~~
 - ~~b) OWNER/OPERATOR MUST IMPLEMENT A PLAN TO PREVENT WILD ANIMALS (E.G., BIRDS, MAMMALS, REPTILES, ETC.) FROM COMING INTO CONTACT WITH MASS MORTALITY WASTES (E.G., PROVIDE AND MAINTAIN ADEQUATE COVER FOR TEMPORARY WASTE PILES).~~
 - ~~c) OWNER/OPERATOR MUST ENSURE THAT ALL TEMPORARY WASTE PILES CONTAINING MASS MORTALITY WASTES ARE DISCHARGED INTO LANDFILL PRIOR TO THE END OF THE~~

~~WORKING DAY, UNLESS SUFFICIENT INFORMATION IS PROVIDED TO DEMONSTRATE THAT A PROPOSED ALTERNATIVE IS PROTECTIVE OF WATER QUALITY AND HUMAN HEALTH FOR A GIVEN TEMPORARY WASTE PILE.~~

- ~~d) OWNER/OPERATOR MUST ENSURE THAT ALL MASS MORTALITY WASTES ARE COVERED WITH SOIL OR OTHER WASTE IMMEDIATELY AFTER IT IS DISCHARGED INTO THE LANDFILL.~~
- ~~e) OWNER/OPERATOR MUST ENSURE THAT ANY STORM WATER RUNOFF THAT COMES INTO CONTACT WITH THE DISASTER RELATED WASTES OR CONTAINING WASTE CONSTITUENTS IS MANAGED AS LEACHATE.~~
- ~~6. DISASTER RELATED AND MASS MORTALITY WASTES DISCHARGED TO TEMPORARY WASTE PILES AT REGULATED WASTE MANAGEMENT OR DISPOSAL FACILITIES TEMPORARILY GRANTED A WAIVER, TOGETHER WITH ANY MATERIALS USED TO CONTAIN THE TEMPORARY WASTE PILES, SHALL BE REMOVED FROM THE SITE. THE SITE SHALL BE RESTORED TO ITS ORIGINAL STATE NO LATER THAN THE 60 DAYS AFTER EXPIRATION OF THIS WAIVER (SEE 10.I.A), OR AS REQUIRED BY THE SAN DIEGO WATER BOARD. ALTERNATIVELY, THE FACILITY OWNER/OPERATOR MUST FILE AN AMENDED ROWD (JOINT TECHNICAL DOCUMENT) AND OBTAIN AMENDED WDRS FROM THE SAN DIEGO WATER BOARD FOR ANY WASTE PILES THAT WILL CONTINUE TO EXIST PAST THE EXPIRATION DATE OF THIS WAIVER.~~
- ~~7. OWNERS/OPERATORS OF REGULATED WASTE MANAGEMENT OR DISPOSAL FACILITIES MUST SUBMIT A NOTICE OF TERMINATION TO THE SAN DIEGO WATER BOARD WITHIN 10 WORKING DAYS OF COMPLETING REMOVAL OF ALL DISASTER RELATED WASTES AND RESTORING THE SITE TO ITS ORIGINAL CONDITION. THE NOTICE OF TERMINATION MUST CONTAIN THE NAME AND CONTACT INFORMATION OF THE OWNER/OPERATOR OF THE REGULATED FACILITY PROPERTY, FACILITY ADDRESS AND CONTACT INFORMATION, DESCRIPTION OF WASTE THAT WAS TEMPORARILY STORED/STAGED IN THE TEMPORARY WASTE MANAGEMENT UNIT, THE FINAL WASTE DISPOSAL LOCATION, CERTIFICATION, AND SIGNATURE OF THE OWNER, OPERATOR, AND/OR AUTHORIZED REPRESENTATIVE. THE CERTIFICATION MUST INCLUDE THE STATEMENT, "I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT."~~

~~10.II.D. SPECIFIC WAIVER CONDITIONS FOR DISASTER RELATED WASTES DISCHARGED TO TEMPORARY WASTE PILES NOT LOCATED AT REGULATED WASTE DISPOSAL FACILITIES~~

- ~~1. ANY AGENCY, JURISDICTION OR PERSON PROPOSING TO ESTABLISH A TEMPORARY WASTE PILE NOT LOCATED AT A REGULATED FACILITY MUST SUBMIT A NOTICE OF INTENT TO THE SAN DIEGO WATER BOARD WITHIN 30 DAYS OF THE INITIAL DISCHARGE OF ANY DISASTER RELATED WASTES. THE NOTICE OF INTENT MUST CONTAIN THE NAME AND CONTACT INFORMATION OF THE OWNER/OPERATOR THE PROPERTY WHERE THE TEMPORARY WASTE PILE FACILITY IS LOCATED, FACILITY ADDRESS AND CONTACT INFORMATION, DESCRIPTION OF TEMPORARY WASTE MANAGEMENT UNIT, CERTIFICATION, AND SIGNATURE OF THE OWNER, OPERATOR, AND/OR AUTHORIZED REPRESENTATIVE. THE CERTIFICATION MUST INCLUDE THE STATEMENT, "I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT."~~
- ~~2. OWNERS/OPERATORS OF TEMPORARY WASTE PILES NOT ON REGULATED FACILITIES MUST ENSURE THAT THEY ARE SITED, DESIGNED, CONSTRUCTED, OPERATED, AND MAINTAINED TO ENSURE COMPLIANCE THE FOLLOWING MINIMUM PRESCRIPTIVE AND PERFORMANCE STANDARDS:~~
 - ~~a) THE BOTTOM OF A TEMPORARY WASTE PILE MUST BE PLACED AT LEAST 5 FEET ABOVE THE HIGHEST HISTORICALLY KNOWN OR ANTICIPATED LEVEL OF GROUNDWATER, AND MORE THAN 100 FEET FROM, AND AT AN ELEVATION THAT IS HIGHER THAN, ANY SURFACE WATER OF THE STATE.~~

- ~~b) TEMPORARY WASTE PILES MUST BE PROTECTED FROM INUNDATION OR WASHOUT DUE OF FLOODS WITH A 100-YEAR RETURN PERIOD.~~
- ~~c) TEMPORARY WASTE PILES CANNOT BE LOCATED ON A KNOWN HOLOCENE FAULT.~~
- ~~d) TEMPORARY WASTE PILES CANNOT BE LOCATED IN AREAS OF POTENTIAL RAPID GEOLOGIC CHANGE (E.G., LANDSLIDES, DEBRIS FLOWS, FLASHFLOOD AREAS, ETC.).~~
- ~~e) TEMPORARY WASTE PILES MUST BE UNDERLAIN BY A TEMPORARY IMPERMEABLE BARRIER (E.G., HEAVY GAUGE PLASTIC) OR LOCATED IN AN AREA COVERED BY A RELATIVELY IMPERMEABLE SURFACE (E.G., ASPHALT, CONCRETE, ETC.). THE LINER MUST BE INSTALLED PRIOR TO ESTABLISHING A TEMPORARY WASTE PILE TO PROTECT ALL NATURAL GEOLOGICAL MATERIALS FROM CONTACT WITH THE WASTE AND FROM CONTACT WITH LEACHATE.~~
- ~~f) TEMPORARY WASTE PILES MUST BE COVERED DAILY WITH EITHER A HEAVY GAGE PLASTIC OR MATERIAL THAT MEETS THE CLASSIFICATION CRITERIA FOR INERT WASTES. A MATERIAL THAT WOULD BE CLASSIFIED AS A DESIGNATED WASTE CANNOT BE UTILIZED FOR DAILY COVER AT A TEMPORARY WASTE STAGING AREA. COVER ON THE TEMPORARY WASTE PILES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO PREVENT RAINWATER INFILTRATION AND RUNOFF, AND CONTROL OF FUGITIVE DUST, VECTORS, ODORS, BLOWING LITTER AND SCAVENGING.~~
- ~~g) TEMPORARY WASTE MANAGEMENT OPERATIONS THAT INCLUDE WASTES WITH A LIQUID CONTENT EXCEEDING ITS MOISTURE-HOLDING CAPACITY AND/OR CONTAINING FREE LIQUIDS, SHALL COMPLY WITH REQUIREMENTS FOR TEMPORARY SURFACE IMPOUNDMENTS (SEE 10.II.E).~~
- ~~h) TEMPORARY WASTE PILES MUST BE DESIGNED, CONSTRUCTED AND OPERATED TO LIMIT, TO THE GREATEST EXTENT POSSIBLE, PONDING, INFILTRATION, INUNDATION, EROSION, SLOPE FAILURE, AND WASHOUT. SURFACE DRAINAGE FROM OUTSIDE OF THE TEMPORARY WASTE PILE SHALL BE DIVERTED FROM THE LOCATION OF THE TEMPORARY WASTE PILE THROUGH IMPLEMENTATION OF MMS/BMPS FOR STORM WATER CONTROL AND CONVEYANCE.~~
- ~~3. OWNERS/OPERATORS OF TEMPORARY WASTE PILES NOT ON REGULATED FACILITIES MUST SUBMIT WRITTEN NOTIFICATION TO THE SAN DIEGO BOARD AT LEAST 30 DAYS PRIOR TO INITIATING THE DISCHARGE OF RETURN WATER OR PONDED WATER CONTAINED WITHIN THE TEMPORARY WASTE PILE IF THE DISCHARGE IS TO A LOCATION OTHER THAN A SANITARY SEWER SYSTEM. BASED ON THE SAN DIEGO WATER BOARD DETERMINATION, THE DISCHARGER MAY RECEIVE: 1) WDRS; 2) A WAIVER OF WDRS, OR 3) WRITTEN DETERMINATION THAT THE DISPOSAL OF THE RETURN WATER OR PONDED WATER IS NOT SUBJECT TO REGULATION BY THE SAN DIEGO WATER BOARD.~~
- ~~4. OWNERS/OPERATORS OF TEMPORARY WASTE PILES NOT ON REGULATED FACILITIES MUST POST AT LEAST ONE CLEARLY VISIBLE SIGN (IN ENGLISH) LISTING THE FOLLOWING MINIMUM INFORMATION: A) PROJECT NAME, B) BRIEF PROJECT DESCRIPTION, AND C) OPERATOR NAME AND PHONE NUMBER. THE DISCHARGER MUST POST ADDITIONAL SIGNS AS NECESSARY (IN LANGUAGES OTHER THAN ENGLISH) TO MORE EFFECTIVELY COMMUNICATE THE MINIMUM CONTACT INFORMATION (LISTED ABOVE) TO THE LOCAL COMMUNITY. THE SIGN(S) SHALL BE MAINTAINED AS REQUIRED TO KEEP THEM LEGIBLE AND SHALL REMAIN IN PLACE WHILE TEMPORARY WASTE PILES REMAIN ON SITE.~~
- ~~5. SOLID WASTES DISCHARGED TO TEMPORARY WASTE PILES NOT AT REGULATED WASTE MANAGEMENT OR DISPOSAL FACILITIES TEMPORARILY GRANTED A WAIVER, TOGETHER WITH ANY MATERIALS USED TO CONTAIN THE TEMPORARY WASTE PILES, SHALL BE REMOVED FROM THE SITE. THE SITE SHALL BE RESTORED TO ITS ORIGINAL STATE NO LATER THAN THE 60 DAYS AFTER EXPIRATION OF THIS WAIVER (SEE 10.I.A), OR AS REQUIRED BY THE SAN DIEGO WATER BOARD.~~
- ~~6. OWNERS/OPERATORS OF TEMPORARY WASTE PILES NOT ON REGULATED FACILITIES MUST SUBMIT A NOTICE OF TERMINATION TO THE SAN DIEGO WATER BOARD WITHIN 10 WORKING DAYS OF COMPLETING REMOVAL OF ALL DISASTER RELATED WASTES AND RESTORING THE SITE TO ITS ORIGINAL CONDITION. THE NOTICE OF TERMINATION MUST CONTAIN THE NAME AND CONTACT INFORMATION OF THE OWNER/OPERATOR THE PROPERTY WHERE THE TEMPORARY WASTE PILE FACILITY WAS LOCATED, FACILITY ADDRESS AND CONTACT INFORMATION, DESCRIPTION OF WASTE THAT WAS TEMPORARILY STORED/STAGED IN THE TEMPORARY WASTE MANAGEMENT UNIT, THE FINAL WASTE DISPOSAL LOCATION, CERTIFICATION, AND SIGNATURE OF THE OWNER, OPERATOR, AND/OR AUTHORIZED REPRESENTATIVE. THE CERTIFICATION MUST INCLUDE THE STATEMENT, "I CERTIFY~~

~~UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT."~~

~~10.II.E. SPECIFIC WAIVER CONDITIONS FOR DISASTER RELATED WASTES DISCHARGED TO TEMPORARY SURFACE IMPOUNDMENTS NOT LOCATED AT REGULATED WASTE DISPOSAL FACILITIES~~

- ~~1. ANY AGENCY, JURISDICTION OR PERSON PROPOSING TO ESTABLISH A TEMPORARY SURFACE IMPOUNDMENT NOT LOCATED AT A REGULATED FACILITY MUST SUBMIT A NOTICE OF INTENT TO THE SAN DIEGO WATER BOARD WITHIN 30 DAYS OF THE INITIAL DISCHARGE OF ANY DISASTER RELATED WASTES. THE NOTICE OF INTENT MUST CONTAIN THE NAME AND CONTACT INFORMATION OF THE OWNER/OPERATOR THE PROPERTY WHERE THE TEMPORARY SURFACE IMPOUNDMENT FACILITY IS LOCATED, FACILITY ADDRESS AND CONTACT INFORMATION, DESCRIPTION OF TEMPORARY WASTE MANAGEMENT UNIT, CERTIFICATION, AND SIGNATURE OF THE OWNER, OPERATOR, AND/OR AUTHORIZED REPRESENTATIVE. THE CERTIFICATION MUST INCLUDE THE STATEMENT, "I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT."~~
- ~~2. OWNERS/OPERATORS OF TEMPORARY SURFACE IMPOUNDMENTS NOT ON REGULATED FACILITIES MUST ENSURE THAT THEY ARE SITED, DESIGNED, CONSTRUCTED, OPERATED, AND MAINTAINED TO ENSURE COMPLIANCE THE FOLLOWING MINIMUM PRESCRIPTIVE AND PERFORMANCE STANDARDS:~~
 - ~~a) THE BOTTOM OF A TEMPORARY SURFACE IMPOUNDMENT MUST BE PLACED AT LEAST 5 FEET ABOVE THE HIGHEST HISTORICALLY KNOWN OR ANTICIPATED LEVEL OF GROUNDWATER, AND MORE THAN 100 FEET FROM, AND AT AN ELEVATION THAT IS HIGHER THAN, ANY SURFACE WATER OF THE STATE.~~
 - ~~b) TEMPORARY SURFACE IMPOUNDMENTS MUST BE PROTECTED FROM INUNDATION OR WASHOUT DUE OF FLOODS WITH A 100-YEAR RETURN PERIOD.~~
 - ~~c) TEMPORARY SURFACE IMPOUNDMENTS CANNOT BE LOCATED ON A KNOWN HOLOGENE FAULT.~~
 - ~~d) TEMPORARY SURFACE IMPOUNDMENTS CANNOT BE LOCATED IN AREAS OF POTENTIAL RAPID GEOLOGIC CHANGE (E.G., LANDSLIDES, DEBRIS FLOWS, FLASHFLOOD AREAS, ETC.).~~
 - ~~e) TEMPORARY SURFACE IMPOUNDMENTS MUST BE UNDERLAIN BY A TEMPORARY IMPERMEABLE BARRIER (E.G., HEAVY GAUGE PLASTIC) OR A RELATIVELY IMPERMEABLE SURFACE (E.G., ASPHALT, CONCRETE, ETC.). THE LINER MUST BE INSTALLED PRIOR TO ESTABLISHING A TEMPORARY SURFACE IMPOUNDMENT TO PROTECT ALL NATURAL GEOLOGICAL MATERIALS FROM CONTACT WITH THE WASTE.~~
 - ~~f) BERMS AND CONTAINMENT STRUCTURES OF TEMPORARY SURFACE IMPOUNDMENTS MUST BE COMPOSED OF INERT MATERIALS THAT WILL NOT CAUSE ADVERSE REACTIONS (E.G., CORROSION, DECAY, OR OTHERWISE REDUCE OR IMPAIR THE INTEGRITY OF THE CONTAINMENT STRUCTURE) WHEN PLACED IN CONTACT WITH THE LIQUID WASTES STORED WITHIN THE TEMPORARY SURFACE IMPOUNDMENT.~~
 - ~~g) TEMPORARY SURFACE IMPOUNDMENTS MUST BE DESIGNED, OPERATED AND MAINTAINED TO ENSURE THAT LIQUID WASTES ARE AT LEAST 2 FEET BELOW THE TOP OF THE IMPOUNDMENT (MEASURED VERTICALLY FROM THE SURFACE OF THE LIQUID UP TO THE POINT ON THE SURROUNDING LINED BERM OR DIKE HAVING THE LOWEST ELEVATION), AND MUST BE DESIGNED AND CONSTRUCTED TO PREVENT OVERTOPPING AS A RESULTS OF WIND CONDITIONS LIKELY TO ACCOMPANY PRECIPITATION CONDITIONS.~~
 - ~~h) DIRECT PIPELINE DISCHARGES OF LIQUID CAN OCCUR ONLY INTO TEMPORARY SURFACE IMPOUNDMENTS WITH AUTOMATIC OR MANUALLY OPERATED FAIL-SAFE SYSTEMS TO PREVENT OVERFILLING.~~

- ~~i) TEMPORARY SURFACE IMPOUNDMENTS MUST BE DESIGNED AND CONSTRUCTED TO PREVENT SCOURING OF CONTAINMENT STRUCTURES AT POINTS OF LIQUID DISCHARGE INTO THE IMPOUNDMENTS.~~
- ~~j) TEMPORARY SURFACE IMPOUNDMENTS MUST BE DESIGNED, CONSTRUCTED AND OPERATED TO LIMIT, TO THE GREATEST EXTENT POSSIBLE, INUNDATION, EROSION, SLOPE FAILURE, AND WASHOUT. SURFACE DRAINAGE FROM OUTSIDE OF THE TEMPORARY SURFACE IMPOUNDMENTS SHALL BE DIVERTED FROM THE LOCATION OF THE TEMPORARY WASTE PILE THROUGH IMPLEMENTATION OF MMS/BMPS FOR STORM WATER CONTROL AND CONVEYANCE.~~
- ~~3. OWNERS/OPERATORS OF TEMPORARY SURFACE IMPOUNDMENTS NOT ON REGULATED FACILITIES MUST SUBMIT WRITTEN NOTIFICATION TO THE SAN DIEGO BOARD AT LEAST 30 DAYS PRIOR TO INITIATING THE DISCHARGE OF RETURN WATER OR PONDED WATER CONTAINED WITHIN THE TEMPORARY WASTE PILE IF THE DISCHARGE IS TO A LOCATION OTHER THAN A SANITARY SEWER SYSTEM. BASED ON THE SAN DIEGO WATER BOARD DETERMINATION, THE DISCHARGER MAY RECEIVE: 1) WDRS; 2) A WAIVER OF WDRS, OR 3) WRITTEN DETERMINATION THAT THE DISPOSAL OF THE RETURN WATER OR PONDED WATER IS NOT SUBJECT TO REGULATION BY THE SAN DIEGO WATER BOARD.~~
- ~~4. OWNERS/OPERATORS OF TEMPORARY SURFACE IMPOUNDMENTS NOT ON REGULATED FACILITIES MUST ENSURE THAT ONLY DISASTER RELATED WASTE STREAMS ARE DISCHARGED INTO TEMPORARY SURFACE IMPOUNDMENTS.~~
- ~~5. ALL VISIBLE PORTIONS OF SYNTHETIC LINER SYSTEMS IN TEMPORARY SURFACE IMPOUNDMENTS MUST BE INSPECTED WEEKLY, OR DAILY AS NECESSARY, UNTIL ALL FREE LIQUID IS REMOVED FROM THE SURFACE IMPOUNDMENT AS PART OF CLOSURE.²⁰ IF, DURING THE ACTIVE LIFE OF THE TEMPORARY SURFACE IMPOUNDMENT, THE WASTES ARE REMOVED AND THE BOTTOM OF THE IMPOUNDMENT IS CLEANED DOWN TO THE LINER, AN INSPECTION SHALL BE MADE OF THE BOTTOM OF THE LINER PRIOR TO REFILLING THE IMPOUNDMENT.~~
- ~~6. OWNERS/OPERATORS OF TEMPORARY SURFACE IMPOUNDMENTS NOT ON REGULATED FACILITIES MUST POST AT LEAST ONE CLEARLY VISIBLE SIGN (IN ENGLISH) LISTING THE FOLLOWING MINIMUM INFORMATION: A) PROJECT NAME, B) BRIEF PROJECT DESCRIPTION, AND C) OPERATOR NAME AND PHONE NUMBER. THE FACILITY OWNER/OPERATOR MUST POST ADDITIONAL SIGNS AS NECESSARY (IN LANGUAGES OTHER THAN ENGLISH) TO MORE EFFECTIVELY COMMUNICATE THE MINIMUM CONTACT INFORMATION (LISTED ABOVE) TO THE LOCAL COMMUNITY. THE SIGN(S) SHALL BE MAINTAINED AS REQUIRED TO KEEP THEM LEGIBLE AND SHALL REMAIN IN PLACE WHILE TEMPORARY SURFACE IMPOUNDMENTS REMAIN ON SITE.~~
- ~~7. SOLID WASTES DISCHARGED TO TEMPORARY SURFACE IMPOUNDMENTS NOT AT REGULATED WASTE MANAGEMENT OR DISPOSAL FACILITIES, TOGETHER WITH ANY MATERIALS USED TO CONTAIN THE TEMPORARY SURFACE IMPOUNDMENTS, SHALL BE REMOVED FROM THE SITE. THE SITE SHALL BE RESTORED TO ITS ORIGINAL STATE NO LATER THAN THE 60 DAYS AFTER EXPIRATION OF THIS WAIVER (SEE 10.I.A), OR AS REQUIRED BY THE SAN DIEGO WATER BOARD.~~
- ~~8. OWNERS/OPERATORS OF TEMPORARY SURFACE IMPOUNDMENTS NOT ON REGULATED FACILITIES MUST SUBMIT A NOTICE OF TERMINATION TO THE SAN DIEGO WATER BOARD WITHIN 10 WORKING DAYS OF COMPLETING REMOVAL OF ALL DISASTER RELATED WASTES AND RESTORING THE SITE TO ITS ORIGINAL CONDITION. THE NOTICE OF TERMINATION MUST CONTAIN THE NAME AND CONTACT INFORMATION OF THE OWNER/OPERATOR THE PROPERTY WHERE THE TEMPORARY SURFACE IMPOUNDMENT FACILITY WAS LOCATED, FACILITY ADDRESS AND CONTACT INFORMATION, DESCRIPTION OF WASTE THAT WAS TEMPORARILY STORED/STAGED IN THE TEMPORARY WASTE MANAGEMENT UNIT, THE FINAL WASTE DISPOSAL LOCATION, CERTIFICATION, AND SIGNATURE OF THE OWNER, OPERATOR, AND/OR AUTHORIZED REPRESENTATIVE. THE CERTIFICATION MUST INCLUDE THE STATEMENT, "I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE~~

²⁰ Pursuant to California Code of Regulations Title 27 section 21400(a)

~~SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.”~~

- ~~10.II.F. SPECIFIC WAIVER CONDITIONS FOR MASS MORTALITY WASTES DISCHARGED TO EMERGENCY LANDFILLS NOT LOCATED AT REGULATED WASTE DISPOSAL FACILITIES~~
- ~~1. ANY AGENCY, JURISDICTION OR PERSON PROPOSING TO ESTABLISH AN EMERGENCY LANDFILL NOT LOCATED AT A REGULATED FACILITY MUST SUBMIT A NOTICE OF INTENT TO THE SAN DIEGO WATER BOARD WITHIN 30 DAYS OF THE INITIAL DISCHARGE OF ANY DISASTER RELATED WASTES. THE NOTICE OF INTENT MUST CONTAIN THE NAME AND CONTACT INFORMATION OF THE OWNER/OPERATOR THE PROPERTY WHERE THE EMERGENCY LANDFILL FACILITY IS LOCATED, FACILITY ADDRESS AND CONTACT INFORMATION, DESCRIPTION OF EMERGENCY WASTE MANAGEMENT UNIT, CERTIFICATION, AND SIGNATURE OF THE OWNER, OPERATOR, AND/OR AUTHORIZED REPRESENTATIVE. THE CERTIFICATION MUST INCLUDE THE STATEMENT, “I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.”~~
 - ~~2. OWNERS/OPERATORS OF EMERGENCY LANDFILLS NOT ON REGULATED FACILITIES MUST ENSURE THAT THEY ARE SITED, DESIGNED, CONSTRUCTED, OPERATED, AND MAINTAINED TO ENSURE COMPLIANCE THE FOLLOWING MINIMUM PRESCRIPTIVE AND PERFORMANCE STANDARDS:~~
 - ~~a) THE BOTTOM OF AN EMERGENCY LANDFILL MUST BE PLACED AT LEAST 10 FEET ABOVE THE HIGHEST HISTORICALLY KNOWN OR ANTICIPATED LEVEL OF GROUNDWATER, AND MORE THAN 500 FEET FROM ANY SURFACE WATER OF THE STATE.~~
 - ~~b) EMERGENCY LANDFILLS MUST BE PROTECTED FROM INUNDATION OR WASHOUT DUE OF FLOODS WITH A 100-YEAR RETURN PERIOD.~~
 - ~~c) EMERGENCY LANDFILLS CANNOT BE LOCATED ON A KNOWN HOLOCENE FAULT.~~
 - ~~d) EMERGENCY LANDFILLS CANNOT BE LOCATED IN AREAS OF POTENTIAL RAPID GEOLOGIC CHANGE (E.G., LANDSLIDES, DEBRIS FLOWS, FLASHFLOOD AREAS, ETC.).~~
 - ~~e) EMERGENCY LANDFILLS CANNOT BE LOCATED IN AREAS UNDERLAIN BY FRACTURED BEDROCK AQUIFER OR HIGHLY PERMEABLE SOILS (E.G., GRAVELS, SANDS, AND LOAMY SANDS) OR IN FACILITIES THAT ARE CHARACTERIZED BY SUCH DEPOSITS (E.G., GRAVEL QUARRY).~~
 - ~~f) FOR DISASTER RELATED MASS MORTALITY WASTES STREAMS THAT ARE IN A LIQUID FORM (E.G. RAW EGGS, ETC.) REDUCE THE MOISTURE CONTENT PRIOR TO DISCHARGE BY MIXING WITH AN ABSORBENT MATERIAL (E.G., SAW DUST, MULCH, SOIL, ETC.).~~
 - ~~g) THE THICKNESS OF EACH LAYER OF MASS MORTALITY WASTES MUST BE LIMITED TO LESS THAN 2 FEET.~~
 - ~~h) LIME (OR ANOTHER LIQUID ABATEMENT MATERIAL) MUST BE ADDED TO EACH LAYER TO HELP REDUCE THE GENERATION OF LIQUID BY THE MASS MORTALITY WASTES.~~
 - ~~i) EACH LAYER OF LIME COVERED MASS MORTALITY WASTES MUST BE COVERED BY AT LEAST 3 FEET OF SOIL BEFORE ADDING ANOTHER LAYER OF MASS MORTALITY WASTES.~~
 - ~~j) MASS MORTALITY WASTES MUST BE DISCHARGED FOR DISPOSAL IN COMPLIANCE WITH THE CONDITIONS OF THIS WAIVER AND COVERED AT THE END OF EACH WORKING DAY~~
 - ~~k) THE FINAL LAYER OF DISASTER RELATED MASS MORTALITY WASTES DISCHARGED INTO THE EMERGENCY LANDFILL MUST BE OVERLAIN BY A FINAL LAYER OF NOT LESS THAN 3 FEET OF SOIL; OR ALTERNATIVELY THE UNIT MAY BE COVERED BY A RELATIVELY IMPERMEABLE ENGINEERED SURFACE (E.G., ASPHALT, CONCRETE, ETC.). THE FINAL SOIL LAYER SHALL BE PLACED IN A MOUND CONFIGURATION SO THAT THE FINAL SOIL LAYER: 1) OVERLAPS THE MASS MORTALITY WASTES BY SEVERAL FEET ON EACH EDGE OF THE EMERGENCY LANDFILL; 2) IS AT LEAST 3 FEET THICK OVER ALL PORTIONS OF THE MASS MORTALITY WASTES; AND 3) IS SLOPED TO PROVIDE GOOD DRAINAGE THAT DOES NOT IMPAIR THE INTEGRITY OF THE EMERGENCY LANDFILL.~~
 - ~~l) OWNER/OPERATOR SHOULD ALSO EVALUATE, IMPLEMENT, AND DOCUMENT OTHER EFFECTIVE WASTE ISOLATION (AND WASTE MOISTURE REDUCING METHODS) IN CONJUNCTION WITH THE PROCEDURES IDENTIFIED ABOVE~~

- ~~3. THE EMERGENCY LANDFILL MUST BE DESIGNED, CONSTRUCTED AND OPERATED TO LIMIT, TO THE GREATEST EXTENT POSSIBLE, PONDING, INFILTRATION, INUNDATION, EROSION, SLOPE FAILURE, AND WASHOUT. THE OWNER/OPERATOR MUST PROTECT THE INTEGRITY OF THE FINAL COVER FROM ADVERSE IMPACTS BY EROSION BY INSTALLING AND MAINTAINING MMS/BMPS, INCLUDING:
 - ~~a) INSTALLATION OF RUNON CONTROL FEATURES ON THE UPGRADIENT SIDE OF THE EMERGENCY LANDFILL TO DIVERT OFFSITE STORM WATER FROM THE EMERGENCY LANDFILL.~~
 - ~~b) INSTALLATION OF AN EFFECTIVE RUNOFF COLLECTION AND CONVEYANCE DITCH.~~
 - ~~c) GRADING AND MAINTENANCE OF THE FINAL COVER TO ELIMINATE PONDING OF WATER OVER THE EMERGENCY LANDFILL.~~
 - ~~d) INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES ON THE COVER OF THE EMERGENCY LANDFILL (E.G., INSTALL STRAW MULCH AND/OR A VEGETATIVE COVER).~~
 - ~~e) INSTALLATION OF A DEER FENCE AROUND THE PERIMETER OF THE EMERGENCY LANDFILL TO DISCOURAGE ACCESS BY DIGGING OF CARNIVORES.~~~~
- ~~4. OWNERS/OPERATORS OF EMERGENCY LANDFILLS NOT ON REGULATED FACILITIES MUST POST AT LEAST ONE CLEARLY VISIBLE SIGN (IN ENGLISH) LISTING THE FOLLOWING MINIMUM INFORMATION: A) CLEARLY IDENTIFY THE AREA AS AN EMERGENCY LANDFILL FOR ANIMAL AND AGRICULTURAL WASTES, B) A WARNING AGAINST TRESPASS, C) A DESCRIPTION OF THE REASON FOR THE EMERGENCY LANDFILL (E.G., EXOTIC NEWCASTLE, AVIAN FLU, ETC.), THE TYPE(S) OF WASTE BURIED AT THE SITE (E.G., TYPES OF CARCASSES, EGG WASTES, MANURE, ETC.), AND D) THE NAME AND TELEPHONE NUMBER OF THE CURRENT PROPERTY OWNER. THE FACILITY OWNER/OPERATOR MUST POST ADDITIONAL SIGNS AS NECESSARY (IN LANGUAGES OTHER THAN ENGLISH) TO MORE EFFECTIVELY COMMUNICATE THE MINIMUM CONTACT INFORMATION (LISTED ABOVE) TO THE LOCAL COMMUNITY. THE SIGN(S) SHALL BE MAINTAINED AS REQUIRED TO KEEP THEM LEGIBLE AND SHALL REMAIN IN PLACE WHILE THE EMERGENCY LANDFILL REMAINS ON SITE.~~
- ~~5. OWNERS/OPERATORS OF EMERGENCY LANDFILLS NOT ON REGULATED FACILITIES MUST SUBMIT NOTICE OF TERMINATION TO THE SAN DIEGO WATER BOARD WITHIN 10 WORKING DAYS OF COMPLETING REMOVAL OF ALL DISASTER RELATED WASTES AND RESTORING THE SITE TO ITS ORIGINAL CONDITION. THE NOTICE OF TERMINATION MUST CONTAIN THE NAME AND CONTACT INFORMATION OF THE OWNER/OPERATOR THE PROPERTY WHERE THE TEMPORARY WASTE PILE FACILITY WAS LOCATED, FACILITY ADDRESS AND CONTACT INFORMATION, DESCRIPTION OF WASTE THAT WAS TEMPORARILY STORED/STAGED IN THE TEMPORARY WASTE MANAGEMENT UNIT, THE FINAL WASTE DISPOSAL LOCATION, CERTIFICATION, AND SIGNATURE OF THE OWNER, OPERATOR, AND/OR AUTHORIZED REPRESENTATIVE. THE CERTIFICATION MUST INCLUDE THE STATEMENT, "I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT."~~
- ~~6. OWNERS/OPERATORS OF EMERGENCY LANDFILLS NOT ON REGULATED FACILITIES MUST SUBMIT A ROWD TO THE SAN DIEGO WATER BOARD AND APPLY FOR WDRS (USING FORM 200). THE ROWD AND APPLICATION FOR WDRS MUST BE PROVIDED TO THE SAN DIEGO WATER BOARD WITHIN 6 MONTHS OF CREATING THE EMERGENCY LANDFILL FOR DISPOSAL OF DISASTER RELATED MASS MORTALITY WASTES. AT A MINIMUM, THE ROWD SHALL INCLUDE THE FOLLOWING INFORMATION:
 - ~~A) A SHORT DESCRIPTION OF THE EMERGENCY CONDITIONS THAT MADE THE EMERGENCY LANDFILL NECESSARY.~~
 - ~~B) THE IDENTITY, PHYSICAL ADDRESS, MAILING ADDRESS AND TELEPHONE NUMBER OF THE CURRENT LAND OWNER.~~
 - ~~C) PHOTOGRAPHS TAKEN TO DOCUMENT THE LOCATION OF THE EMERGENCY LANDFILL, PRACTICES USED FOR PLACEMENT OF WASTES AND SOIL LAYERS, AND THE APPEARANCE OF THE EMERGENCY LANDFILL AFTER INSTALLATION OF THE FINAL COVER.~~
 - ~~D) A MAP SHOWING THE LOCATION AND PERIMETER OF THE EMERGENCY LANDFILL, ITS LOCATION RELATIVE TO LOCAL TOPOGRAPHICAL, GEOGRAPHICAL, BIOLOGICAL, AND~~~~

~~CULTURAL FEATURES (E.G. ROADS, STREAMS, ETC.), AND PROVIDE GEOGRAPHICAL INFORMATION SYSTEM (GIS) DATA AS AVAILABLE.~~

~~E) A SIMPLE CROSS SECTION OF THE EMERGENCY LANDFILL AND A DESCRIPTION OF THE CONSTRUCTION (DEPTH, THICKNESS OF LAYERS AND FINAL COVER).~~

~~F) AN ESTIMATE OF THE AMOUNT OF WASTES (E.G., IN POUNDS OR TONS) DISCHARGED INTO THE EMERGENCY LANDFILL.~~

~~G) A DESCRIPTION OF MEASURES TAKEN TO ENSURE THAT WASTES AND WASTE CONSTITUENTS DO NOT MIGRATE OUTSIDE THE EMERGENCY LANDFILL.~~

~~H) ANY OTHER SITE-SPECIFIC OR DISCHARGER-RELATED INFORMATION REQUESTED BY THE SAN DIEGO WATER BOARD.~~

~~Conditional Waiver No. 11 — Aerially Discharged Wastes OVER LAND~~

~~CONDITIONAL WAIVER NO. 11 IS FOR DISCHARGES OF WASTES THAT HAVE BEEN DISCHARGED AERIALY OVER LAND, WHICH MAY BE A SOURCE OF POLLUTANTS THAT CAN ADVERSELY AFFECT THE QUALITY OF WATERS OF THE STATE.~~

~~THE FOLLOWING TYPES OF DISCHARGE NOT REGULATED OR AUTHORIZED UNDER WASTE DISCHARGE REQUIREMENTS (WDRS) MAY BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 11:~~

- ~~• DISCHARGES OF WASTES RELATED TO FIREWORKS DISPLAYS OVER LAND~~
- ~~• OTHER WASTES DISCHARGED AERIALY OVER LAND THAT MAY ADVERSELY AFFECT THE QUALITY OF THE WATERS OF THE STATE, BUT DETERMINED TO BE “LOW THREAT” BY THE SAN DIEGO WATER BOARD~~

~~IN ORDER TO BE ELIGIBLE FOR CONDITIONAL WAIVER NO. 11, DISCHARGES MUST COMPLY WITH CERTAIN CONDITIONS TO BE PROTECTIVE OF WATER QUALITY. WAIVER CONDITIONS APPLICABLE TO WASTES DISCHARGED AERIALY OVER LAND INCLUDE THE FOLLOWING:~~

~~11.I.A. GENERAL WAIVER CONDITIONS FOR AERIALY DISCHARGED WASTES OVER LAND~~

~~11.II.A. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES OF WASTE RELATED TO FIREWORKS DISPLAYS OVER LAND~~

~~WASTES DISCHARGED AERIALY OVER LAND THAT COMPLY WITH THE GENERAL AND SPECIFIC WAIVER CONDITIONS IN CONDITIONAL WAIVER NO. 11 ARE NOT EXPECTED TO POSE A THREAT TO THE QUALITY OF WATERS OF THE STATE.~~

~~11.I.A. GENERAL WAIVER CONDITIONS FOR AERIALY DISCHARGED WASTES OVER LAND~~

- ~~1. AERIALY DISCHARGED WASTES CANNOT BE DISCHARGED DIRECTLY OVER AND/OR INTO SURFACE WATERS OF THE STATE (INCLUDING EPHEMERAL STREAMS AND VERNAL POOLS).~~
- ~~2. AERIALY DISCHARGED WASTES MUST NOT CAUSE OR THREATEN TO CAUSE A CONDITION OF CONTAMINATION, POLLUTION, OR NUISANCE.~~
- ~~3. AERIALY DISCHARGED WASTES MUST NOT IMPACT THE QUALITY OF GROUNDWATER IN ANY WATER WELLS OR SURFACE WATER IN ANY DRINKING WATER RESERVOIRS.~~
- ~~4. DISCHARGERS MUST COMPLY WITH ANY LOCAL, STATE, AND FEDERAL ORDINANCES AND REGULATIONS AND OBTAIN ANY REQUIRED APPROVALS, PERMITS, CERTIFICATIONS, AND/OR LICENSES FROM AUTHORIZED LOCAL AGENCIES.~~
- ~~5. DISCHARGER MUST SUBMIT A NOTICE OF INTENT OR TECHNICAL AND/OR MONITORING PROGRAM REPORTS WHEN DIRECTED BY THE SAN DIEGO WATER BOARD.~~

~~11.II.A. SPECIFIC WAIVER CONDITIONS FOR DISCHARGES OF WASTE RELATED TO FIREWORKS DISPLAYS OVER LAND~~

- ~~1. NO MORE THAN ONE FIREWORKS DISPLAY MAY BE CONDUCTED FROM A LAUNCH SITE OR WITHIN 1.0 MILE OF ANOTHER LAUNCH SITE WITHIN A 48-HOUR PERIOD.²⁴ IF THE ORGANIZER WILL HAVE MORE THAN ONE FIREWORKS DISPLAY WITHIN A 48-HOUR PERIOD, THE ORGANIZER MUST FILE A NOTICE OF INTENT CONTAINING INFORMATION ABOUT THE FIREWORKS TO BE USED, LOCATION OF LAUNCH AREA AND NEARBY WATER BODIES AND GROUNDWATER BASINS, SURROUNDING LAND USES, PLANNED PERIOD OF AND FREQUENCY OF DISCHARGE, COPIES OF ANY PERMITS OBTAINED FROM OTHER PUBLIC AGENCIES, AND MEASURES THAT WILL BE TAKEN TO MINIMIZE OR ELIMINATE THE DISCHARGE OF POLLUTANTS THAT MIGHT AFFECT SURFACE WATER AND GROUNDWATER QUALITY. SUFFICIENT INFORMATION MUST BE SUBMITTED BEFORE THE DISCHARGE MAY BEGIN.~~
- ~~2. ALL FIREWORKS-RELATED DEBRIS MUST BE CLEANED UP FROM LAND SURFACE AREAS.~~
- ~~3. LAUNCH AREAS AND DEPOSITION AREAS OF FIREWORKS DISPLAYS MAY NOT BE LOCATED WITHIN AREAS DESIGNATED AS ZONE A FOR GROUNDWATER SOURCE AREA PROTECTION, AS DEFINED BY THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH’S DRINKING WATER SOURCE ASSESSMENT PROTECTION PROGRAM. THIS CONDITION MAY BE WAIVED IF THE OWNER OR OPERATOR OF A GROUNDWATER DRINKING WATER SOURCE, THROUGH A~~

²⁴- This condition is intended to alleviate spatial and temporal accumulation of fireworks-related chemical contaminants.

~~PERMIT, SPECIFICALLY ALLOWS THE FIREWORKS DISPLAY LAUNCH AREA AND/OR DEPOSITION AREA WITHIN AN AREA DESIGNATED AS ZONE A FOR GROUNDWATER SOURCE AREA PROTECTION.~~

- ~~4. LAUNCH AREAS AND DEPOSITION AREAS OF FIREWORKS DISPLAYS MAY NOT BE LOCATED WITHIN AREAS DESIGNATED AS ZONE A FOR SURFACE WATER SOURCE PROTECTION, AS DEFINED BY THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S DRINKING WATER SOURCE ASSESSMENT PROTECTION PROGRAM. THIS CONDITION MAY BE WAIVED IF THE OWNER OR OPERATOR OF A SURFACE WATER SOURCE RESERVOIR OR INTAKE STRUCTURE, THROUGH A PERMIT, SPECIFICALLY ALLOWS THE FIREWORKS DISPLAY LAUNCH AREA AND/OR DEPOSITION AREA WITHIN AN AREA DESIGNATED AS ZONE A FOR SURFACE WATER PROTECTION.~~
- ~~5. THE FIREWORKS DISPLAY MUST BE PERMITTED BY ALL RELEVANT PUBLIC AGENCIES THAT REQUIRE PERMITS FOR FIREWORKS DISPLAYS (E.G., FIRE DEPARTMENTS, MUNICIPAL GOVERNMENTS, LAW ENFORCEMENT, WATER SUPPLY AGENCIES). COPIES OF ANY PERMITS MUST BE AVAILABLE ON SITE FOR INSPECTION.~~
- ~~6. THE SAN DIEGO WATER BOARD AND/OR OTHER LOCAL REGULATORY AGENCIES MUST BE ALLOWED REASONABLE ACCESS TO THE SITE IN ORDER TO PERFORM INSPECTIONS AND CONDUCT MONITORING.~~

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

9174 Sky Park Court, Suite 100
San Diego, California 92123-4340



NOTICE OF INTENT

TO COMPLY WITH
CONDITIONAL WAIVERS OF WASTE DISCHARGE REQUIREMENTS
FOR SPECIFIC TYPES OF DISCHARGE WITHIN
THE SAN DIEGO REGION

I. PROPERTY/FACILITY INFORMATION

Property/Facility Name:			
Property/Facility Contact:			
Property/Facility Address:			
City:	County:	State:	Zip:
Telephone:	Fax:	Email:	
Assessor Parcel Number(s):		Hydrologic Area/Subarea:	

II. PROPERTY/FACILITY OWNER INFORMATION

Property/Facility Owner Name:			
Property/Facility Owner Mailing Address:			
City:	County:	State:	Zip:
Telephone:	Fax:	Email:	

III. PROPERTY/FACILITY OPERATOR INFORMATION

Property/Facility Operator Name:			
Mailing Address:			
City:	County:	State:	Zip:
Telephone:	Fax:	Email:	

IV. CONDITIONAL WAIVER FOR NOTICE OF INTENT

Mark (X) the conditional waiver proposed for the discharge:

<input type="checkbox"/> Conditional Waiver 1 - Discharges from on-site disposal systems
<input type="checkbox"/> Conditional Waiver 2 - "Low threat" discharges to land
<input type="checkbox"/> Conditional Waiver 3 - Discharges from animal operations
<input type="checkbox"/> Conditional Waiver 4 - Discharges from agricultural and nursery operations
<input type="checkbox"/> Conditional Waiver 5 - Discharges from silvicultural operations
<input type="checkbox"/> Conditional Waiver 6 - Discharges of dredged or fill materials nearby or within surface waters
<input type="checkbox"/> Conditional Waiver 7 - Discharges of recycled water to land
<input type="checkbox"/> Conditional Waiver 8 - Discharges/disposal of solid wastes to land
<input type="checkbox"/> Conditional Waiver 9 - Discharges/disposal of slurries to land
<input type="checkbox"/> Conditional Waiver 10 - Discharges of emergency/ disaster related wastes
<input type="checkbox"/> Conditional Waiver 11 - Aerially discharged wastes

V. DESCRIPTION OF DISCHARGE

NOTICE OF INTENT FOR CONDITONAL WAIVERS

Describe the discharge (i.e., source(s) of discharge, pollutants of concern, period and frequency, etc.). Use additional pages as needed. Provide a map of the property/facility if necessary.

VI. DESCRIPTION OF MANAGEMENT MEASURES AND BEST MANAGEMENT PRACTICES

Describe what management measures (MMs) and best management practices (BMPS) will be implemented to minimize or eliminate the discharge of pollutants to waters of the state. Use additional pages as needed. Provide a map of the property/facility showing locations of MMs/BMPs if necessary.

VII. ADDITIONAL INFORMATION

Please provide additional information, as needed or required, about the discharge and/or how the discharger intends to comply with the waiver conditions of the conditional waiver. Use additional pages as needed.

VIII. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature (Owner or Authorized Representative)

Date

Print Name

Title

Telephone Number

Email

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

9174 Sky Park Court, Suite 100
San Diego, California 92123-4340



**TEMPORARY WASTE PILE CERTIFICATION
[SECTION A]**

I. TEMPORARY WASTE PILE GENERATOR INFORMATION

Generator Name:			
Generator Contact and Title:			
Generator Mailing Address:			
City:	County:	State:	Zip:
Telephone:	Fax:	Email:	

II. WASTE INFORMATION

Local Oversight Program Case No.:	San Diego Water Board File No.:						
Waste Type:	<input type="checkbox"/> Gasoline <input type="checkbox"/> Diesel <input type="checkbox"/> Other Petroleum Hydrocarbons						
(check all that apply)	<input type="checkbox"/> Other Impacted Dredged Spoils <input type="checkbox"/> Other: _____						
Contaminant Concentrations (Use additional pages as needed):							
Mean	Mean+80%CI	Mean	Mean+80%CI	Mean	Mean+80%CI	Mean	Mean+80%CI
Mean	Mean+80%CI	Mean	Mean+80%CI	Mean	Mean+80%CI	Mean	Mean+80%CI
Mean	Mean+80%CI	Mean	Mean+80%CI	Mean	Mean+80%CI	Mean	Mean+80%CI
Waste Pile Quantity (yd ³):		Description of Containment Method:					

III. TEMPORARY WASTE PILE SITE INFORMATION

Site Property Owner Name:			
Site Address:			
City:	County:	State:	Zip:
Telephone:	Fax:	Email:	
Assessor Parcel Number(s):		Hydrologic Area/Subarea:	

IV. PROPERTY OWNER ACKNOWLEDGMENT

I hereby acknowledge receipt of the waste soil described in section II and that I have reviewed any associated reports. By signing this form I acknowledge that the Generator of this waste has certified that all 8.II.D waiver conditions have been met.

Signature (Owner or Authorized Representative)	Date
Print Name	Title

V. GENERATOR CERTIFICATION

I hereby certify that the information provided regarding soil characterization is a complete and accurate representation of the subject soil, and that the soil is not hazardous waste as defined by California Code of Regulations Title 22 and by the U.S. Environmental Protection Agency (Code of Federal Regulations Title 40), and that all 8.II.D waiver conditions have been met.

Generator Signature	Date
Print Name	Title



~~TEMPORARY WASTE PILE CERTIFICATION~~

~~[SECTION B]~~

and

~~NOTICE OF TERMINATION~~

~~I. FINAL WASTE DISPOSAL INFORMATION~~

Final Disposition of Waste:	<input type="checkbox"/> Off-site/Landfill Disposal	<input type="checkbox"/> On-site Reuse/Disposal
	<input type="checkbox"/> Off-site Reuse/Disposal	<input type="checkbox"/> Other: _____
Property Owner/Discharger Name:		
Property Owner/Discharger Contact and Title:		
Property Owner/Discharger Mailing Address:		
City:	County:	State: Zip:
Telephone:	Fax:	Email:
Assessor Parcel Number(s):	Hydrologic Area/Subarea:	
Date(s) Waste Disposed:		
Quantity of Waste Disposed: (in cubic yards for each disposal date)		
Disposal Location(s): (for each disposal date)		

~~II. FINAL DISPOSAL CERTIFICATION~~

~~I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.~~

Signature (Owner or Authorized Representative)	Date
Print Name	Title

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

9174 Sky Park Court, Suite 100
San Diego, California 92123-4340



INERT WASTE CERTIFICATION

I. INERT WASTE SOIL GENERATOR INFORMATION

Generator Name:			
Generator Contact and Title:			
Generator Mailing Address:			
City:	County:	State:	Zip:
Telephone:	Fax:	Email:	

II. INERT WASTE SOIL EXPORT SITE INFORMATION

Export Site Property Owner Name:			
Export Site Address:			
City:	County:	State:	Zip:
Local Oversight Program Case No.:			
San Diego Water Board File No.:			

III. EXPORTED INERT WASTE SOIL INFORMATION *(Use additional pages as needed.)*

Date(s) Inert Waste Soil Exported:
Quantities of Inert Waste Soil Exported: (in cubic yards for each date of export)
<input type="checkbox"/> Mark the box (☒) if the inert waste soil was temporarily stockpiled prior to export. If the box is marked, please provide a copy of the Temporary Waste Pile Certification Section A form as required under 8.II.D waiver conditions.
Provide a map of the export site showing the location of the nearby surface water bodies and/or water wells, excavation(s), stockpile(s), samples collected for characterization. Include approximate extent and depths of excavation(s), extent and height of stockpile(s), and depth of samples collected.

IV. DESCRIPTION OF EXPORT SITE BEST MANAGEMENT PRACTICES

Describe what management measures (MMs) and best management practices (BMPS) were implemented at the export site to minimize or eliminate the discharge of pollutants to waters of the state. Use additional pages as needed. Provide a map of the property/facility showing locations of MMs/BMPs if necessary.

V. INERT WASTE SOIL CHARACTERIZATION

Name of Certified Analytical Laboratory:			
Certified Analytical Laboratory Contact:			
Certified Analytical Laboratory Address:			
City:	County:	State:	Zip:
Telephone:	Fax:	Email:	
Number of samples collected for characterization:			
<input type="checkbox"/> Mark the box (<input checked="" type="checkbox"/>) to confirm that no samples collected to characterize waste soil as inert contained detectable concentrations of constituents other than Title 22 metals, as required by waiver condition 8.II.F.1.j.			
Title 22 Metals Contaminant of Concern	EPA Approved Analytical Method	90% UCL Concentration (mg/kg)*	

*Use additional pages if there are additional contaminants of concern. Attach copy of laboratory analytical report.
 * If molybdenum, silver, and/or zinc exceed the Tier 2 SSLs, then the waiver does not apply and a Report of Waste Discharge (RoWD) must be submitted to the San Diego Water Board.*

VI. ENROLLMENT FOR REUSE OF TIER 1 or TIER 2 INERT WASTE SOIL

Mark the box () next to the tier that the inert waste soil has been characterized, as supported with data provided in section V.

<input type="checkbox"/> Tier 1 (Complete section X) Management of Tier 1 inert waste soils must comply with waiver conditions 8.II.F.1 and 8.II.F.2.	<input type="checkbox"/> Tier 2 (Complete sections VII through X) Management of Tier 2 inert waste soils must comply with waiver conditions 8.II.F.1 and 8.II.F.3.
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VII. TIER 2 INERT WASTE SOIL IMPORT SITE INFORMATION

Import Site Property Owner Name:			
Import Site Address:			
City:	County:	State:	Zip:
Telephone:	Fax:	Email:	
Assessor Parcel Number(s):		Hydrologic Area/Subarea:	
<i>Provide a map of the import site showing the location of the nearby surface water bodies and/or water wells, and approximate depth to groundwater.</i>			

VIII. DESCRIPTION OF IMPORT SITE BEST MANAGEMENT PRACTICES

Describe what management measures (MMs) and best management practices (BMPS) were implemented at the import site to minimize or eliminate the discharge of pollutants to waters of the state. Use additional pages as needed. Provide a map of the property/facility showing locations of MMs/BMPs if necessary.

IX. PROPERTY OWNER ACKNOWLEDGMENT

Mark all the boxes () to acknowledge that the applicable Tier 2 inert waste soil waiver conditions have been or will be met:

- Import site is designated for commercial or industrial land use.
- Inert waste soil placed at least 5 feet above highest historically known or anticipated level of groundwater.
- Soil that separates inert waste soil from groundwater has clay content greater than 5 percent and/or in situ permeability of less than 10^{-5} cm/sec.
- Inert waste soil placed at least 100 feet from the nearest surface water body.
- Inert waste soil is protected against 100-year peak storm flows as defined by the county flood control agency.
- Inert waste soil covered by either: 1) engineered materials (e.g. used as road base, fill beneath buildings, bridge abutments), or 2) not less than 2 feet of noncontaminated, clean fill. The cover has a permeability of no more than 10^{-5} cm/sec.
- Placement of a cover on the inert waste soils completed within 30 days of discharging the final load of inert waste soils at the import site.

I acknowledge the receipt or planned receipt of the waste soil described in sections V and VI and that the soil will be managed pursuant to the restrictions set forth in waiver conditions 8.II.F.3.

Signature (Owner or Authorized Representative)

Date

Print Name

Title

X. GENERATOR AND CONSULTANT CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Print Name (Generator)

Print Name (Consultant)

Signature (Generator)

Signature (Consultant)

Title (Generator)

Title and Professional Registration No. (Consultant)

Date

Date

|

**California Regional Water Quality Control Board
San Diego Region**

Errata Sheet

Revised Tentative Order No. R9-2015-0008

**Basin Plan Amendment a Resolution Approving an Amendment
to the Water Quality Control Plan for the San Diego Basin (9) to
change the Nitrate Water Quality Objective for Groundwaters,
incorporate the Onsite Wastewater Treatment Systems Policy
and to incorporate Miscellaneous Updates**

The following changes have been made to Attachment A to Tentative Order No. R9-2015-0008 (Supporting Document No. 1). Text has been modified in response to written comments received and as a result of subsequent discussions with the San Diego County Water Authority.

The following sections of Pages 4-10 and 4-11 of Chapter 4 of the Basin Plan have been modified as shown below. Text in ~~red underline/strikeout~~ font shows the original proposed changes. Text in blue underline font shows the latest proposed changes.

Landscape Irrigation with Recycled Water

~~Irrigating landscapes with recycled water is critical to developing a local, sustainable water supply for the Region. Recycled water that percolates past the landscape root zone, however, can be a source of nitrate to ground water and interconnected surface water.~~
Applying recycled water and fertilizer in amounts and at rates needed by the landscape in end use areas will protect groundwater and interconnected surface water from excessive nitrogen loading.

Permits issued by the Regional Board for projects that include landscape irrigation with recycled water typically require the recycled water producer to develop rules and regulations that must be implemented in the end use areas for the protection of public health and the environment. The permits also stipulate minimum requirements for the rules and regulations. Practices to ensure that recycled water and fertilizer are applied at agronomic rates in end use areas should be included in

these minimum requirements for the rules and regulations. Below are some example practices that lead to the application of recycled water and fertilizer at agronomic rates.

- Monitor nutrient levels in recycled water supplies and notify end users of the nutrient value of recycled water.
- Use fertilizers appropriately taking into account the nutrient levels in the recycled water.
- Avoid overwatering of landscapes and runoff.
- Educate and train site supervisors on how to (1) minimize the potential for runoff or over-irrigation; and (2) take into account the nutrient value of the recycled water.
- Conduct periodic inspections of end use areas.

~~The State Recycled Water Policy establishes criteria that landscape irrigation projects must meet to be eligible for streamlined permitting. The following criteria will protect surface water quality as well as ground water quality and should be included in Master Reclamation Permits, Water Recycling Requirements, and WDRs (permits) for landscape irrigation projects that use recycled water. Adherence to these criteria by end users will limit nutrient loading to groundwater and protect interconnected surface water. The criteria are:~~

- ~~● Recycled water agencies must ensure recycled water is applied in amounts and at rates as needed for the landscape (i.e., at agronomic rates and not when the soil is saturated). New and revised recycled water permits must require that the recycled water agency prepare and submit an operations and management plan to the Regional Board, that may apply to multiple sites, that specifies the agronomic rate(s) and describes a set of reasonably practicable measures to ensure compliance with this requirement, which may include the development of water budgets for use areas, site supervisor training, periodic inspections, tiered rate structures, the use of smart controllers, or other appropriate measures.~~
- ~~● Recycled water agencies must ensure their discharges comply with any applicable salt and nutrient management plan.~~

- ~~● Recycled water agencies must ensure appropriate use of fertilizers that takes into account the nutrient levels in the recycled water. Recycled water agencies must monitor and communicate to the users the nutrient levels in their recycled water.~~
- ~~● Application in amounts and at rates as needed for the landscape (i.e., at agronomic rates and not when the soil is saturated). Each irrigation project shall be subject to an operations and management plan, that may apply to multiple sites, provided to the Regional Board that specifies the agronomic rate(s) and describes a set of reasonably practicable measures to ensure compliance with this requirement, which may include the development of water budgets for use areas, site supervisor training, periodic inspections, tiered rate structures, the use of smart controllers, or other appropriate measures.~~
- ~~● Compliance with any applicable salt and nutrient management plan.~~
- ~~● Appropriate use of fertilizers that takes into account the nutrient levels in the recycled water. Recycled water producers shall monitor and communicate to the users the nutrient levels in their recycled water.~~

**California Regional Water Quality Control Board
San Diego Region**

Errata Sheet 2

Revision to Tentative Order No. R9-2015-0008

**Basin Plan Amendment a Resolution Approving an Amendment
to the Water Quality Control Plan for the San Diego Basin (9) to
change the Nitrate Water Quality Objective for Groundwaters,
incorporate the Onsite Wastewater Treatment Systems Policy
and to incorporate Miscellaneous Updates**

Add the following new “Whereas” and renumber the remaining paragraphs.

13. Because groundwater basins are covered by an overburden in which the nitrogen levels may be unknown, understanding the overall contribution of nitrogen from various sources moving through the vadose zone is important. Additional information can provide guidance to permit writers to ensure that the 45 mg/L nitrate water quality objective in receiving groundwater is not exceeded, especially in vulnerable drinking water aquifers. If appropriate, additional implementation measures may be added to the Basin Plan to guide permit writers.