Appendix B

Review of
New Types of Discharge
~~to be Regulated by the~~
~~Proposed Conditional Waivers~~

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B Review of New Types of Discharge ~~to be Regulated by the Proposed Conditional Waivers~~

In addition to the types of discharge eligible for ~~regulated by~~ the existing conditional waivers, several new types of discharge have been identified during the development of this Basin Plan amendment that are not currently regulated in the Region~~, but could be regulated by conditional waivers~~. Revising the conditional waivers to include waiver conditions for these new types of discharge would allow these new types of discharge be eligible for a waiver. These new types of discharge include the following:

1. "Low threat" discharges to land
2. Discharges from on-site graywater systems
3. Discharges from grazing lands
4. Wild~~F~~fire suppression and fuels management activities
5. Discharge/disposal/reuse of soils characterized as inert from known contaminated sites
6. Concrete grinding residues
7. Temporary waste piles and surface impoundments for disaster-related wastes
8. Temporary waste piles and emergency landfills for mass mortality wastes
9. Fireworks

The new types of discharge ~~proposed for regulation by conditional waivers~~ are reviewed and discussed below in the following subsections. ~~Proposed~~ The waiver conditions ~~required~~ proposed for these new types of discharge ~~to be regulated by conditional waivers~~ are also provided in the following subsections. Discharges that can comply with the proposed waiver conditions are not expected to pose a threat to the quality of waters of the state.

B.1 Review of the New Types of Discharge Proposed ~~for~~ to be Eligible for~~Regulation by~~ a Conditional Waiver~~s~~

B.1.1 "Low Threat" Discharges to Land

There are several types of discharge consisting of potable, natural, and/or relatively low contaminant sources of waters that may be discharged to land which are not specifically regulated with WDRs or eligible for a conditional waiver~~s~~. These types of "low threat" discharge can contain several pollutants that can affect the quality of waters of the state. These discharges can potentially infiltrate to groundwater or runoff to surface waters. However, "low threat" discharges would not pose a threat to the quality of waters of the state if discharged in compliance with certain conditions.

The following discussion identifies the potential pollutants of concern associated with "low threat" discharges to land, and the conditions under which the discharge would not pose a threat to water quality. "Low threat" discharges to land that can comply with the proposed waiver conditions are not expected to pose a threat to the quality of waters of the state and may be waived of the requirement to file RoWDs and/or regulation by WDRs.

"Low threat" discharges include liquid wastes containing pollutant concentrations that ~~will~~ should not impact the quality of waters of the state under ambient conditions. "Low threat" discharges are not expected to contain significant concentrations of pollutants that can adversely affect the quality of underlying groundwater. "Low threat" discharges may include potable water or uncontaminated groundwater. Potable water and uncontaminated groundwater are not considered waste when initially discharged. However, when it 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. Examples of these types of discharge include, but are not limited to, the following:

- Groundwater pumped from drinking water wells
- Groundwater pumped 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
- ~~Other discharges of water to land, determined to be "low threat" by the San Diego Water Board~~

Discharges from these "low threat" sources to land are typically infrequent, consist of low volumes, and/or do not contain significant concentrations of pollutants that can ~~degrade~~ adversely affect the quality of underlying groundwater. In some cases, water that ponds on the surface could evaporate and concentrate dissolved solids or other pollutants. However, these pollutants would likely attenuate before infiltrating and/or leaching to groundwater. These types of discharge are expected to pose a low threat to groundwater quality.

Low volumes and ~~l~~infrequent discharges ~~of water~~ from "low threat" sources are not expected to ~~degrade~~adversely affect the quality of groundwater because the water would likely evapotranspire before infiltrating to the underlying groundwater. However, excessive volumes or frequent discharges from specific types of "low threat" discharges could potentially be a source of pollutants that can ~~degrade~~ infiltrate to underlying groundwater and adversely affect the ~~water~~ quality of groundwater over time. A Notice of Intent filed with the San Diego Water Board about these discharges could provide notification of the project, enrollment, and sufficient information and data to the San Diego Water Board to determine compliance with the conditions of the waiver, or determine if regulation by individual WDRs is appropriate. Therefore, enrollment should be required for frequent or regular "low threat" discharges ~~from water wells~~ to land.

~~This conditional waiver should apply only to "low threat" discharges to land that do not contain pollutants at concentrations that will degrade underlying groundwater quality.~~

Proposed Waiver Conditions for "Low Threat" Discharges to Land:

~~WDRs and/or the requirement to file RoWDs for~~ "~~l~~Low threat" discharges to land are not expected to pose a threat to the quality of waters of the state under the following ~~should be waived under the following proposed~~ conditions:

1. Prevent the direct or indirect discharge of "~~l~~low threat" discharges ~~to land cannot be discharged directly or indirectly~~ to any surface waters of the state (including ephemeral streams and vernal pools) ~~for regulation by this waiver. Any "low threat" discharges to surface waters must be regulated either by general or individual WDRs or in accordance with the conditions of an applicable conditional waiver~~.
2. "Low threat" discharges to land must not cause the migration of contaminants such as chlorinated solvents, hydrocarbons, or other toxic or hazardous substances to groundwater.
3. "Low threat" discharges to land 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. "Low threat" discharges to land must not ~~degrade~~adversely affect the quality of underlying groundwater.
5. 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.
6. For discharges from washing vehicles, pavement, buildings, etc., discharges of wash water and similar intermittent discharges to land must not exceed an average of 1,200 gallons per day for any continuous 30-day period.
7. For discharges from structural BMPs that utilize infiltration, the following conditions apply:
   ~~a)~~**~~Either~~**~~,~~ ~~t~~The installation of structural BMP that utilizes infiltration must comply with the design criteria of the municipality regulated by MS4 WDRs (conforming to NPDES storm water regulations);
   ~~b)~~a) **or**, for any discharge that exceeds 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 would not cause the groundwater at the disposal site to exceed water quality objectives.
   b) 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.
8. Discharger must submit a Notice of Intent or technical and/or monitoring program reports when directed by the San Diego Water Board.

B.1.2 Discharges from On-site Graywater Systems

Graywater systems can discharge several pollutants that can affect the quality of waters of the state. Graywater systems discharge effluent to the subsurface which is a source of pollutants that can potentially infiltrate to groundwater. However, the use of graywater systems is in the public interest to help conserve potable water resources.

Effluent from graywater systems should not pose a threat to the quality of waters of the state if discharged in compliance with certain conditions.

The following discussion identifies the potential pollutants of concern associated with discharges from graywater systems, and the conditions under which the discharge would not pose a threat to water quality. Discharges from graywater systems that can comply with the proposed waiver conditions are not expected to pose a threat to the quality of waters of the state and may be waived of the requirement to file RoWDs and/or regulation by WDRs.

Graywater is wash water originating from showers, bathtubs, clothes washing machines, and hand washing sinks that are not used for disposal of chemicals or chemical-biological ingredients. Graywater excludes toilet wastes, known as "black water," and is free of high concentrations of organic wastes such as those derived from garbage disposals and dishwashers. Graywater is generally subject to very little treatment or no treatment at all.

The Water Code defines "*graywater*" as "*untreated wastewater which has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and which does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. Graywater includes wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs but does not include wastewater from kitchen sinks or dishwashers*."[1]

Effluent discharged from a graywater system is intended for use on-site from the building or structure that discharges it. On-site graywater systems are attached to plumbing systems for the distribution and use of graywater. Graywater use is typically limited to subsurface application through drip and mini-leachfield irrigation systems. Effluent that is discharged from graywater systems may be used for irrigation purposes, but the discharge of effluent from a graywater system is primarily an alternative method of disposal.

According to the Water Code, the California Department of Water Resources (DWR) was given the task of developing and adopting the regulations for the installation of graywater systems.[2] The Graywater Standards, developed by the DWR and adopted by the California Building Standards Commission, pertaining to the construction, installation, or alteration of graywater systems, can be found in the California Plumbing Code (CPC).[3]

However, the discharge of effluent from a graywater system to the subsurface on land, which can pose a potential threat to water quality ~~and is therefore defined as a waste~~, is

[1] As defined in Water Code section 14876
[2] Pursuant to Water Code section 14877.1
[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

regulated by the State and Regional Water Boards. Graywater systems can discharge effluent that has potentially come in contact with human fecal matter (e.g., soiled diapers washed in clothes washing machines), nitrogen compounds (e.g., urine from children and adults in bathtubs and showers), phosphorus (e.g., laundry detergents used in clothes washing machines), or other chemicals (e.g., cleaning chemicals washed down bathroom washbasins). Therefore, graywater systems can potentially transport and leach bacteria, nutrients, and other pollutants to underlying groundwater~~s~~, or to surface waters if graywater surfaces and runs off the property. Graywater that comes into contact with groundwater or surface water can ~~degrade~~ potentially have an adverse effect on water quality. However, proper design, installation and maintenance of a graywater system can eliminate the potential treat to water quality.

According to the CPC Graywater Standards, "*It shall be unlawful for any person to construct, install or alter, or cause to be constructed, installed or altered any graywater system in a building or on premises without first obtaining a permit to do such work from the Administrative Authority.*"[4] Therefore, the installation of a graywater system is subject to approval by the Administrative Authority, or authorized local authorities. The authorized local authorities are typically the county or city building or planning departments. However, because of the fact that the discharge from a graywater system could potentially surface or pond and runoff to surface waters, or ~~degrade~~adversely affect underlying groundwater quality, or create a risk to public health, the authorized local authorities could also include the county or city storm water, environmental, health, or public health departments. Approval for the installation of a graywater system should be obtained from all applicable authorized local authorities.

The Water Code states that a graywater system may be installed if the authorized local authorities having jurisdiction over the installation determines that the system complies with the CPC Graywater Standards.[5] The CPC Graywater Standards recommend that any or all of the following information should be submitted to the authorized local authority for approval prior to installation of a graywater system:[6]

(a) Plot plan drawn to scale completely dimensioned, showing lot lines and structures, direction and approximate slope of surface, location of all present or proposed retaining walls, drainage channels, water supply lines, wells, paved areas and structures on the plot, number of bedrooms and plumbing fixtures in each structure, location of private sewage disposal system and 100 percent expansion area or building sewer connecting to public sewer, and location of the proposed graywater system.
(b) Details of construction necessary to ensure compliance with the requirements of the CPC Graywater Standards together with full description of the complete installation including installation methods, construction and materials as required by the authorized local authority.

[4] California Code of Regulations Title 24 Part 5 Appendix G section G3.
[5] Water Code section 14877.2
[6] California Code of Regulations Title 24 Part 5 Appendix G section G4.

(c) A log of soil formations and groundwater level as determined by test holes dug in close proximity to any proposed irrigation area, together with a statement of water absorption characteristics of the soil at the proposed site as determined by approved percolation tests. In lieu of percolation tests, the authorized local authority may allow the use of Table G-2, an infiltration rate designated by the authorized local authority, or an infiltration rate determined by a test approved by the authorized local authority.
(d) A characterization of the graywater for commercial, industrial, or institutional systems, based on existing records or testing.

A city or county may adopt, by ordinance, standards that prohibit the use of graywater, or standards that are more restrictive than those in the CPC Graywater Standards, after a public hearing.[7] Therefore, authorized local authorities may have requirements in addition to the minimum requirements found in the CPC Graywater Standards.

The discharge of effluent from a graywater system is subject to regulation by the State and Regional Water Boards in order to protect the waters of the state. Under the existing conditional waivers, there is no waiver of WDRs and/or requirement to file RoWDs specific to discharges from graywater systems. If a conditional waiver is not developed, adopted, and issued for discharges from graywater systems, owners/operators of these systems must file a RoWD with the San Diego Water Board to determine if regulation by an individual waiver of WDRs or individual WDRs is appropriate.

Graywater systems are not expected to pose a significant threat to water quality if properly designed, installed, maintained and operated. The San Diego Water Board determined that it is consistent with the Basin Plan and in the public interest to delegate regulation of specific types of discharge to another public agency. Obtaining the appropriate permits from authorized local agencies for graywater systems can be a waiver condition that serves as the method of enrollment for regulation by a conditional waiver. Completed and approved permit applications and inspection reports for graywater systems that can be obtained from the authorized local agencies can provide sufficient information and data to the San Diego Water Board to determine compliance with conditions of a conditional waiver for discharges from graywater systems.

~~This conditional waiver should only apply to properly designed and installed graywater systems, approved and granted the appropriate permits by the authorized local agencies, discharging effluent from an on-site graywater system to land.~~

Proposed Waiver Conditions for Discharges from On-site Graywater Systems:

~~WDRs and/or the requirement to file RoWDs for d~~Discharges from ~~on-site~~ graywater ~~disposal~~ systems are not expected to pose a significant threat to the quality of waters of the state under the following~~should be waived under the following proposed~~ conditions:

[7] Water Code section 14877.3

1. Prevent the direct or indirect discharge of ~~E~~effluent from a graywater system ~~cannot be discharged directly or indirectly~~ to any surface waters of the state (including ephemeral streams and vernal pools).
2. Effluent from a graywater system must be discharged to the subsurface and cannot surface or pond.
3. Effluent from a graywater system must not ~~degrade~~adversely affect the quality of underlying groundwater.
4. Effluent from a graywater system must not cause or threaten to cause a condition of contamination, pollution, or nuisance.
5. Effluent from a graywater system must be discharged at least 5 feet above highest known historical or anticipated groundwater level.
6. Effluent from a graywater system must be discharged at least 100 feet away from any surface water body.
7. Effluent from a graywater system must not impact the quality of groundwater in any water wells.
8. An on-site graywater system must be permitted by the city, county, or other authorized local agency that has jurisdiction over the installation. The graywater system must be designed and installed, at a minimum, according to the CPC Graywater Standards. If the county, city, and/or other authorized local authorities have additional requirements, the graywater system must be designed and installed to comply with those requirements.
9. Graywater systems ~~cannot~~ proposed to be constructed ~~and effluent from a graywater system cannot be discharged~~ 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.
10. The graywater system owner/operator 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.
11. The graywater system owner/operator must maintain and operate the system in accordance with the design approved by the authorized local agencies.
12. 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.
13. Graywater systems can only accept domestic wastewater.
14. 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.

~~13. Graywater systems that do not comply with CPC Graywater Standards and/or did not properly obtain the appropriate permits from the authorized local agencies must be brought into conformance with CPC Graywater Standards and/or obtain the appropriate permits to continue operation. If the owner/operator of a graywater~~

~~system that does not conform with CPC Graywater Standards and/or does not have the appropriate permits chooses not to comply with this condition, the owner/operator must file a RoWD to the San Diego Water Board for regulation by individual WDRs or an individual waiver, or cease the use of the graywater system and permanently remove it from operation.~~

B.1.3 Discharges from Grazing Lands

Grazing on pasture and range lands can generate and discharge several sources of pollutants that can affect the quality of waters of the state. These discharges can potentially infiltrate to groundwater or runoff to surface waters. However, discharges from grazing lands would not pose a threat to the quality of waters of the state if discharged in compliance with certain conditions.

The following discussion identifies the potential pollutants of concern associated with discharges from grazing lands, and the conditions under which the discharges would not pose a threat to water quality. Discharges from grazing lands that can comply with the proposed waiver conditions are not expected to pose a threat to the quality of waters of the state and may be waived of the requirement to file RoWDs and/or regulation by WDRs.

Animals that graze remove vegetation and may cause erosion, which can result in increased and excessive amounts of sediment in surface water runoff. Animals that are allowed to graze along or within stream banks may reduce bank stability, cause increased flow velocity and channel erosion, and remove riparian habitat and wildlife. Grazing animals also produce wastes (e.g., manure, urine), which can be a significant source of sediment, nutrients, and pathogens (i.e., bacteria, viruses, protozoa) in surface and storm water runoff and infiltration, or if discharged directly into a stream. Therefore, discharges from grazing lands due to animal activities and wastes can potentially be a significant source of pollutants that can ~~degrade~~ have an adverse effect on the quality of waters of the state. ~~However, proper management of animal wastes and activities can significantly reduce the impact of animals on water quality.~~

A guidance document prepared by several public and private entities in Orange and San Diego Counties entitled *Equestrian-Related Water Quality Best Management Practices* outlines the measures that can be taken by horse owners to reduce the impact of horses on water quality. Many of the same MMs/BMPs can be used by grazing facilities to protect water quality. Types of MMs/BMPs recommended in the document include:

- Runoff Management
- Erosion Control
- Bacteria/Nutrient Transportation Prevention
- General Housekeeping
- Protection of Waterbodies

Additionally, MMs/BMPs specifically for the management of range and pasture lands used for grazing are also available from the NRCS in the *Field Office Technical Guide*.

Grazing facilities that properly manage their facilities and animals can prevent the discharge of pollutants that may adversely impact the quality of waters of the state. Grazing facilities that implement MMs/BMPs should be eligible for ~~regulation by~~ a conditional waiver without enrollment. Grazing facilities that violate waiver conditions by not implementing MMs/BMPs and allow the degradation of water quality should be required to comply with waiver conditions or be required to file a RoWD and be regulated with WDRs. Enforcement actions could also be taken against facilities that fail to comply with waiver conditions.

~~This conditional waiver should only apply to discharges to land resulting from animal wastes and activities that may cause erosion on lands used for grazing.~~

Proposed Waiver Conditions for Discharges from Grazing Lands:

~~WDRs and/or the requirement to file RoWDs for the d~~Discharges from grazing lands are not expected to pose a threat to the quality of waters of the state under the following ~~should be waived with the following proposed waiver~~ conditions:

1. Grazing operations must comply with local, state, and federal ordinances and regulations and obtain any required approvals, permits, certifications, and/or licenses from authorized local agencies.
2. Grazing facilities must implement MMs/BMPs to minimize or eliminate the discharge of pollutants that may adversely impact the quality 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, or the *Field Office Technical Guide* available from the NRCS. Additional references may be available from other sources.
3. Grazing facilities must manage grazing fields to allow lands to revegetate and minimize topsoil erosion.
4. Grazing facilities must prevent direct contact of animals with surface water bodies. Animals should not be allowed adjacent to or within stream banks. Grazing operations should maintain a buffer zone or riparian filter strip ~~(at least 100 feet is recommended)~~ between the animal and any surface waters of the state. The buffer zone must adequately minimize or eliminate the discharge of pollutants from grazing lands. There should be no direct exposure of a surface water body to an animal. ~~Above-ground watering troughs or basins and fencing should be installed to eliminate direct exposure of animals to surface water bodies.~~
5. Grazing facilities must prevent the direct or indirect discharge of animal wastes (i.e., manure, urine) to surface waters of the state (including ephemeral streams and vernal pools).
6. Grazing facilities 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 ~~surface~~ 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 composted on site, composting activities must comply with the waiver conditions applicable to composting operations ~~for regulation by a conditional waiver~~.
h) 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 waiver conditions applicable to soil amendment or mulch operations ~~for regulation by a conditional waiver~~.

7. 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.
8. Grazing facilities must submit a Notice of Intent or technical and/or monitoring program reports when directed by the San Diego Water Board.

B.1.4 Wilff~~F~~ire Suppression and Fuels Management Activities

Wildfire suppression and fuels management activities can result in the discharge of pollutants that can affect the quality of waters of the state. Wildfire suppression and fuels management activities can discharge sediment and other pollutants directly to surface waters, and pollutants that can leach to underlying groundwater. However, discharges from wildfire suppression and fuels management activities would not pose a threat to the quality of waters of the state if discharged in compliance with certain conditions.

The following discussion identifies the potential pollutants of concern associated with discharges from wildfire suppression and fuels management activities, and the conditions under which the discharge would not pose a threat to water quality. Discharges from wildfire suppression and fuels management activities that can comply with the proposed waiver conditions are not expected to pose a threat to the quality of

waters of the state and may be waived of the requirement to file RoWDs and/or regulation by WDRs.

Wildf~~F~~ire suppression and fuels management activities are ~~-~~projects typically related to timber operations. Dead vegetation, brush, and/or trees should be cleared from around structures, fields, and forests to reduce the fuel available for wildfires that may occur during fire season (typically June to November). Wildf~~F~~ire suppression and fuels management activities can result in erosion and the discharge of sediment, dissolved solids, nutrients, pesticides, and other pollutants. These pollutants can be transported to surface waters and groundwater by surface runoff, which can ~~degrade~~adversely affect the quality of the waters of the state.

As discussed under existing Conditional Waiver No. 22 (see Appendix A, section A.3.18), the USFS and BOF/CDF have been designated the Water Quality Management Agencies (WQMAs) for timber operations on NFS and private/state lands, respectively. Therefore, wildfire suppression and fuels management activities would be regulated by the certified Water Quality Management Plans of the appropriate WQMA.

The San Diego Water Board determined that it is consistent with the Basin Plan and in the public interest to delegate regulation of specific types of discharge to another public agency. Obtaining the appropriate approvals from the USFS or BOF/CDF should be included as a waiver condition that can serve as the method of enrollment for ~~regulation by~~ a conditional waiver. Completed and approved documentation (environmental and decision documents, Notices of Exemption, Notices of Emergency, THPs, and/or NTMPs) for wildfire suppression and fuels management activities that can be obtained from the USFS or BOF/CDF can provide sufficient information and data to the San Diego Water Board to determine compliance with the conditions of the conditional waivers.

~~This conditional waiver should only apply to discharges that are a result of fire suppression and fuels management activities that are performed in accordance with the certified Water Quality Management Plan of the USFS or BOF/CDF.~~

Proposed Waiver Conditions for Wild~~F~~fire Suppression and Fuels Management Activities:

~~WDRs and/or the requirement to file RoWDs for d~~Dischargess ~~during~~ from wildfire suppression and fuels management activities are not expected to pose a threat to the quality of waters of the state under the following ~~should be waived under the following proposed waiver~~ conditions:

1. Wild~~F~~fire suppression and fuels management activities must implement MMs/BMPs to minimize or eliminate the discharge of any pollutants that could adversely affect the quality of waters of the state.

2. Wildf~~F~~ire suppression and fuels management activities must comply with any federal, state, or local 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.
4. For wildfire suppression and fuels management activities on NFS lands, the following conditions should apply:
   a) The State Water Board and USEPA must continue to certify the *Water Quality Management Plan for National Forest System Lands in California*.
   b) The USFS must maintain: (a) a water quality program consistent with the Basin Plan, and (b) a program to monitor the implementation and effectiveness of MMs/BMPs.
   c) The USFS must perform wildfire suppression and fuels management activities in accordance with MMs/BMPs in any approved water quality and/or timber harvest plans.
   d) The USFS must submit a Notice of Intent or technical and/or monitoring program reports when directed by the San Diego Water Board.
5. For wildfire suppression and fuels management activities on nonfederal lands, the following conditions should apply:
   a) The State Water Board must continue to certify the *Water Quality Management Plan for Timber Operations on Nonfederal Lands*.
   b) Wildf~~F~~ire suppression and fuels management activities within 150 feet of existing structures (i.e., "FireSafe" treatments) that are conducted pursuant to a Notice of Exemption approved by the 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.
   c) For wildfire suppression and fuels management activities 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~~, and the owner/operator must submit technical and/or monitoring program reports when directed by the San Diego Water Board~~.
   d) For wildfire suppression and fuels management activities subject to a THP or NTMP approved by the CDF, a copy of the Plan must be provided to the San Diego Water Board~~, and the owner/operator must submit technical and/or monitoring program reports when directed by the San Diego Water Board~~.
   e) 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.

B.1.5 Discharge/Disposal/Reuse of Soils Characterized as Inert from Known Contaminated Sites

Discharges of soil from contaminated sites to land can be significant sources of pollutants that can affect the quality of waters of the state. These discharges contain pollutants that can potentially be transported in surface and storm water runoff to surface waters, or leached to underlying groundwater. However, discharges of soil

characterized as inert from contaminated sites to land would not pose a threat to the quality of waters of the state if discharged in compliance with certain conditions.

The following discussion identifies the potential pollutants of concern associated with discharges of soil from contaminated sites to land, and the conditions under which the discharges would not pose a threat to water quality. Discharges of soil from contaminated sites to land that can comply with the proposed waiver conditions are not expected to pose a threat to the quality of waters of the state and may be waived of the requirement to file RoWDs and/or regulation by WDRs.

There are many sites in the San Diego Region that are known or discovered to have had unauthorized ~~releases~~ discharges or releases of pollutants that have contaminated the soil and/or groundwater. Often, the sites will undergo remediation or corrective actions to remove contaminated soils and restore the site for use by future owners or tenants.

In most situations, the contaminants are limited to a spatially (laterally and vertically) limited area of the site. Typically these areas are over-excavated to ensure complete removal of the contaminated soils. However, over-excavation of an area often means that soil that is not impacted by the release has also been removed.

The soil that has been excavated from a site during remediation is typically stockpiled on the site until the soil can be characterized. Based on the history of a site, soil samples are submitted to a certified environmental analytical laboratory for analysis. The analytical results can be used to determine if the soil is characterized as a hazardous,[8] designated,[9] non-hazardous,[10] or inert[11] waste.

The soil that has been impacted by the ~~unauthorized~~ release must be properly characterized and transported to an appropriate permitted disposal facility. Waste soil that is characterized as hazardous waste must be disposed of at a Class I landfill. Designated and non-hazardous wastes are typically disposed of at Class II or III landfills. Inert wastes and some non-hazardous wastes can be disposed of at an unclassified landfill. However, the regulations for the disposal of solid wastes allow for the recycling and reuse of non-hazardous, or inert wastes.[12]

As discussed above, soil that is not impacted by a release is often excavated in order to ensure complete removal of contaminated soil from a site. There has been interest expressed to the San Diego Water Board by some public agencies and private firms for the ability to recycle and reuse soil from sites undergoing remediation or corrective action as fill material at other sites. Of particular interest is the reuse of waste soils that can be characterized as inert.

[8] Defined in California Code of Regulations Title 23 section 2521 and Title 22 section 66261.3
[9] Defined in California Code of Regulations Title 27 section 20210 and Water Code section 13173
[10] Defined in California Code of Regulations Title 27 section 20220
[11] Defined in California Code of Regulations Title 27 section 20230
[12] California Code of Regulations Title 27 section 20090(h)

~~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."[13] The primary difference between non-hazardous and inert waste is that inert waste does not contain decomposable or degradable materials. The interested persons would like to recycle and reuse waste soils that have been characterized as inert in a fully unrestricted manner. Another alternative would be to recycle and reuse the soil according to a set of placement and use conditions. Reusing waste soils in this manner benefits the people of the state and is in the public interest by reducing the volume of soil disposed of in public landfills.

However, in order for soil to be reused at another site and be protective of water quality, a waste-, site-, and use-specific analysis would be required. The discharge of waste soils for reuse can potentially impact surface water and/or groundwater quality. Inert waste soils that are exported for use at another site could affect surface water quality if runoff is allowed to transport sediment to any surface water bodies. Waste soils characterized as inert ~~w~~should not contain soluble pollutants at levels of concern to groundwater quality.

A discharger of waste soils must determine if pollutant or contaminant levels in waste soil are protective of water quality. Inert waste soils cannot contain hazardous or designated levels of pollutants or contaminants. The Central Valley Regional Water Quality Control Board (Central Valley Water Board) developed a methodology for waste classification and cleanup level determination, known as the Designated Level Methodology,[14] which is used to identify the boundary between designated wastes and non-hazardous or inert wastes, which is the non-hazardous or inert waste target concentration. The inert waste target concentration is determined as follows:

$$\text{Inert Waste Target} = \text{Water Quality Goal} \times \text{Environmental Attenuation Factor} \times \text{Leachability Factor}$$

~~Where t~~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.

Pollutant or contaminant concentrations below the inert waste target would be considered protective of groundwater quality. The inert waste target may be protective of surface water quality from contaminants in the waste soil as well, but the primary concern would be sediment from the waste soil, which could not be discharged directly or indirectly to surface waters.

[13] California Code of Regulations Title 27 section 20230(a)
[14] Regional Water Quality Control Board, Central Valley Region. 1989. *The Designated Level Methodology for Waste Classification and Cleanup Level Determination – Staff Report.*

Additionally, exporting and reusing inert waste soil from a known contaminated site can have potentially adverse effects on human or ecological receptors from any pollutants or contaminants that may be present in the soil. Therefore, pollutants or contaminant levels in the inert waste soil must not only be protective of water quality, but also human and ecological health.

The California Environmental Protection Agency's (CalEPA) Office of Environmental Health Hazard Assessment (OEHHA) developed screening levels to identify concentrations of hazardous chemicals in soil that the CalEPA considers to be below thresholds of concern for risks to human health.[15] These screening levels are known as the California Human Health Screening Levels (CHHSLs). The CHHSLs identify screening levels that are considered protective of human health for different land uses. There are CHHSLs for residential land uses~~,~~ and industrial/commercial land uses.

For ecological receptors, the CalEPA has not developed soil screening levels. However, the U.S. Department of Energy Oak Ridge National Laboratory (ORNL) developed toxicological benchmarks for ecological receptors in soil. These benchmarks were used to develop ecological preliminary remediation goals (e-PRGs).[16] The e-PRGs developed by ORNL correspond to minimal and acceptable levels of effects on general ecological endpoints. The ORNL e-PRGs can serve as screening levels that may be considered protective of ecological receptors.

In some cases, natural background concentrations of some pollutants or contaminants (i.e., heavy metals) may exceed soil screening levels (CHHSLs and/or e-PRGs). The dischargers cannot be expected to reduce naturally occurring concentrations of pollutants or contaminants to less than background levels. However, background levels can vary significantly from one location to another within the San Diego Region as well as throughout the state. The Kearney Foundation of Soil Science at the University of California prepared a document in 1996 (Kearny Report) on background concentrations of elements in California soils.[17] The study collected samples from 50 locations throughout California and provided a statistical analysis of the results. Included in the results were minimum, maximum, and arithmetic mean concentrations of 46 different inorganic elements.

With the inert waste targets, human and ecological health soil screening levels, and background levels, soil screening levels may be developed to allow waste soils to be acceptable for full unrestricted reuse. Reuse of inert waste soil can include activities such as restoration of ecological habitats, development of a children's playground or school, or development of commercial or industrial facilities.

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[15] California Environmental Protection Agency. 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties.* http://www.calepa.ca.gov/Brownfields/documents/2005/CHHSLsGuide.pdf

[16] Efroymson, R.A., G.W. Suter II, B.E. Sample, and D.S. Jones. 1997. *Preliminary Remediation Goals for Ecological Endpoints*. Oak Ridge National Laboratory, Oak Ridge, TN. 50 pp. ES/ER/TM-162/R2.

[17] Kearney Foundation of Soil Science Division of Agriculture and Natural Resources, University of California. 1996. *Background Concentrations of Trace and Major Elements in California Soil – Special Report*

Full unrestricted use would mean that the inert waste soil could be used for any purpose, as long as sediment from the inert waste soil is not transported directly or indirectly to surface waters. However, the San Diego Water Board can only authorize the full unrestricted reuse of waste soil characterized as inert within the boundaries of the San Diego Region. Reuse of waste soil characterized as inert outside the boundaries of the San Diego Region would require a conditional waiver or WDRs from the Regional Water Board regulating the area, or the State Water Board would have to issue a statewide conditional waiver or WDRs authorizing the reuse of waste soils characterized as inert.

Soil screening levels for full unrestricted reuse of inert waste soil within the San Diego Region can be developed for first tier screening criteria, or Tier 1 Soil Screening Levels. Waste soil that can be characterized with pollutant or contaminant concentrations that are protective of water quality, residential human health, and ecological health, but not less than background could be reused without restriction.

However, many potential uses of inert waste soil include only commercial or industrial ~~anthropogenic~~ development purposes. For such uses, soil screening levels must only be protective of water quality and commercial or industrial human receptors, but not ecological receptors, and do necessarily have to be less than background. Soil screening levels for reuse of inert waste soil only for commercial or industrial ~~anthropogenic~~ development purposes can be developed as second tier screening criteria, or Tier 2 Soil Screening Levels.

Because background concentrations can vary significantly (i.e., up to two orders of magnitude), a representative background value must be selected. For full unrestricted reuse of inert waste soils, the arithmetic mean background concentration from the Kearny Report is representative of background soil concentrations throughout California. Therefore, the arithmetic mean background concentration from the Kearny Report is used in selecting the Tier 1 Soil Screening Levels. However, background concentrations in areas that have been impacted by anthropogenic activities typically have higher background concentrations. ~~Therefore, for reuse of inert waste soils for anthropogenic development purposes, a higher background concentration could be considered representative.~~ AHence, a value of one-half of the maximum background concentration from the Kearny Report ~~could be considered representative of background soil concentrations in anthropogenic developed areas~~was used in selecting the Tier 2 Soil Screening Levels.

Based on the above discussion, the following tables summarizes the proposed Tier 1 and Tier 2 Soil Screening Levels:

Tier 1 Soil Screening Levels

Pollutant	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 (CHHSLs) 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 I 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.

Tier 2 Soil Screening Levels

Pollutant	Inert Waste Target[a] (mg/kg)	Industrial CHHSL[b] (mg/kg)	Background[d] Max (mg/kg)	Background[d] ½ Max (mg/kg)	TTLC[e] (mg/kg)	Tier 2 SSL[f,g] (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 (CHHSLs) 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..

If a waste soil from a known contaminated site is characterized as inert in accordance with the criteria and soil screening levels above, reuse of the inert waste soil at the source site or another site should not create or threaten to create a condition of pollution or nuisance, provided no sediment from the inert waste material is transported to any surface water bodies. ~~Therefore, this waiver should only apply to the discharge/reuse of inert waste soils on land, where sediment is not allowed to be transported off a site to any surface water of the state.~~

Proposed Waiver Conditions for Discharge/Reuse of Soils Characterized as Inert from Contaminated Sites:

~~WDRs and/or the requirement to file RoWDs for t~~The discharge and/or reuse of soils characterized as inert from contaminated sites to land is not expected to pose a threat to the quality of waters of the state under the following~~should be waived under the following proposed waiver~~ conditions:

1. 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).
2. Inert waste soils from known contaminated sites cannot contain significant quantities of decomposable waste.
3. Inert waste soils from known contaminated sites cannot contain any "free liquids."[18]
4. Inert waste soils that are discharged/disposed/reused at any site cannot have any hydrocarbon, chlorinated solvent, or other contaminant-based odor.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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:
   a) All waste soils generated during remediation or corrective action must be stockpiled on the site in accordance with the waiver conditions for the temporary discharge of specified contaminated soil, or waste soils may be sampled and characterized in-situ prior to transport and disposal or reuse off site.

[18] "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"

b) Waste soil must be segregated into 2 categories:
   i) 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.
   ii) 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.

c) 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: [19]

Volume of Soil	Number of Samples
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 cy[20]

cy = cubic yards

d) Samples must be analyzed by a state-certified analytical laboratory using EPA approved analytical methods for the following constituents:
   i) 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.
   ii) Total ~~recoverable~~ petroleum hydrocarbons (by USEPA Method 8015[21] – full range if export site includes oil or fuel as potential or actual contaminants of concern~~spill or release investigation or remediation~~).
   iii) Polychlorinated biphenyls (if export site includes PCBs as potential or actual contaminants of concern~~spill or release investigation or remediation~~).
   iv) Volatile and semi-volatile organic compounds (if export site includes volatile and semi-volatile organic compounds as potential or actual contaminants of concern~~solvent spill or release investigation or remediation~~).

[19] Department of Toxic Substances Control, Information Advisory Clean Imported Fill Material, October 2001 http://www.dtsc.ca.gov/Schools/upload/SMP_FS_Cleanfill-Schools.pdf

[20] 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.

[21] Or latest version USEPA SW846 method.

v) Pesticides (if export site includes a known agricultural area, pesticides as potential or actual contaminants of concern~~spill or release investigation~~).
vi) Other constituents (if the contaminated portion of the export site is found to contain other pollutants or contaminants).

e) *If analytical results indicate detectable concentrations of constituents other than Title 22 metals, waste soil cannot be characterized as inert.*

10. For 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.[22]

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**

[22] 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.

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 (CHHSLs) 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 I 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..

c) 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 ~~and placement of the soil~~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, ~~maximum reported concentrations of Title 22 metals~~the 90 percent UCL of the data for the contaminants of concern, ~~number of samples exceeding Tier 1 Soil Screening Levels,~~ 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.*"

11. 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 ~~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.[23]

Tier 2 Soil Screening Levels

Pollutant	Inert Waste Target[a] (mg/kg)	Industrial CHHSL[b] (mg/kg)	Background[d] Max (mg/kg)	Background[d] ½ Max (mg/kg)	TTLC[e] (mg/kg)	Tier 2 SSL[f,g] (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 (CHHSLs) 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)

[23] 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.

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..

c) 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, ~~maximum reported concentrations of Title 22 metals~~the 90 percent UCL of the data for the contaminants of concern, ~~number of samples exceeding Tier 2 Soil Screening Levels,~~ 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. Tier 2 inert waste soil 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 must 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 must be placed at least 100 feet from the nearest surface water body.
iv) Tier 2 inert waste must be protected against 100-year peak stream flows as defined by the County flood control agency.
v) Tier 2 inert waste must 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 must have a permeability of no more than 10^{-5} cm/sec. Placement of a cover on the inert waste soils must be completed with 30 days of revising/discharging the final load of inert waste soils at the import site.

B.1.6 Concrete Grinding Residues

Discharges of concrete grinding residues can contain several pollutants that can affect the quality of waters of the state. These pollutants contain can potentially leach to groundwater or runoff to surface waters. However, discharges of concrete grinding residues would not pose a threat to the quality of waters of the state if discharged in compliance with certain conditions.

The following discussion identifies the potential pollutants of concern associated with discharges of concrete grinding residues to land, and the conditions under which the discharges would not pose a threat to water quality. Discharges of concrete grinding residues that can comply with the proposed waiver conditions are not expected to pose a threat to the quality of waters of the state and may be waived of the requirement to file RoWDs and/or regulation by WDRs.

Grinding or grooving is generally performed to improve the riding quality and/or friction of~~f~~ new or existing cement concrete or asphalt concrete pavement. Existing pavements are ground or grooved as a rehabilitation strategy. New pavements are ground or grooved to meet smoothness or friction requirements. Typically, concrete grinding activities include the use of water to cool the grinding blades and surfaces. The water mixes with the concrete particles and may create a high pH, or alkaline, slurry. The slurry can be collected to allow the solids to settle out, and water decanted for reuse in grinding/grooving. The resulting concrete grinding residue must be stored and disposed.

If the concrete grinding residues are discharged to land for storage, proper management measures must be taken to prevent the ~~degradation of~~runoff to surface waters or leaching of pollutants to groundwater ~~quality~~. Concrete grinding residues must be properly contained to prevent it from running off to surface waters. Concrete grinding residues consist of high liquid content, which can potentially infiltrate to groundwater. However, the very fine-grained materials in the residue would likely seal the disposal area surface, which will severely reduce or eliminate any leaching potential as the water content evaporates. Containment of the concrete grinding residues ~~would~~ also eliminates the threat to surface waters.

As long as concrete grinding residues are properly managed and contained, these types of discharge are not expected impact surface water or groundwater quality. Discharges of concrete grinding residues to land that can comply with the proposed waiver conditions are not expected to pose a threat to the quality of waters of the state~~Therefore, enrollment should not be required for concrete grinding residues.~~

This conditional waiver should apply only to concrete grinding residues discharged/disposed to land that are properly managed.

Proposed Waiver Conditions for Concrete Grinding Residues:

~~WDRs and/or the requirement to file RoWDs for the d~~Discharges ~~and/or disposal~~ of concrete grinding residues to land are not expected to pose a threat to the quality of waters of the state under the following ~~should be waived under the following proposed waiver~~ conditions:

1. Prevent the direct or indirect discharge of ~~C~~concrete grinding residues ~~cannot be discharged directly or indirectly~~ to any surface waters of the state (including ephemeral streams and vernal pools).
2. Concrete grinding residues must be contained to eliminate the potential for runoff from the site.
3. If concrete grinding residues are discharged to land for storage, the ~~disposal~~ storage area 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 ~~containment~~ storage area must be at least 5 feet above the highest known historical or anticipated groundwater level.
5. The walls of the ~~containment~~ storage area must be at least 100 feet away from any surface water body.
6. Concrete grinding residues cannot contain any toxic or hazardous constituents.
7. Concrete grinding residues discharged to land must not ~~degrade~~adversely affect the quality of underlying groundwater.
8. Concrete grinding residues must be removed and disposed of at an appropriate disposal facility prior to restoring the ~~containment~~ storage area ~~or sump~~ to pre-~~sump~~ discharge conditions.
9. The discharge/disposal ~~containment~~ storage area must be filled in and restored to pre-discharge/disposal conditions.
10. Discharger must submit a Notice of Intent or technical and/or monitoring program reports when directed by the San Diego Water Board.

B.1.7 Temporary Waste Piles and Surface Impoundments for Disaster-Related Wastes

Discharges of disaster-related wastes contain several pollutants that can affect the quality of waters of the state. These pollutants can potentially leach to groundwater or runoff to surface waters. However, discharges of disaster-related wastes to temporary waste piles or surface impoundments would not pose a signficiant threat to the quality of waters of the state if discharged in compliance with certain conditions.

The following discussion identifies the potential pollutants of concern associated with discharges of disaster-related wastes to temporary waste piles and surface impoundments, and the conditions under which the threat to water quality would be minimized. Discharges of disaster-related wastes to temporary waste piles and surface impoundments that can comply with the proposed waiver conditions may be waived of the requirement to file RoWDs and/or regulation by WDRs.

When a disaster (i.e., flood, fire, or earthquake) occurs, significant amounts of debris, which can include solid and/or liquid wastes, will require cleanup and disposal. Disaster-related waste streams from the cleanup after regional disasters can include "mixed emergency wastes." Mixed emergency wastes are solid wastes that consists of or contains two or more categories of wastes (*e.g.,* nonhazardous wastes, household hazardous wastes, universal wastes, inert wastes, *etc.)* that and have been mixed so that the individual waste components are not practically separable for purposes of waste management.

Solid and/or liquid wastes derived from the cleanup of debris associated with disaster-related impacts are likely to be taken to existing regulated (i.e., permitted) waste management units (e.g., waste transfer stations) and waste disposal facilities (e.g., landfills) for treatment (including sorting, etc), storage, and/or disposal. There is a combination of privately owned and publicly owned active regulated waste management units and waste disposal facilities currently accepting discharges of non-hazardous municipal solid waste (MSW) within the San Diego Region. If there are significant amounts of disaster-related wastes, agencies and jurisdictions, or persons, engaged in cleanup activities within the San Diego Region may also find it necessary to establish temporary staging areas at these regulated waste management units and solid waste disposal facilities to facilitate effective emergency containment, cleanup, and disposal of disaster-related wastes.

Temporary staging areas may consist of temporary waste piles and/or surface impoundments. Temporary waste piles and temporary surface impoundments are sites/facilities, or a portion of an existing regulated waste management facility, at which liquid or solid wastes are temporarily discharged, stored, and treated (sorting of recyclables), and where containment features and ancillary features for precipitation and drainage control are present. Temporary waste piles and temporary surface impoundments are temporary de facto waste management units.

Depending on the amount and/or locations of disaster-related wastes that must be managed, it may not always be possible to locate temporary staging areas at regulated waste management units or solid waste disposal facilities. Emergency conditions may temporarily disrupt the normal procedures for transport, treatment and disposal of wastes requiring dischargers to improvise temporary engineered alternatives to prescriptive standards for waste management and containment. Staging areas may need to be established temporarily until the disaster-related wastes can be transferred to a regulated facility. In emergency situations, the San Diego Water Board may allow

engineered alternatives to construction and prescriptive standards set forth in California Code of Regulations Title 27.[24]

California Code of Regulations Title 27 ~~section~~ includes the following exemptions for the disposal of solid wastes:

- Cleanup actions for solid wastes, taken at the direction of public agencies to cleanup and abate conditions of pollution or nuisance, resulting from unintentional or unauthorized releases of waste or pollutant to the environment.[25] Wastes, pollutants, or contaminated materials removed from the immediate place of release must be discharged/disposed according to applicable solid waste disposal requirements.[26]
- Recycling or other use of materials salvaged from waste, or produced by waste treatment, such as scrap metal, compost, and recycled chemicals.[27] Residual wastes from recycling or treatment operations must be discharged/disposed according to the applicable solid waste disposal requirements.[28]
- Waste treatment in fully enclosed facilities, such as tanks, or in concrete-lined facilities of limited areal extent, such as oil-water separators.[29]

Under the provisions of Water Code section 13269(c), waiving the issuance of WDRs for the expeditious management and eventual disposal of solid wastes resulting from the cleanup of disaster-impacted areas in the San Diego Region is not against the public interest, provided that certain conditions are met. Additionally, waiving regulation for the temporary staging of disaster-related wastes would enable San Diego Water Board staff resources to be used more effectively during the state of emergency. Therefore, the public interest is served if short term discharges of disaster-related wastes into temporary waste piles and/or surface impoundments 1) comply with specific conditions, 2) are effectively regulated by other public agencies, and/or 3) do not result in violations of the Basin Plan.

~~This conditional waiver should apply only to the temporary discharge of disaster-related wastes to land until the waste can be properly and permanently disposed at a regulated disposal facility.~~

Proposed Waiver Conditions for Temporary Waste Piles and Surface Impoundments for Disaster-Related Wastes:

[24] California Code of Regulations Title 27 section 20080(b)
[25] California Code of Regulations Title 27 section 20090(d)
[26] State Water Board promulgated sections of California Code of Regulations Title 27 Article 2 Subchapter 2 Chapter 13 Subdivision 1 for nonhazardous wastes, and California Code of Regulations Title 23 Article 2 Chapter 15 for hazardous wastes.
[27] California Code of Regulations Title 27 section 20090(h)
[28] State Water Board promulgated sections of California Code of Regulations Title 27 Article 2 Subchapter 2 Chapter 13 Subdivision 1 for nonhazardous wastes, and California Code of Regulations Title 23 Article 2 Chapter 15 for hazardous wastes.
[29] California Code of Regulations Title 27 section 20090(i)

~~WDRs and/or the requirement to file RoWDs for d~~Discharges of disaster-related wastes to temporary waste piles and surface impoundments should minimize the potential impact and should not pose a significant threat to the quality of waters of the state under the following~~be waived under the following proposed waiver~~ conditions:

1. This conditional waiver does not become active and available until 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.
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 regulated by this waiver, or
   c) Six (6) months have elapsed since the Governor issued a declaration of the state of emergency for any portion of the San Diego Region.
3. For all temporary waste piles and surface impoundments used to manage disaster-related waste, the following conditions apply:
   a) Prevent the direct or indirect discharge of ~~D~~disaster-related wastes ~~cannot be discharged directly or indirectly~~ to any surface waters of the state (including ephemeral streams and vernal pools).
   b) Disaster-related waste management operations must not be performed in a manner that creates, or contributes to a condition of pollution or nuisance.
   c) Disaster-related waste management operations must not be performed in a manner that creates, or contributes to, conditions; which violate the waste discharge prohibitions promulgated in the Basin Plan.
   d) Disaster-related wastes must 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 ~~regulated by this waiver~~.[30]
   e) Disaster-related wastes must 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.[31]
   f) Liquid hazardous wastes or "restricted hazardous wastes"[32] 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 must not consist of or contain material classified as a designated waste.[33]

[30] Pursuant to California Code of Regulations Title 27 section 20200(b)(1)
[31] Pursuant to California Code of Regulations Title 27 section 20200(b)(2)
[32] Defined in California Health and Safety Code section 25122.7
[33] Defined in California Code of Regulations Title 27 section 20210

h) Inert wastes[34] 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 must 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 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); and

iii) As allowed by valid WDRs issued by the San Diego Water Board for other categories of waste management units.

4. For the discharge of disaster-related ~~solid~~ wastes for disposal at regulated waste disposal facilities in the San Diego Region, the following conditions should apply:

a) ~~Solid w~~Waste (not otherwise suitable for recycling or reuse) derived from cleanup of disaster-impacted areas in the San Diego Region and managed under provisions of this waiver must 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*.

b) ~~Solid w~~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.

c) Food wastes, animal carcasses, and other putrescible wastes derived from cleanup of disaster-impacted areas in the San Diego Region must be discharged for disposal in compliance with conditions of this waiver and covered expeditiously.

d) Inert wastes contained in mixed emergency wastes derived from cleanup of disaster-impacted areas in the San Diego Region, must be separated and recycled when appropriate and practicable.

e) The discharger is responsible for accurately classifying disaster-related ~~solid~~ waste streams in accordance with the applicable regulatory requirements.[35]

f) The regulated waste disposal facility owner/operator is responsible for properly identifying disaster-related ~~solid~~ waste streams[36] and identifying wastes that may be suitable for use as alternative daily cover (ADC). Solid waste~~s~~ that may be used as ADC at a regulated disposal facility are as follows:

i) Solid wastes that are classified as inert wastes.

ii) Solid wastes that meet the criteria for ADC as prescribed in California Code of Regulations Title 27 sections 20690 to 20705, and.

[34] Defined in California Code of Regulations Title 27 section 20230
[35] Requirements are provided in California Code of Regulations Title 27, Title 23, Chapter 15, and/or Title 22 Division 4.5.
[36] Pursuant to California Code of Regulations Title 27 section 20200(c)

iii) 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.

g) Within 60 days after the expiration of this waiver (see above) 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 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.

5. For the discharge of disaster-related ~~solid~~ wastes to temporary waste piles located at regulated waste management or disposal facilities in the San Diego Region, the following conditions should apply:

a) 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.*"

b) 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 must 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 MMs/BMPs to the maximum extent practicable for storm water conveyance and control.

c) 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.

d) 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.

e) Solid wastes discharged to temporary waste piles at regulated waste management or disposal facilities temporarily regulated by this waiver, together with any materials used to contain the temporary waste piles, must be removed

from the site. The site must be restored to its original state no later than the 60 days after expiration of this waiver (see above), 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.

f) 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.*"

6. For the discharge of disaster-related ~~solid~~ wastes to temporary waste piles NOT located at regulated waste management or disposal facilities in the San Diego Region, the following conditions should apply:

a) 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.*"

b) 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:

i) 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.

ii) Temporary waste piles must be protected from inundation of washout due of floods with a 100-year return period.
iii) Temporary waste piles cannot be located on a known Holocene fault.
iv) Temporary waste piles cannot be located in areas of potential rapid geologic change (*e.g.,* landslides, debris flows, flashflood areas, *etc.*).
v) 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.
vi) 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.
vii) Temporary waste management operations that include wastes with a liquid content exceeding its moisture-holding capacity and/or containing free liquids, must comply with requirements for temporary surface impoundments (see below).
viii) 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 must be diverted from the location of the temporary waste pile through implementation of MMs/BMPs to the maximum extent practicable for storm water control and conveyance.

c) 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.
d) 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) must be maintained as required to keep them legible and must remain in place while temporary waste piles remain on site.
e) ~~Solid w~~Wastes discharged to temporary waste piles not at regulated waste management or disposal facilities temporarily ~~regulated by this~~granted a waiver,

together with any materials used to contain the temporary waste piles, must be removed from the site. The site must be restored to its original state no later than the 60 days after expiration of this waiver (see above), or as required by the San Diego Water Board.

f) 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.*"

7. For the discharge of disaster-related ~~solid~~ wastes to temporary surface impoundments NOT located at regulated waste management or disposal facilities in the San Diego Region, the following conditions should apply:

a) 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.*"

b) 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:

i) The bottom of a temporary surface impoundment must be placed at least 5 feet above the highest historically or anticipated known level of groundwater, and more than 100 feet from, and at an elevation that is higher than, any surface water of the state.

ii) Temporary surface impoundments must be protected from inundation of washout due of floods with a 100-year return period.

iii) Temporary surface impoundments cannot be located on a known Holocene fault.
iv) Temporary surface impoundments cannot be located in areas of potential rapid geologic change (*e.g.,* landslides, debris flows, flashflood areas, *etc.*).
v) 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.
vi) 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.
vii) 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.
viii) Direct pipeline discharges of liquid can occur only into temporary surface impoundments with automatic or manually operated fail-safe systems to prevent overfilling.
ix) Temporary surface impoundments must be designed and constructed to prevent scouring of containment structures at points of liquid discharge into the impoundments.
x) 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 must be diverted from the location of the temporary waste pile through implementation of MMs/BMPs to the maximum extent practicable for storm water control and conveyance.

c) 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.
d) Owners/operators of temporary surface impoundments not on regulated facilities ~~temporarily regulated by this waiver~~ must ensure that only disaster related waste streams are discharged into temporary surface impoundments.
e) 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.[37] 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 must be made of the bottom of the liner prior to refilling the impoundment.

f) 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) must be maintained as required to keep them legible and must remain in place while temporary surface impoundments remain on site.

g) Solid wastes discharged to temporary surface impoundments not at regulated waste management or disposal facilities ~~temporarily regulated by this waiver~~, together with any materials used to contain the temporary surface impoundments, must be removed from the site. The site must be restored to its original state no later than the 60 days after expiration of this waiver (see above), or as required by the San Diego Water Board.

h) 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 significant penalties for submitting false information, including the possibility of fine and imprisonment.*"

[37] Pursuant to California Code of Regulations Title 27 section 21400(a)

B.1.8 Temporary Waste Piles and Emergency Landfills for Mass Mortality Wastes

Discharges of mass mortality wastes can be sources of several pollutants that can affect the quality of waters of the state. These pollutants can potentially leach to groundwater or runoff to surface waters. However, discharges of mass mortality wastes to temporary waste piles or emergency landfills would not pose a significant threat to the quality of waters of the state if discharged in compliance with certain conditions.

The following discussion identifies the potential pollutants of concern associated with discharges of mass mortality wastes to temporary waste piles and emergency landfills, and the conditions under which the threat to water quality would be minimized. Discharges of mass mortality wastes to temporary waste piles and emergency landfills that can comply with the proposed waiver conditions may be waived of the requirement to file RoWDs and/or regulation by WDRs.

On January 27, 2003, the State Water Board updated its interim guidance concerning the management of mass mortality wastes associated with the impacts from Exotic Newcastle Disease (END). The document issued by the State Water Board contains guidance for managing high-moisture content wastes streams associated with mass mortality of animals and disaster-related wastes. Disposal of large volumes of wastes (e.g., animal carcasses, animal fecal wastes, *etc.*) associated with mass mortality (*e.g.,* natural disaster, agricultural disease, *etc.*) may cause wastes to exceed moisture holding capacity at MSW landfills. Mass mortality wastes are characterized as non-hazardous solid wastes.[38]

When a disaster (i.e., flood, fire, earthquake, or animal epidemic) occurs, significant numbers of animal carcasses and related wastes may require cleanup and disposal. Disaster-related mass mortality waste streams from the cleanup after regional disasters can include "mixed emergency wastes." Mixed emergency wastes are solid wastes that consists of or contains two or more categories of wastes (*e.g.,* nonhazardous wastes, household hazardous wastes, universal wastes, inert wastes, *etc.)* that and have been mixed so that the individual waste components are not practically separable for purposes of waste management.

Wastes streams resulting from the cleanup of disaster-related mass mortality wastes are likely to be taken to existing regulated (i.e., permitted) waste management units (e.g., waste transfer stations) and waste disposal facilities (e.g., landfills) for treatment (including sorting, etc), storage, and/or disposal. There is a combination of privately owned and publicly owned active regulated waste management units and waste disposal facilities currently accepting discharges of non-hazardous MSW within the San

[38] California Code of Regulations Title 27 section 20220(a) defines *"nonhazardous solid waste"* as including *"… manure, vegetable or animal solid and semi-solid wastes, and other discarded waste (whether of solid or semi-solid consistency); provided that such wastes do not contain wastes which must be managed as hazardous 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)."*

Diego Region. If there are significant amounts of disaster-related mass mortality wastes, agencies and jurisdictions, or persons, engaged in cleanup activities within the San Diego Region may also find it necessary to establish temporary staging areas at these regulated waste management units and solid waste disposal facilities to facilitate effective emergency containment, cleanup, and disposal of disaster-related wastes.

Temporary staging areas will likely consist of temporary waste piles. Temporary waste piles are sites/facilities, or a portion of an existing regulated waste management facility, at which solid wastes are temporarily discharged, stored, and treated, and where containment features and ancillary features for precipitation and drainage control are present. Temporary waste piles are temporary de facto waste management units.

Depending on the amount and/or locations of disaster-related mass mortality wastes that must be managed, locating temporary staging areas at regulated waste management units or solid waste disposal facilities may not always be possible. Emergency conditions may temporarily disrupt the normal procedures for transport, treatment and disposal of wastes requiring dischargers to improvise temporary engineered alternatives to prescriptive standards for waste management and containment. Staging areas may need to be established temporarily until the disaster-related wastes can be transferred to a regulated facility.

In order to prevent the creation of a condition of pollution or nuisance, and the spread of disease associated with mass mortality wastes, agencies and jurisdictions, or persons, engaged in cleanup of disaster-impacted areas within the San Diego Region may find that establishing emergency waste management units (emergency landfills) that are not located at a regulated facility is necessary. Emergency landfills are also sites/facilities at which solid wastes are discharged, stored, and treated, and where containment features and ancillary features for precipitation and drainage control are present, but were not previously permitted. Emergency landfills are waste management units for the permanent disposal of disaster-related mass mortality waste streams

In emergency situations, the San Diego Water Board may allow engineered alternatives to construction and prescriptive standards set forth in California Code of Regulations Title 27.[39]

California Code of Regulations Title 27 ~~section~~ includes the following exemptions for the disposal of solid wastes:

- Cleanup actions for solid wastes, taken at the direction of public agencies to cleanup and abate conditions of pollution or nuisance, resulting from unintentional or unauthorized releases of waste or pollutant to the environment.[40] Wastes, pollutants, or contaminated materials removed from the immediate place

[39] California Code of Regulations Title 27 section 20080(b)
[40] California Code of Regulations Title 27 section 20090(d)

of release must be discharged/disposed according to applicable solid waste disposal requirements.[41]

- Waste treatment in fully enclosed facilities, such as tanks, or in concrete-lined facilities of limited areal extent, such as oil-water separators.[42]

Under the provisions of Water Code section 13269(c), waiving the issuance of WDRs for the expeditious management and eventual disposal of solid wastes resulting from the cleanup of disaster-impacted areas in the San Diego Region is not against the public interest, provided that certain conditions are met. Additionally, waiving regulation for the temporary staging of mass mortality disaster-related wastes would enable San Diego Water Board staff resources to be used more effectively during the state of emergency. Therefore, the public interest is served if short term discharges of mass mortality disaster-related wastes into temporary waste piles and/or permanent disposal in emergency landfills comply with specific conditions, are effectively regulated by other public agencies, and/or do not result in violations of the Basin Plan.

~~This conditional waiver should apply only to the discharge of disaster-related mass mortality wastes to temporary waste piles until the waste can be properly and permanently disposed at a regulated disposal facility, or discharge and permanent disposal in properly designed emergency landfills.~~

Proposed Waiver Conditions for Temporary Waste Piles and Emergency Landfills for Mass Mortality Wastes:

~~WDRs and/or the requirement to file RoWDs for d~~Discharges of mass mortality wastes to temporary waste piles and emergency landfills should minimize the potential impact and should not pose a significant threat to the quality of waters of the state under the following ~~be waived under the following proposed waiver~~ conditions:

1. This conditional waiver does not become active and available until 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.
2. This conditional waiver is only in effect temporarily and must 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 regulated by this waiver, or
   c) Six (6) months have elapsed since the Governor issued a declaration of the state of emergency for any portion of the San Diego Region.

[41] State Water Board promulgated sections of California Code of Regulations Title 27 Article 2 Subchapter 2 Chapter 13 Subdivision 1 for nonhazardous wastes, and California Code of Regulations Title 23 Article 2 Chapter 15 for hazardous wastes.
[42] California Code of Regulations Title 27 section 20090(i)

3. For all temporary waste piles and emergency landfills used to manage disaster-related mass mortality waste, the following conditions should apply:
   a) Prevent the direct or indirect discharge of ~~D~~disaster-related mass mortality wastes ~~cannot be discharged directly or indirectly~~ to any surface waters of the state (including ephemeral streams and vernal pools).
   b) Disaster-related mass mortality waste management operations must not be performed in a manner that creates, or contributes to a condition of pollution or nuisance.
   c) Disaster-related mass mortality waste management operations must not be performed in a manner that creates, or contributes to conditions; which violate the waste discharge prohibitions promulgated in the Basin Plan.
   d) Disaster-related mass mortality wastes must 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 ~~regulated by this waiver~~.[43]
   e) Disaster-related wastes must 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.[44]
   f) Liquid hazardous wastes or "restricted hazardous wastes"[45] cannot be discharged to MSW landfills, temporary waste piles, or emergency landfills.
   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 must not consist of or contain material classified as a designated waste.[46]
   h) Inert wastes[47] 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 must be discharged for treatment and permanent disposal **only** into:
      i) 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); and
      ii) As allowed by valid WDRs issued by the San Diego Water Board for other categories of waste management units or
      iii) Emergency landfills established in accordance with the conditions of this waiver.

[43] Pursuant to California Code of Regulations Title 27 section 20200(b)(1)
[44] Pursuant to California Code of Regulations Title 27 section 20200(b)(2)
[45] Defined in California Health and Safety Code section 25122.7
[46] Defined in California Code of Regulations Title 27 section 20210
[47] Defined in California Code of Regulations Title 27 section 20230

4. For the discharge of disaster-related mass mortality wastes for disposal at regulated waste disposal facilities in the San Diego Region, the following conditions should apply:
   a) ~~Solid w~~Waste (not otherwise suitable for recycling or reuse) derived from cleanup of disaster-impacted areas in the San Diego Region and managed under provisions of this waiver must 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*.
   b) ~~Solid w~~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.
   c) Food wastes, animal carcasses, and other putrescible wastes derived from cleanup of disaster-impacted areas in the San Diego Region must be discharged for disposal in compliance with conditions of this waiver and covered expeditiously.
   d) Inert wastes contained in mixed emergency wastes derived from cleanup of disaster-impacted areas in the San Diego Region, must be separated and recycled when appropriate and practicable.
   e) 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 landfill should implement the following procedures:
      i) 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.
      ii) 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.
      iii) 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.
      iv) 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.*).
   f) Within 60 days after the expiration of this waiver (see above) 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 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.
5. For the discharge of disaster-related mass mortality wastes to temporary waste piles located at regulated waste management or disposal facilities in the San Diego Region, the following conditions should apply:

a) 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 mass mortality 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.*"
b) Owners/operators of regulated waste management or disposal facilities must manage temporary waste piles for disaster related mass mortality wastes as follows:
    i) 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.
    ii) 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).
    iii) 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.
    iv) Owner/operator must ensure that all mass mortality wastes are covered with soil or other waste immediately after it is discharged into the landfill.
    v) 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.
c) Owners/operators of regulated waste management or disposal facilities must prevent surface runoff/runon from contacting mass mortality wastes derived from cleanup of disaster-impacted areas in the San Diego Region and must prevent erosion and transport of soils containing disaster-related mass mortality wastes or waste constituents by surface runoff from all temporary waste piles. The facility owner/operator must implement MMs/BMPs to the maximum extent practicable for storm water conveyance and control.
d) All wastes derived from disaster-impacted areas in the San Diego Region must be placed at least 5 feet above the highest historically or anticipated known level of groundwater, and more than 100 feet from, and at an elevation that is higher than, any surface water of the state.

e) 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.
f) Mass mortality wastes discharged to temporary waste piles at regulated waste management or disposal facilities temporarily regulated by this waiver, together with any materials used to contain the temporary waste piles, must be removed from the site.
g) Owners/operators of regulated waste management or disposal facilities must submit Notice of Termination to the San Diego Water Board within 10 working days of completing removal of all disaster-related mass mortality wastes and restoring the site to its original condition. The Notice of Termination must contain the name and contact information of the owner/operator ff 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.*"

6. For the discharge and disposal of disaster-related mass mortality wastes to emergency landfills NOT located at regulated waste management or disposal facilities in the San Diego Region, the following conditions should apply:
   a) 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.*"
   b) 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:
      i) The bottom of an emergency landfill must be placed at least 10 feet above the highest historically or anticipated known level of groundwater, and more than 500 feet from any surface water of the state.

ii) Emergency landfills must be protected from inundation of washout due of floods with a 100-year return period.
iii) Emergency landfills cannot be located on a known Holocene fault.
iv) Emergency landfills cannot be located in areas of potential rapid geologic change (*e.g.,* landslides, debris flows, flashflood areas, *etc.*).
v) 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).
vi) 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.*).
vii) The thickness of each layer of mass mortality wastes must be limited to less than 2 feet.
viii) Lime (or another liquid abatement material) must be added to each layer to help reduce the generation of liquid by the mass mortality wastes.
ix) 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.
x) 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
xi) 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 must 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.
xii) Owner/operator should also evaluate, implement, and document other effective waste isolation (and waste moisture reducing methods) in conjunction with the procedures identified above

c) 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:
i) Installation of runon control features on the upgradient side of the emergency landfill to divert offsite storm water from the emergency landfill.
ii) Installation of an effective runoff collection and conveyance ditch.
iii) Grading and maintenance of the final cover to eliminate ponding of water over the emergency landfill.
iv) Installation and maintenance of erosion control measures on the cover of the emergency landfill (*e.g.,* install straw mulch and/or a vegetative cover).
v) Installation of a deer fence around the perimeter of the emergency landfill to discourage access by digging of carnivores.

d) 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) must be maintained as required to keep them legible and must remain in place while the emergency landfill remains on site.

e) 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.*"

f) 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 must include the following information:
   i) A short description of the emergency conditions that made the emergency landfill necessary.
   ii) The identity, physical address, mailing address and telephone number of the current land owner.
   iii) 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.
   iv) 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.
   v) A simple cross section of the emergency landfill and a description of the construction (depth, thickness of layers and final cover).

vi) An estimate of the amount of wastes (*e.g.,* in pounds or tons) discharged into the emergency landfill.
vii) A description of measures taken to ensure that wastes and waste constituents do not migrate outside the emergency landfill.
viii) Any other site-specific or discharger related information requested by the San Diego Water Board.

B.1.9 Discharges of Wastes Related to Fireworks Displays

Discharges of fireworks release pollutants that can affect the quality of waters of the state. These discharges release pollutants that can potentially be deposited on the ground surface and transported in storm water and surface runoff to surface waters, or leached to underlying groundwater. However, discharges of fireworks would not pose a threat to the quality of waters of the state if discharged in compliance with certain conditions.

The following discussion identifies the potential pollutants of concern associated with discharges of fireworks over land, and the conditions under which the discharges would not pose a threat to water quality. Discharges of fireworks over land that can comply with the proposed waiver conditions are not expected to pose a threat to the quality of waters of the state and may be waived of the requirement to file RoWDs and/or regulation by WDRs.

Fireworks displays are a common feature of many community events and celebrations in the San Diego Region such as at annual Fourth of July celebrations and other special events. Other fireworks displays are more frequent such as at sporting events and amusement parks. Fireworks displays generate and discharge wastes to the environment that have the potential to adversely affect waters of the state.

A fireworks device typically consists of black powder and a combination of chemicals that emit prescribed colors when ignited, encased in a shell constructed from paper and plastic.[48] Some of the chemicals commonly used in fireworks are potassium chlorate, potassium perchlorate, potassium nitrate, sodium benzoate, sodium oxalate, ammonium perchlorate, strontium nitrate, strontium carbonate, sulfur, charcoal, copper oxide, polyvinyl chloride, iron, titanium, shellac, dextrine, phenolic resin, and aluminum.[49] While actual fireworks device compositions are usually proprietary, typical fireworks devices may contain 38 to 64 percent by weight chlorate and perchlorate compounds.[50] Perchlorate and nitrates are pollutants of concern in drinking water, while nitrates and metals may have biostimulatory and toxicological effects, respectively, in aquatic habitats.

[48] Federal Register, Vol. 71, No. 83, May 1, 2006, pages 25544-25558
[49] Ibid
[50] McLain, JH, "Pyrotechinics," Franklin Institute Press, Philadelphia, 1980; and Lancaster, R, "Fireworks Principles and Practice," Chemical Publishing Co., New York, 1972; and manufacturer's information originally cited in Lahontan Regional Water Quality Control Board , "Fact Sheet, Questions and Answers about Water Sampling Conducted at Lake Tahoe on the Fourth of July," June 3, 2002.

Fireworks displays may include a combination of aerial shells that are launched to altitudes of 200 to 1,000 ft, low-level devices that reach heights up to 200 feet, and ground level set displays of flares, sparklers and strobes.[51] During a fireworks display, fireworks-related wastes are released to the environment in the form of particulates and fine solids suspended in the atmosphere that settle out, unexploded residues, launched but unexploded devices ("duds"), and fireworks casing and shell debris containing chemical residues.[52] The amount of fireworks-related wastes that reach surface waters and ground surfaces and the extent of the area impacted are generally unknown and depend on the form of the waste (e.g., particulate or debris) and are determined for the most part by prevailing wind conditions.[53] The area of deposition of fireworks-related wastes from a display has been estimated to extend from between 300 feet to 0.5 miles from the launch point.[54]

The potential impacts of fireworks displays on surface waters and groundwaters have been investigated through a number of studies:

- Water quality monitoring in Lake Tahoe conducted for the California Regional Water Quality Control Board, Lahontan Region (Lahontan Water Board) after a Fourth of July fireworks display in 2001 detected perchlorate levels that were elevated compared to background levels, and possibly also elevated nitrate levels, after the display. However perchlorate levels were non-detectable 12 hours after the display.[55]
- A study conducted at Disney World in Florida to assess the impacts of over 2,000 fireworks displays over 10 years on a small man-made lake concluded that concentrations of nitrogen and fireworks-related metals increased in the water column and the sediment of the lake, however, the observed levels had not resulted in eutrophication of the lake.[56]
- The Massachusetts Department of Environmental Protection (MADEP) conducted a study in 2004 to investigate the impacts of an annual fireworks display at the University of Massachusetts Dartmouth campus. The MADEP concluded that 10 years of annual fireworks displays have resulted in perchlorate contamination in soil and groundwater within the study area at levels that would potentially pose a drinking water concern.[57]

These studies suggest that annual or infrequent fireworks displays present a low threat to groundwater quality. However, there may be potential water quality impacts that are

[51] Federal Register, Vol. 71, No. 83, May 1, 2006, pages 25544-25558
[52] Ibid
[53] Ibid
[54] Ibid
[55] Lahontan Regional Water Quality Control Board, "Fact Sheet, Questions and Answers about Water Sampling Conducted at Lake Tahoe on the Fourth of July," June 3, 2002.
[56] DeBusk, TA et al, "Environmental Effects of Fireworks on Bodies of Water," 1st International Symposium on Fireworks, Canada, May 13-15, 1992
[57] Massachusetts Department of Environmental Protection, "Evaluation of Perchlorate Contamination at a Fireworks Display, Dartmouth, Massachusetts," August 2005 (Draft Report).

cumulative for shallow groundwaters used as drinking water sources with recurring fireworks displays. Available information does not indicate that fireworks displays must be prohibited to protect waters of the state. However, fireworks that are discharged directly over and into surface waters ~~would~~ may be subject to NPDES regulations, therefore cannot be ~~regulated with~~eligible for a conditional waiver.

Fireworks displays, if improperly conducted, are also potential fire hazards which may also impact waters of the state indirectly if the fireworks display results in a brush fire or structure fire. Potential impacts from fires include the discharge of burned material to surface waters and groundwaters, runoff of fire-fighting water and chemicals, and soil erosion from de-vegetated areas.

Organizers of fireworks displays are required to obtain permits from various public agencies prior to conducting fireworks displays. Organizers are typically required to obtain permits from the appropriate fire departments to address fire hazards. Organizers typically must also obtain a special event permit from municipal governments or a department of municipal government. These municipal special event permits address several issues such as traffic, public safety, noise, and increasingly storm water runoff impacts. For fireworks displays near drinking water reservoirs, municipal departments and special districts that own or operate drinking water reservoirs also usually require their own permit, or provide input to the issuance of municipal special event permits, to address water quality impacts to the reservoirs. Fireworks displays in areas within the jurisdiction of the U.S. Coast Guard must also be covered under a federally-mandated marine event permit. While the primary purpose of a marine event permit is to ensure public safety in navigable waters, the U.S. Coast Guard also considers environmental impacts through the National Environmental Protection Act (NEPA) process required for the issuance of a federal permit.

The permitting process and permits issued by the agencies mentioned previously can provide preliminary information and data to the San Diego Water Board to determine compliance with conditions of a waiver for discharges of fireworks-related wastes. Obtaining the proper permits from appropriate public agencies can be a waiver condition that serves as the method of enrollment for regulation by a conditional waiver.

~~The conditional waiver should only apply to fireworks displays that have obtained the proper permits from the appropriate public agencies that require permits for fireworks events, and are not discharge directly over and into surface waters.~~

Proposed Waiver Conditions for Discharges of Wastes Related to Fireworks: Displays

~~WDRs and/or the requirement to file RoWDs for d~~Discharges of waste related to firework displays over land are not expected to pose a threat to the quality of waters of the state under the following ~~should be waived with the following proposed waiver~~ conditions:

1. Fireworks can not be discharged directly over and/or into surface waters of the state (including ephemeral streams and vernal pools) ~~for regulation by this waiver~~.

~~2.Fireworks displays must be conducted at least 0.5 miles from the nearest surface waters of the state for regulation by this waiver, unless sufficient information is provided to demonstrate that a proposed distance is protective of surface water quality.~~

~~3.~~2. 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.[58] 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.

~~4.~~3. All fireworks-related debris must be cleaned up from land surface areas.

~~5.~~4. 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 ~~Services'~~ Drinking Water Source Assessment Protection Program. This condition may be waived if the owner or operator of a groundwater drinking water source, through a permit, specifically allows the fireworks display launch area and/or deposition area within an area designated as Zone A for groundwater source area protection.

~~6.~~5. 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 ~~Services'~~ 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.

~~7.~~6. The fireworks display must be permitted by all relevant public agencies that require permits for fireworks displays~~, including~~ (e.g., fire departments, municipal governments, law enforcement, water supply agencies~~), and the U.S. Coast Guard~~. Copies of any permits must be available on site for inspection.

7. 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

8. Discharger must submit a Notice of Intent or technical and/or monitoring program reports when directed by the San Diego Water Board.

[58] This condition is intended to alleviate spatial and temporal accumulation of fireworks-related chemical contaminants.