

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Alan D. Friedman)
MEETING DATE: JUNE 14, 2017

ITEM: 5A

SUBJECT: CALIFORNIA DEPARTMENT OF TRANSPORTATION –
Reissuance of Conditional Waiver of Waste Discharge Requirements for
Tire Shreds Reuse in Road Construction Projects

CHRONOLOGY: May 2011 – Conditional Waiver of Waste Discharge Requirements issued

DISCUSSION: The California Department of Transportation (Caltrans) recycles tires by shredding them for use as road base and fill material. Studies have shown that this use does not affect water quality, particularly if the tire shreds are contained beneath a cap and not placed in contact with groundwater or surface water.

The Tentative Order (Appendix A) would extend the five-year waiver of Waste Discharge Requirements for the discharge of tire shreds, provided that several conditions of the waiver relative to the placement of the tire shreds are met. The Tentative Order is a reissuance of a Conditional Waiver first adopted in 2000 and subsequently reissued in 2006 and 2011. We received no comments on the Tentative Order when circulated for public comment and expect this item to remain uncontested.

**RECOMMEN-
DATION:** Adoption of the Tentative Order

FILE NO.: CIWQS Place ID

APPENDIX A: Tentative Order

Appendix A

TENTATIVE ORDER

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

TENTATIVE ORDER

CALIFORNIA DEPARTMENT OF TRANSPORTATION

**CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS for
TIRE SHREDS REUSE IN ROAD CONSTRUCTION PROJECTS**

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Water Board, finds that:

1. **Purpose of Order:** This Order is a reissuance of Order No. R2-2011-0026, Conditional Waiver of Waste Discharge Requirements (WDRs), for the reuse of tire shreds in road construction projects. The original conditional waiver from 2000 is based upon studies that indicate that water quality impacts from the reuse of tire shreds in road construction projects are negligible provided that the conditions for the proper placement of tire shreds are specified and complied with. This Order sets forth such conditions.
2. **Project Description:** The California Department of Transportation (hereinafter, Caltrans or the Discharger) recycles tires by shredding them for use as road base and fill material. Typically, layers of tire shreds are separated from underlying native soil by geofabric, overlain by engineered soil and capped by asphalt or concrete. Surface grading and/or drainage structures minimize infiltration of rainwater through the tire shreds.
3. **Water Quality Studies:** Water quality studies have been conducted that indicate that the use of tire shreds as a road construction material will not significantly affect the quality of the waters of the State. Testing indicates that the leaching of metals and organic chemicals from tire rubber and tire belts is negligible. Although laboratory tests indicate that aquatic organisms can be affected by exposure to undiluted pore water from buried tire shred layers, field conditions and the conditions specified within this Order for tire shred placement will prevent biota from such exposure. In addition, reuse of tire shreds provides a net environmental benefit by reducing waste tire piles.
4. **Prevention of Water Quality Impacts:** Specific design criteria for tire shred placement are necessary to assure that beneficial uses of waters of the State are not impacted by potential leaching of contaminants from tire shreds. Design criteria include maintaining minimum tire shred size requirements, maintaining separation between tire shred layers and groundwater and surface waters, minimizing percolation of rainwater through tire shreds, and minimizing the potential for tire shreds to self-ignite.
5. **Report of Waste Discharge:** California Water Code (CWC) section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, that could affect the quality of the waters of the State, shall file a report of waste discharge. Caltrans' submittal of January 27, 2000, and supporting documentation fulfills these requirements.

6. **Waiver of Waste Discharge Requirements:** Title 27, Division 2, Subdivision 1 of the California Code of Regulations (CCR) authorizes the Water Board to adopt WDRs to address discharges of solid waste which may potentially impact waters of the State. CWC section 13269 authorizes the Water Board to waive WDRs for a specific discharge or a specific type of discharge where such a waiver is not against the public interest. Such a waiver is conditional: it may be terminated for any type of discharge at any time; it does not authorize any discharge that is otherwise prohibited or regulated; it does not preclude the need for permits which may be required by other local or governmental agencies; and it does not preclude the Water Board from taking enforcement actions for violations of the terms and conditions set forth in this waiver, or for any discharges that cause or threaten to cause violations of provisions of the Basin Plan or that create or threaten to create a condition of pollution or nuisance.
7. **Public Interest for Waiver:** It is in the public interest for the Water Board to waive the issuance of WDRs for discharges of tire shreds, provided that the Discharger meets and complies with all conditions and requirements of this waiver.
8. **California Environmental Quality Act:** This amendment is exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to CCR Title 14, section 15301. In the event that site-specific or project-specific tire shred placements result in potential water quality impacts unforeseen at this time, supplemental environment assessment may be required under CEQA by State or local governmental agencies.
9. **Conditions of Waiver:** WDRs for the discharge of tire shreds to land for use on road construction projects are hereby waived provided that the following conditions are met:
 - a. Tire shreds shall have a maximum of 25% (by weight) passing 1 ½ sieve and a maximum of 1% passing a No. 4 (4.75mm) sieve. To the extent practicable, particulate tire rubber and particulate belt materials shall be removed from material stock prior to placement.
 - b. Belt material protruding from the tire shreds shall protrude no more than one inch from the cut edge of the tire shreds on 75% of the pieces and no more than two inches on 100% of the pieces.
 - c. Tire shreds shall have less than 1% (by weight) of metal fragments that are not at least partially encased in rubber.
 - d. Tire shreds shall be free of contaminants such as oil, grease, gasoline, diesel fuel, wood, wood chips, or other fibrous organic matter or materials that could create a fire hazard.
 - e. The tire shreds shall be free of remains of tires that have been subjected to a fire.
 - f. The tire shreds shall not be placed in direct contact with soil containing organic matter such as topsoil, which could biochemically create a fire hazard.
 - g. Use of drainage features that could provide free access to air shall be avoided.

- h. Tire shreds shall not be placed in a single layer greater than 10 feet thick. However, the cumulative thickness of tire shred layers may be greater than 10 feet thick provided that layers of non-organic material separate tire shred layers.
- i. Tire shreds shall not be placed in contact with groundwater and must be separated from the highest anticipated groundwater by at least 5 feet.
- j. Tire shreds shall be contained beneath a cap constructed of asphalt, concrete, or compacted earth. Infiltration of water into the tire shreds shall be minimized by grading the cap surface to promote runoff. The integrity of the cap shall be maintained so that tire shreds do not become mobilized or exposed.
- k. Tire shreds shall not be placed within or below unlined surface water channels, including drainage ditches. Tire shreds shall be placed no closer than 5 feet from surface waters, including drainage ditches.
- l. Tire shreds shall not be placed in contact with groundwater with a pH less than 6 or greater than 8.5.
- m. Tire shreds shall not be placed in soils or groundwater in which pollutants or chemicals are present that may increase leaching of compounds from the tire shreds or affect the stability of the tire shreds.
- n. The discharge of any waste other than tire shreds as specified in these conditions is prohibited. A record shall be maintained of all areas where tire shreds are utilized for road construction. The record shall contain a map specifying the lateral and vertical placement of tire shreds and an estimate of the total volume. The record shall also include a detailed project description and schematic and documentation that the conditions of this waiver are met. The record shall be made available to Water Board staff within 30 days of request by the Executive Officer.
- o. Should visual observations, field sampling and analysis, or additional water quality studies indicate that tire shreds are releasing chemicals at concentrations that significantly impact waters of the State, or have the potential to release chemicals at concentrations that would significantly impact waters of the State, the Discharger shall notify the Water Board within 30 days.
- p. Any proposed change to the conditions specified within this waiver will require written approval from the Executive Officer.

10. **Authority:** This Order does not preempt or supersede the authority of federal or State agencies, or municipalities or other local agencies, to prohibit, restrict, or control discharges of tire shreds subject to their jurisdiction.

11. **Term of Waiver:** This waiver will expire five years after adoption of this Order pursuant to CWC section 13269. Should the Discharger seek renewal of the waiver after the five-year

period, the Discharger shall submit a formal request to the Executive Officer. This waiver supersedes the conditional waiver issued pursuant to Order No. R2-2011-0026, which expired on May 11, 2016.

12. **Notice and Meeting:** The Water Board has notified the Discharger and interested agencies and persons of its intent to waive WDRs and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations. The Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED pursuant to CWC section 13269 that waste discharge requirements are conditionally waived for the period described in Finding 11 above provided all conditions in Finding 9 are met.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Region on **DATE**.

Bruce H. Wolfe
Executive Officer