CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. R2-2006-0007

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

CALIFORNIA DEPARTMENT OF TRANSPORTATION

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

1. **Purpose of Order:** This Order is a reissuance of Order No. 00-045, Waiver of Waste Discharge Requirements for use of tire shreds in road construction projects. The original waiver is based upon studies which indicate that water quality impacts from use of tire shreds in road construction projects are negligible provided that separation from groundwater is maintained, and that tire shred use will provide a net environmental benefit.

2. **Project Description:** California Department of Transportation (CalTrans, hereinafter referred to as the discharger) has recycled used 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, and overlain by engineered soil and capped by asphalt or concrete. Surface grading and/or drainage structures prevent infiltration of rainwater through the tire shreds.

3. **Water Quality Studies**: Water quality studies indicate that use of tire shreds in road construction projects will not significantly affect the quality of the waters of the State. Testing indicates that leaching of metals, VOCs, and SVOCs from tire rubber and tire belts is negligible. Although laboratory tests indicate that aquatic species can be affected by exposure to undiluted porewater from buried tire shreds layers, actual field conditions and the criteria specified within this Order for tire shreds placement will prevent biota from such exposure.

4. **Prevention of Water Quality Impacts**: Specific design criteria for tire shred placement are necessary to assure that beneficial use 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 shreds layers and groundwater and surface waters, minimizing percolation of rainwater water through tire shreds, and minimizing the potential for tire shreds to self-ignite.

5. **Report of Waste Discharge**: Section 13260(a) of the California Water Code 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 (ROWD). Caltrans' submittal of January 27, 2000 and supporting documentation fulfills this requirement.

6. **Waiver of Waste Discharge Requirements**: Title 27, Division 2, Subdivision 1 of the California Code of Regulations authorizes the Board to adopt Waste Discharge Requirements (WDRs) to address discharges of solid waste which may potentially impact waters of the State. Section 13269 of the Water Code authorizes the Board to waive WDRs for a specific discharge or for a specific type of discharge where such a waiver is consistent with any applicable water quality control and is in the public interest. Such a waiver is conditional: it may be terminated for any type of discharge at any time; does not authorize any discharge that is otherwise prohibited or regulated; does not preclude the need for permits which may be required by other local or governmental agencies; and does not preclude the 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 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 Section 15301, Title 14 of the California Code of Regulations. In the event that site-specific and/or project-specific tire shred placements result in potential water quality impacts unforseen at this time, supplemental environmental 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 inch sieve, and maximum of 1% passing No.4 (4.75 mm) 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 1-inch from the cut edge of the tire shreds on 75% of the pieces and no more than 2- inches on 100% of the pieces.

c. Tire shreds shall have less than 1% by (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, 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 level by 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 soil with a pH less than 6 or greater than 8.5.

m. Tire shreds shall not be placed in soils and/or groundwater in which pollutants or chemicals are present which may increase leaching of compounds from tire shreds or affect the stability of tire shreds.

n. The discharge of any waste other than tire shreds as specified in Condition 1 above is prohibited. A record shall be maintained of all areas where tire shreds are utilized for road construction. The record shall include a map specifying the lateral and vertical placement of the tire shreds, and an estimate of the total volume. The record should also include a detailed project description and schematic, and documentation that the conditions of the waiver above are met. The record shall be made available to Board staff within 30 days of request by the Executive Officer.

p. Should visual observations, field sampling and analysis, or additional water quality studies indicate that tire shreds are releasing chemicals at concentrations which significantly impact waters of the state, or have the potential to release chemicals at concentrations which significantly impact waters of the state, the discharger shall notify the Board within 30 days.

q. Any proposed change to conditions specified 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 in 5 years of adoption of this Order pursuant to Section 13269 of the California Water Code. Should the discharger seek reissuance of the waiver after the 5-year period, the discharger shall submit a formal request to the Executive Officer. This waiver supercedes the conditional waiver issued pursuant to Order No. 00-045, which expired on June 21, 2005.

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

I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on January 11, 2006.

Bruce H. Wolfe
Executive Officer