

**DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY**

801 K STREET, MS 19-01, SACRAMENTO, CALIFORNIA 95814 • (916) 322-4027 • WWW.CALRECYCLE.CA.GOV

November 14, 2011

OWTS Policy  
State Water Resources Control Board  
P.O. Box 2231  
Sacramento, CA 95812

**Comment Letter – Draft OWTS Policy Documents**

Thank you for the opportunity to review the Public Comment Draft for onsite wastewater treatment systems (OWTS) dated September 30, 2011. We are specifically reviewing the Public Comment Draft to allow for the use of tire-derived aggregate (TDA) as a replacement for gravel in OWTS. Please see our earlier letter to Mr. Jonathon Bishop on this topic (September 21, 2010 letter attached).

TDA has been approved as a replacement for aggregate in septic systems in 17 states and is used extensively in Arkansas, Florida, Georgia, New York, North Carolina, South Carolina, and Virginia. Numerous studies have been completed to support the use of TDA in OWTS. In addition, CalRecycle is currently conducting a field project with Humboldt State University with two sections of leachfield (gravel and TDA) constructed to further demonstrate the satisfactory performance of TDA as a drainage media that does not adversely impact water quality.

Based on our review, we offer the following comments.

**Comment 1** – TDA could be used as an effective alternative fill material in the Tier 1 scenario (Low-Risk New or Replacement OWTS). It would be helpful if the Public Comment Draft clarifies what backfill materials are acceptable for use in the leachfield dispersion system required under Tier 1 by including a drawing of a “typical septic system” identifying acceptable backfill materials (including TDA). We also suggest language similar to the following be inserted after the existing section 8.1 (the existing section 8.2 Septic Tank Construction and Installation would then become Section 8.3):

*8.2 Materials used for septic tank leachfields*

*8.2.1 Solid (non-perforated) pipe shall be used between the distribution box and the trenches. Perforated distribution pipe shall be used in the trenches. Perforated pipe shall be made of rigid or corrugated plastic and meet applicable ASTM standards for use in septic systems.*

*8.2.2 Aggregate used in the leachfield trenches shall mean washed gravel or crushed stone 3/4 - 1 1/2 inches in diameter.*



8.2.3 *The aggregate shall be covered with a permeable filter fabric such as geotextile that prevents soil from entering the aggregate after backfilling, yet allows air and moisture to pass through.*

8.2.4 *Alternate Materials, such as tired derived aggregate, may be used as a substitute for conventional gravel or stone aggregate. The materials must provide at least the equivalent soil infiltration area and storage volume as conventional gravel or stone aggregate and also maintain structural integrity and be non-degradable by wastewater effluent.*

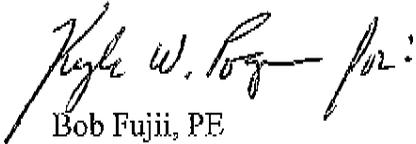
**Comment 2** - The terms aggregate, gravel, leachfield, and TDA do not exist in the definitions section of the Public Comment Draft. We recommend that these definitions be added so that there is a better understanding of what is required, especially under "Minimum OWTS Design and Construction Standards" contained in Tier 1 (Section 8.0).

**Comment 3** - The Public Comment Draft should also include a definition for TDA. We propose the following language.

*Tire Derived Aggregate (TDA) - aggregate manufactured from waste tires to a similar size distribution as conventional gravel or stone aggregate and used as alternative to gravel or stone aggregate in soil absorption areas. For septic systems, TDA is generally 0.5-4 inches in size.*

Thank you again for the opportunity to provide comments to your Public Comment Draft. If you have any questions, please feel free to call Albert Johnson, at (916) 341-6687.

Sincerely



Bob Fujii, PE  
Sr. Waste Management Engineer  
Statewide Technical and Analytical Resources Division  
Department of Resources, Recycling and Recovery (CalRecycle)

cc: Howard Levenson, Deputy Director, CalRecycle  
Brenda Smyth, Branch Chief, CalRecycle  
Kyle Pogue, Section Manager, CalRecycle  
Albert Johnson, Engineering Geologist, CalRecycle

Attachment: September 21, 2010 letter from Brenda Smyth to Jonathon Bishop



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September 21, 2010

Mr. Jonathon Bishop  
Chief Deputy Director  
SWRCB  
P.O. Box 100  
Sacramento, CA 95812

Re: Proposed Statewide Onsite Wastewater Treatment Systems Regulations (AB 885)

Dear Mr. Bishop:

Pursuant to my phone call, I am writing about the status of the SWRCB's proposed regulations for onsite wastewater treatment systems (OWTS). In particular, we would like to explore the possibility with you of adding language allowing the use of tire-derived aggregate (TDA) as an alternative to gravel in leach fields and seepage pits.

CalRecycle staff has had several discussions with your staff regarding the use of TDA as a substitute for aggregate in OWTS. TDA is routinely used in this manner, and there are numerous studies that have been done to support the use of TDA in OWTS. In fact, it has been approved in 17 states as a replacement for aggregate in septic systems and it is used extensively in the Eastern states of Arkansas, Florida, Georgia, New York, North Carolina, South Carolina, and Virginia. In some of these states, it is a large part of the market for tires diverted from landfill disposal.

CalRecycle is mandated to regulate and manage waste tires. For the last 15 years we have been promoting the reuse of waste tires as TDA in civil engineering projects through direct funding and education. Our projects completed to date include slope stabilization, retaining wall backfill, lightweight embankment fill, vibration mitigation, and various landfill applications. Although there has been numerous studies done nationwide, we would be willing to work with you to conduct research that you think is necessary to allow the use of TDA as an alternative for aggregate in OWTS.

We hope that by incorporating language in your OWTS regulations to allow TDA use in septic systems, we will be able to increase the market potential for TDA and reduce the number of waste tires going to landfill disposal.

I would appreciate the opportunity to discuss this suggestion with you directly. If you have any questions please feel free to call me at 916-341-6605, or your staff may also contact Albert Johnson at 916-341-6687.

Sincerely,

A handwritten signature in black ink that reads "Brenda K. Smyth".

Brenda K. Smyth, Division Chief  
Statewide Technical and Analytical Resources Division

cc: Darrin Polhemus, Deputy Director, Division of Water Quality  
James Giannopoulos, Asst. Deputy Director, Division of Water Quality  
Howard Levenson, Asst. Director, CalRecycle

