

REQUEST FOR APPROVAL

To: Howard Levenson
Deputy Director, Materials Management and Local Assistance Division

From: Brenda Smyth
Branch Chief, Statewide Technical and Analytical Resources Branch

Request Date: October 30, 2013

Decision Subject: Approval of Scope of Work and Humboldt State University Sponsored Programs Foundation as Contractor for the Evaluation of Water Quality Impacts of Tire-Derived Aggregate Use In Storm Water Management Applications Contract (Tire Recycling Management Fund, FY 2013/14)

Action By: November 19, 2013

Summary of Request:

Staff requests approval of the Scope of Work (SOW) and Humboldt State University Sponsored Programs Foundation as contractor for the Evaluation of Water Quality Impacts of Tire-Derived Aggregate (TDA) Use in Storm Water Management Applications Contract.

Recommendation:

Staff recommends that CalRecycle enter into the contract with Humboldt State University Sponsored Programs Foundation as the contractor, using Fiscal Year (FY) 2013/14 funds allocated to Research on Applications and Technologies for Waste Tires in the Research Section in the current (7th Edition) Five-Year Tire Plan. This contract will be funded in an amount not to exceed \$150,000 for the tasks outlined in the attached Scope of Work.

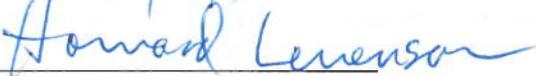
The \$150,000 for this contract will come from the \$1,000,000 Research on Applications and Technologies for Waste Tires line item for FY 2013/14 in the Research Section in the current (7th Edition) Five-Year Tire Plan as summarized in the table below.

Contract	Fund Source	Amount Available	Amount to Fund Item	Amount Remaining	Line Item (Index/PCA)
CSU Humboldt TDA Research Contract	Tire Recycling Management Fund (FY 2013/14)	\$1,000,000	\$150,000	\$850,000	Research on Applications and Technologies for Waste Tires (7730/T5100)

Deputy Director Action:

On the basis of the information and analysis in this Request for Approval and the findings set out below, I hereby approve the Scope of Work and Humboldt State University Sponsored Programs Foundation as contractor for the Evaluation of Water Quality Impacts of Tire-Derived Aggregate Use in Storm Water Management Applications Contract in an amount not to exceed one hundred fifty thousand dollars (\$150,000), subject to availability of funds appropriated to this program.

Dated:

11/18/13


Howard Levenson
Deputy Director

Attachment 1: Scope of Work

Background Information, Analysis, and Findings

CalRecycle currently promotes the use of waste tires in various civil engineering applications as part of its ongoing efforts to divert waste tires from landfills in California. TDA has successfully been used in California as lightweight fill in road construction, back-fill for retaining walls, and vibration dampening on rail lines. Recent research completed by Humboldt State University for CalRecycle determined various engineering properties of TDA for septic systems, compressive loading, and thermal profile characteristics applicable to storm water retention basins. Managing the effects of storm water on receiving water quality due to runoff from new roadway and highway construction is the focus of intense interest and regulation by the State and Federal Government. This contract will continue to develop the storm water application by investigating the suitability of TDA to contain storm water runoff in retention basins adjacent to new roadway and highway construction.

CalRecycle has sponsored past research studies that assessed the aquatic toxicity of TDA (Aquatic Toxicity Testing: Assessing the Safe Use of Scrap Tires as Roadbed fill, Exponent 2004) in subsurface applications (i.e., in light weight embankment fill projects) to determine potential impacts to groundwater. This project is different because it will evaluate the water quality impacts to surface water runoff. This contract proposes the following four primary tasks:

Task 1-Work Plan: Develop a Work Plan which will include sufficient detail for design/construction, sampling/data collection, and data analysis/reporting for the tasks below.

Task 2-Impact of Metal Leachate: Design and construct of a bench scale test environment that simulates TDA in a storm water retention basin. TDA exposed to storm

water leaches various metals resulting from oxidation of the steel cording and bead wire in the tire. The primary metals observed are iron, manganese, and zinc. The rate and duration of the oxidation under conditions similar to that found in a storm water treatment basin will be determined using a number of bench scale TDA filled vessels.

Task 3-TDA Storm Water Treatment Basin: Complete a field project that includes construction of a treatment and retention basin that receives storm water from a paved surface subject to frequent vehicle use. This task may involve partnering with a public agency for an existing construction project. The basin design will be similar to those used by Caltrans to treat highway runoff or basins in common use to treat parking lot runoff. Samples will be collected and analyzed to determine the effectiveness of TDA as a treatment media.

Task 4- Preparation of Final report and Presentation of Findings: Prepare a final report and at the direction of the contract manager present the information to Caltrans, public works directors, engineers, and recycling coordinators, etc.

The SOW for this contract (Attachment 1) proposes the four tasks above to provide data on the ability of TDA to treat storm water runoff to determine its suitability for storm water applications. The information gained from this contract is designed to help promote this civil engineering application in California and increase usage of TDA as part of CalRecycle's ongoing waste tire technical outreach and education efforts.

Since we are proposing to award this contract to the Humboldt State University (HSU) Sponsored Programs Foundation rather than directly to HSU, we will be entering into a standard agreement rather than an interagency agreement. The agreement will comply with Government Code section 19130 and contain the state's standard terms and conditions. However, because all of the research will be done by HSU faculty, staff, and students, the functions of the contract are exempt from civil service and will not be competitively bid.

