

PROPOSAL TO RECOVER AND RECYCLE WASTE TIRES IN THE CALIFORNIA-MEXICO BORDER REGION OF THE TIJUANA RIVER

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EXECUTIVE SUMMARY

The U.S.-Mexico border Pacific Ocean coastline is home to 18,987 protected acres of coastal and marine ecosystems in the region. Yet, these sensitive coastal ecosystems and the health of the border region community are under threat from California-generated waste tires. A rapidly changing microclimate, compounded by a very strong forecasted El Niño will undoubtedly bring an unprecedented influx of waste tires into the U.S. from Mexico. Short-term action is needed in order to prevent catastrophic impacts caused by cross-border waste tires. With the \$300,000 appropriated to the Border Relations Council (Council) by the legislature to address waste issues¹ and the task at hand for the Border Region Solid Waste Working Group to submit recommendations to the Council on how to efficiently expend these resources, the need for pragmatic hands-on information to help inform this decision and demonstrate the effectiveness of investing resources across the border is now, more critical than ever.

Thus, WILDCOAST respectfully requests \$100,000 to fund a one-year demonstrative project to clean up tires in Tijuana in order to: a) demonstrate the financial effectiveness of investing resources in Mexico, and; b) to prevent tires from crossing the border and impacting the sensitive riparian and estuarine habitat of the Tijuana River Watershed.

STATEMENT OF NEED

The U.S.-Mexico border Pacific Ocean coastline is home to 18,987 protected acres of some of the most ecologically significant coastal and marine ecosystems in the region. This area includes the 2,293-acre Tijuana River National Estuarine Research Reserve, recognized as one of 23 wetlands of international significance by the Ramsar convention; the 1,800 acre Tijuana River Valley Regional Park Preserve, which provides habitat for over 300 bird species, and the 1,930 acre Tijuana River Mouth State Marine Conservation Area, which provides critical habitat for leopard sharks, bottlenose dolphins and the California spiny lobster. These areas also provide much needed nature-based recreational opportunities for some of the lowest-income communities in San Diego County.

Yet, these sensitive coastal ecosystems and the health of the border region community are under threat from California-generated waste tires. Approximately one million waste tires that originate in California are exported to Mexico each year². In Tijuana, once they are discarded, they are carried with the rains impacting United States county, state and federally protected areas such as Border Field State Park, Tijuana River Valley Regional Park, Tijuana River National Estuarine Research Reserve, and the Tijuana River Mouth State Marine Conservation Area.

A rapidly changing microclimate, compounded by a very strong forecasted El Niño will bring an unprecedented inflow of waste tires into the U.S. from Mexico. Short-term action is needed in order to prevent catastrophic impacts caused by cross-border waste-tires. These weather pattern changes bring a

¹ SB83 (Natural Resources Trailer Bill) language amended Government Code Section 99523

² "The Flow of Used and Waste Tires in the California-Mexico Border Region" Institute for Regional Studies of the Californias, San Diego State University (2009)

new threat to public health. Recently, new invasive tropical breeds of mosquitoes have been detected: *aedes Aegypti* and *aedes Albopictus*, which can carry the dengue, chikungunya, yellow fever and West Nile viruses. According to the County of San Diego's vector control program during the month of August 700 specimens of the "Black Salt Marsh Mosquito" were captured in the Tijuana Estuary³. This breed can carry and infect both humans and animals with diseases.

Additionally, waste tires that litter the Tijuana River Valley and Estuary can begin to leach heavy metals into the soil and affect land-based and aquatic organisms. This can greatly disrupt the sensitive ecology of these protected areas.

During wet-weather, storm water dislodges tires and carries thousands of them through canyons and tributaries of the Tijuana River, across the border into the United States and the Tijuana River Valley. U.S. state, local, and federal agencies spend millions of taxpayer dollars to remove approximately 80,000 pounds of tires annually from the river, sediment basins, and the sensitive habitats of the Tijuana River Valley Regional Park, Tijuana River National Estuarine Research Reserve, Border Field State Park, and the Tijuana River Mouth State Marine Conservation Area. It costs an average of \$1 million a year to clean up one sediment basin at Border Field State Park, which fills up with waste tires, trash and sediment each time it rains. The city of San Diego spends approximately 3 million in the Tijuana River Valley in flood prevention efforts⁴.

Waste-tires also pose a serious safety hazard to border region communities. They can become lodged in the riparian vegetation, causing the waterway to clog and cause flash flooding. The Tijuana River Valley Recovery Team, convened by the San Diego Regional Water Quality Control Board acknowledges the **short-term need** to "reduce flood risk, prevent property damage, and protect life with long-term ecosystem restoration, recreation and public use activities."⁵

Baja California environmental authorities assess that up to 95% of the tires in the canyons and ravines in Tijuana and those that pass through the fences back to the U.S. originate in California. California State agencies acknowledge that the most efficient and cost-effective way to resolve this waste tire issue is to work directly in Mexico in partnership with Baja California agencies to engineer and develop cooperative management and recycle-and-reuse waste-tire projects.

1.0 PROJECT GOAL AND OBJECTIVES

The goal of this project is to reduce the significant impact of discarded waste tires on the public health, safety and sensitive ecosystems of the San Diego-Tijuana border region.

The project will also demonstrate the benefits of multi-level agency, private sector and non-governmental organization collaboration between California and Baja California including WILD COAST/COSTASALVAJE, the state of Baja California's Environmental Protection Secretariat and Promotora Ambiental de La Laguna, S.A. de C.V, the company that provides waste services to Tijuana and 74 cities in Mexico.

The specific objectives of this project are:

³ County of San Diego Department of Environmental Health Vector Control Program COMMUNIQUÉ – August 3, 2015 for San Diego County

⁴ Tijuana River Valley Recovery Team, Recovery Strategy Living with Water, 2012.

⁵ Tijuana River Valley Recovery Team, Recovery Strategy Living with Water, 2012.

- Recover up to 100,000 tires from areas in close proximity to the border and adjacent to tributaries of the Tijuana River.
- Shred collected waste tires and recycle shredded scraps further by selling them to companies that can use them for tire-derived products such as asphalt, light bricks, energy, and other profitable options.
- Create an end-of-project report to help inform CalRecycle's *Waste Tire Strategic Plan*, which is to be presented to the California Border Relations Council in 2016-2017. This report would include specific information collected through the project including data related to: a) financial outputs from tire shredding and recycling in Mexico b) effectiveness of cross-border multi-lateral/sector partnerships.

3.0 ACTION PLAN

3.1 Tire Pickup

Leveraging resources from the State of California earmarked in the SB 87 trailer bill, the State of Baja California would invest resources to support the coordination and pick up of tires in Tijuana. The Environmental Protection Secretariat (SPA) has committed to pay 10 percent of the total cost of the pick-up, hauling, transport, and tire shredding processes.

As a registered non-profit in Mexico, WILD Coast has the flexibility to manage financial and human resources across the border. By working in partnership with SPA, by the end of the project, 100,000 tires will have been diverted from entering the U.S.

Thirteen illegal waste tire-dumping sites have been identified by SPA which can serve as a project site, including the *Cañon Los Laureles*, *Zona Rio Tijuana* and *Cañon Matadero*. Tires would be collected from these areas, picked up, and transported to the shredding site by Promotora Ambiental De La Laguna, S.A. de C.V. (PASA).

3.2 Shred and Recycle

PASA will shred the tires at its facility, and Eco Commodities LLC will help recycle the shreds further by selling them to companies that could use them for energy, such as cement plants; to make diesel, asphalt, and light bricks; or for use in playgrounds and sports venues.

3.3 Maintenance

To ensure the maintenance and long-term viability of this program, we are considering the following activities:

- Increasing awareness of the population living close to the clean up sites.
- Posting educational signs at the sites.
- Coordinating monthly pick-up and transport of tires to collection centers and shredding facilities.
- Training of permanent staff to watch (guard and maintain) the sites.

4.0 PROJECT LEAD AND PARTNERS

4.1 Project Lead

WILD Coast/COSTASALVAJE is a binational conservation team with offices in Imperial Beach, California and Ensenada, Baja California that would oversee the finances and management of this project



and coordinate tire recovery and recycling with project partners. WILDCOAST/COSTASALVAJE has managed binational projects on the border funded by the Border Environmental Cooperation Commission, U.S. EPA, County of San Diego, and the City of San Diego. We have partnered with Mexico’s National Water Commission (CONAGUA), California State Parks, State Regional Water Board, and U.S. Fish and Wildlife Service on restoration and conservation projects along the San Diego-Tijuana border in both the U.S. and Mexico.

4.2 Project Partners

Secretary of the Environment, State of Baja California

The Baja California Secretariat of Environmental Protection (SPA) is the agency responsible for applying state level policy for environmental protection, including waste management policies and provisions. The SPABC has legal jurisdiction over non-hazardous waste and over special management waste. No institutional framework exists within the Baja California Secretariat (SPBC) policies specifically regarding waste tire management.

Promotora Ambiental S.A. de C.V.

PASA is a Mexican waste management company that operates waste collection, management and disposal, recycling, and wastewater treatment services throughout the country (74 cities). It also offers a range of other environmental solutions, including biotechnology, drilling waste management, private collection, residential collection, landfill, waste transfer, PET recycling, and others.

Eco Commodities, LLC

Eco Commodities is a trading company that specializes in buying and selling recycled commodities derived from post landfill, post consumer and postindustrial waste. They specialize in trade between Mexico and the U.S for recycled commodities like cardboard, plastics, metals, steel, and tire scrap.

5.0 BUDGET

Personnel	Total Request
Project Manager (US) @ (0.25FTE)	\$ 16,500.00
Project Coordinator (MX) @ (0.75FTE)	\$ 30,500.00
Operating Expenses	
Travel (transportation to project site)	\$ 3,000.00
Shredding tire cost at \$30 per ton	\$ 30,000.00
Signage for designated project site	\$ 1,000.00
Transportation of collected tires to shredder facility at \$10 per ton	\$ 10,000.00
SUBTOTAL	\$ 91,000.00
INDIRECT COST @10%	\$ 9,000.00
GRAND TOTAL	\$ 100,000.00

Figure 1: Map of illegal dumping sites throughout the city of Tijuana provided by the Environmental Protection Secretariat of the State of Baja California

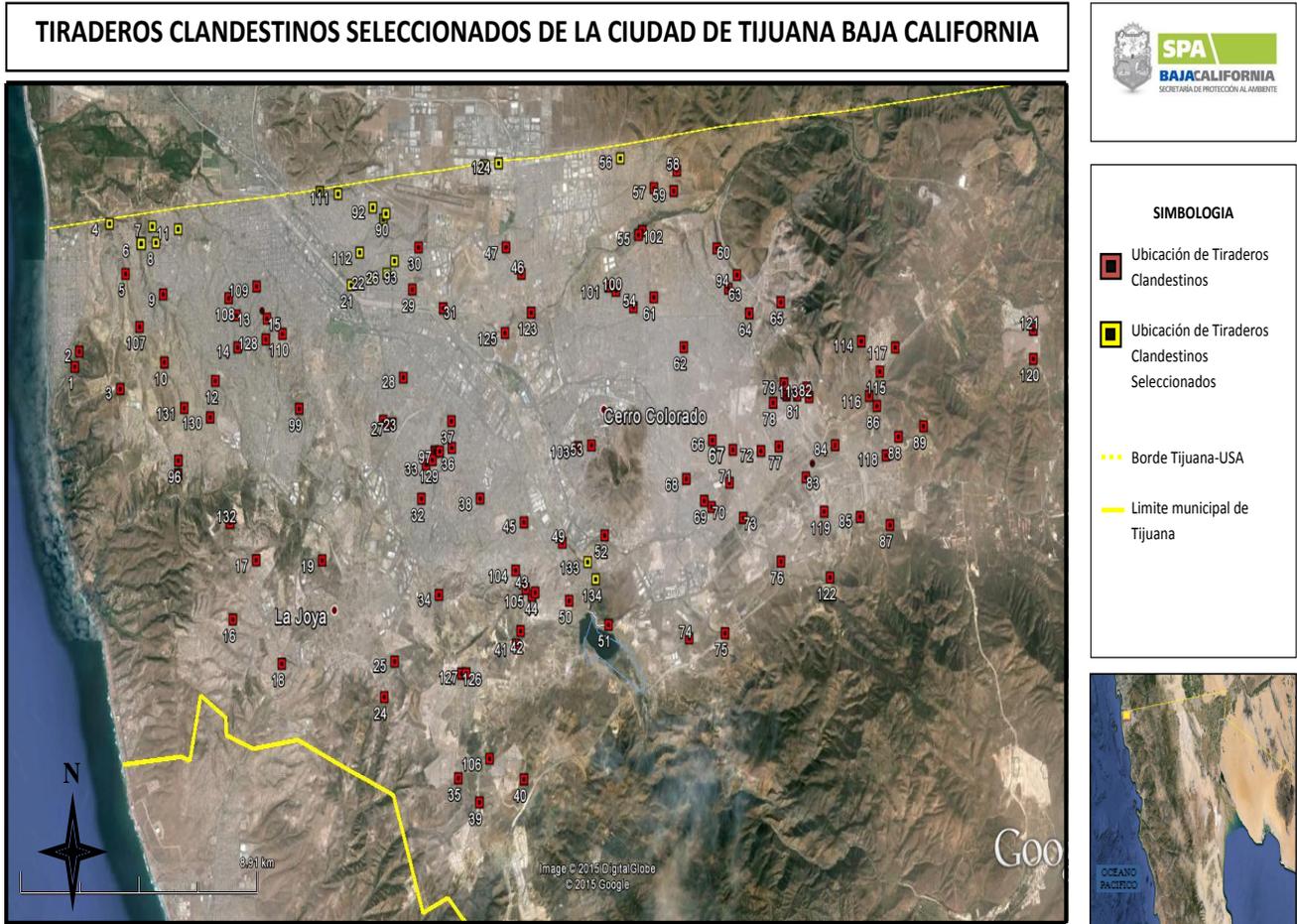


Figure 2: Tire Project Cycle

