

“A Wetland of
International
Importance.”
Ramsar
Committee,
2005

The Tijuana River
Watershed spans some
1,700 square miles with
nearly 75% of this
drainage located in
Mexico. Unlike most
other coastal ecosystems
in the region, it has
contiguous beach, dune,
salt marsh, riparian, and
upland habitats. The
Tijuana Estuary is the
largest intact coastal
wetland system in
Southern California,
despite stressors
associated with being
situated on an
international border.



Tijuana River National Estuarine Research Reserve
301 Caspian Way, Imperial Beach, CA 91932

Goat Canyon Sediment Basins

An Effective Model for Marine
Debris Capture in the Tijuana
River Watershed





Comprehensive Approach to Sediment and Marine Debris Control

The Goat Canyon Sediment Basin (GCSB) complex, managed by California State Parks (CSP), is a sediment and debris retention facility that captures large volumes of sediment and debris directly impacting estuarine and ocean habitats.

Goat Canyon Sediment Basin Complex

The GCSB includes the Sediment Basins which consist of a concrete bottom in-canyon diversion structure that transitions into a flow-through sedimentation basin system. The sediment basins contain two floating debris barrier systems intended to capture solid waste during storms.



A significant portion of the solid waste in Goat Canyon is composed of plastic products (i.e. single-use plastic) and foam (i.e. food containers) originating in Los Laureles – a primary sub watershed of the Tijuana River that has become increasingly urbanized. Since there is little enforcement of zoning laws, trash collection and waste water discharge are problematic within the community; dumping is a common practice in the hillsides, which ultimately end up in Goat Canyon. Fortunately, California State Parks debris infrastructure capture majority of the debris before it enters the Tijuana Estuary.

Percentage of Solid Waste Captured (by Weight)

- PET (21%)
- HDPE (2%)
- Styrofoam (3%)
- Expanded Foam (2%)
- Other single-use plastic (30%)
- Tires (20%)

Key Facts

- The GCSB Complex costs \$1.8 million USD per year to maintain
- Combined, the basins hold about 60,000 cubic yards of sediment
- In over a decade, California State Parks has excavated a total of 514,000 cubic yards of sediment – enough to cover 80% of the Reserve's salt marsh habitat (318 acres)
- The marine debris infrastructure has stopped approximately 2 million pounds of debris from entering the Estuary

Contact Us

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