EcoBale
A Lightweight Breakwater for Shoreline Protection and Bank Stabilization

- Reduces Wave Energy
- Traps Sediment
- Cost-Effective

- Safe & Easy to Install
- Environmentally Sustainable
- Fishery Reefing Options
EcoBales are a cost-effective lightweight breakwater solution manufactured with an open cell matrix. The matrix is made of recycled polyethylene terephthalate, commonly referred to as PET plastic, the same plastic used to make drinking bottles. The EcoBale is strong enough to reduce erosion by performing as a breakwater while also collecting and building sediment.

Construction

Martin Ecosystems' EcoBale is manufactured using 100% recycled PET plastic. The PET fibers are bonded together forming a non-toxic, non-woven fibrous matrix, creating the advantage of having an open structure while retaining high tensile and tear strength. Foam spokes create hardening and structural stability, netting encapsulates the bale while the polyurea coating provides UV protection, visibility and durability.

Open Cell Volume

Every EcoBale has a volumetric displacement of 1015 ml/cubic foot. The creation of this open cell area allows for the EcoBale to collect sediment within the structure which is key to sediment entrapment and build up.

Modular

EcoBale’s modular design provides a standard approach to installation. Vertically deployed to meet design depths, EcoBale is also lightweight with minimal loading of the sub grade. This mitigates the need for sub grade improvements such as geo-textiles. Anchoring EcoBales are anchored by a wood pile where they sit on the water bottom.

Environmentally Safe

The matrix, foam spikes and coating are designed for marine environments and are non-toxic to fish.

Lightweight & Easy to Install

7.5' EcoBale weighs 365 pounds
5.0' EcoBale weighs 245 pounds

EcoBale is a lightweight modular solution requiring less equipment than traditional rock or cement breakwaters.

EcoBale Sizes

5 foot tall x 4.5 foot diameter
7.5 foot tall x 4.5 foot diameter