



## Tire reef mapping in the Puget Sound to assess restoration opportunities

In the 1960's and 70's, tire reefs (bundles of new or used of automobile tires piled under water) were thought to be an inexpensive solution to enhance underwater habitat, while providing a way to dispose of otherwise unwanted tires. Globally, tire reefs were created for both recreational diving and habitat enhancement. Over time however, these tires have aged, strapping has disintegrated, bundles have broken apart, resulting in tires dispersed across the sea floor.

A number of tire reefs were also established in Puget Sound. Mapping the depth and extent of these deteriorating tire reefs to plan their removal is a priority for WADNR. Heavy metals and chemicals such as Zinc, copper oil-based plasticizers, paints and pigments containing zinc and titanium oxides, and, paraphenyldiamines (ozone scavengers) are known components present within tires. Some of these substances are toxic to aquatic organisms.

The Aquatic Assessment and Monitoring Team (AAMT) has conducted multi-beam sonar (R2sonic 2020) and towed video surveys at 20 different sites in Puget Sound. These surveys help AAMT to estimate the overall count of tires and footprint of the reefs, estimate reef depth, and to provide an assessment of bundle integrity and tire dispersal.

### Project Outcomes

AAMT is working closely with DNR's Aquatic Lands Restoration Team (ALRT), who will use this information to evaluate priority sites for tire removal and restoration.



Figure. 1. A reef built of tires in Florida. Reefs like these were thought to enhance habitat for fish and provide a solution for an overstock of tires in the 1970s. Photo: Mikkel Pitzner, Project Baseline Gulfstream.

### Why does this matter to DNR?

As part of an effort to clean up Puget Sound, WADNR aims to remove tire reefs on state owned land. Multi-beam and side-scan sonar will allow us to provide restoration specialists with the maps they need to adequately remove priority reefs. In addition to mapping reef footprints, vegetation presence will be delineated by our staff for pre and post restoration. Benthic and fish use surveys may also be carried out pre and post restoration to assess the impact of reef removal.

### For more information

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