Soft shore techniques describe measures that can reduce shoreline erosion with fewer of the environmental impacts associated with conventional hard structures such as bulkheads and seawalls. They include beach nourishment, the use of large logs, biotechnical methods using vegetation, and others techniques.

Documenting these observations is difficult, however, as soft shore projects are tricky to define and experts can disagree about which projects should count.

**Use of soft shore techniques**

*By: Armor Type*

- 
- 

Material type, identified from WDFW HPA permits, for new and removed shoreline armor in 2016 and 2018. “Hard armor” materials include large angular rock (sloped or vertical), concrete vertical walls and sheet pile walls. “Soft armor” materials include gravel, logs and root wads. Other categories of material type include creosote wood, unspecified wood (e.g., log piling, ACZA treated wood and sometimes logs) and “other” (e.g., concrete chunks, debris or materials otherwise uncategorized).

**Key Indicator Results**

- Although awareness of soft shore techniques is increasing, most replacement projects and many new armor projects continue to use conventional structures.
- Washington Department of Fish and Wildlife’s Hydraulic Project Approval (HPA) data provide a region-wide accounting of armor-related projects, but documentation of soft shore projects is incomplete and inconsistent.
- Soft shore projects are complex, often combine soft measures with conventional structures, and are subject to differing interpretations of what should be included, making documentation difficult. The lack of data on the use of soft shore techniques over time preclude a trend analysis.
- Property owners and coastal consultants are increasingly familiar with soft shore methods, but remain reluctant to employ them in the absence of better information about cost and performance.
- Soft shore techniques are to be used wherever feasible, but this is a subjective standard and many proponents feel strongly that these options are not feasible, particularly when erosion risks are high.