

Coastal Jetty Safety



US Army Corps
of Engineers®
Portland District

Your safety, our concern

Jetties were constructed to aid ships traveling between rivers and the ocean, and were never intended to be used for recreational purposes. These structures should be admired for their complexity and contributions to the region from a distance.

Hidden Dangers

Waves remove or shift even the largest boulders from the jetties, but underwater currents – which penetrate the structure – remove smaller rocks and sand from the inside of the jetty. And that can create dangers – some visible, others hidden:

- Sudden larger waves, even in calm weather, can knock a person off balance or into the water
- Waves and strong currents near the jetty can prevent safe recovery after a fall into the water
- Open crevasses and sinkholes between large boulders create stepping hazards
- Slippery rock surfaces caused by sea spray
- Caverns within the structure, caused by the eroding of stones and sand, could be hidden below a thin surface which can suddenly collapse

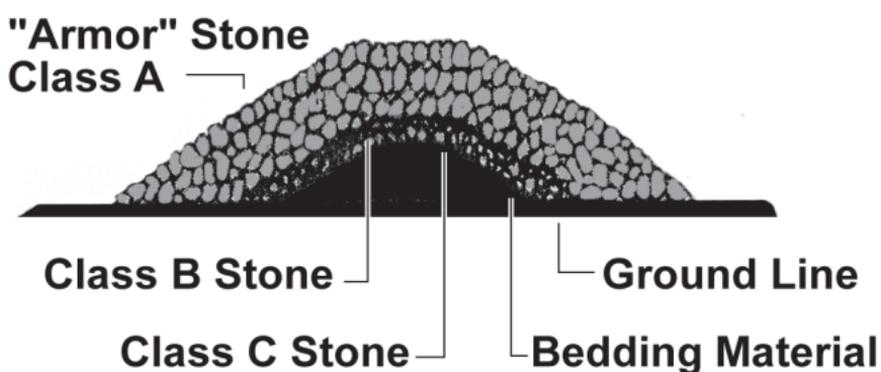
STAY OFF JETTIES

DANGER



Understanding coastal jetties

Just as bridges provide safe passage over rivers, gorges or other depressions, jetties help ocean-going vessels move between coastal rivers and the Pacific Ocean. Simply put, jetties are rock fingers which stretch out into the ocean from the beaches, essentially extending the mouths of the rivers well into the sea.



Jetty construction starts with a bed of rocks being placed on the ocean floor. Larger boulders are placed on top of this bed to form the main body of the jetty. Progressively larger boulders are added in layers to form the outer “armor” shell of the structure. The largest of the boulders (weighing 30 tons to 50 tons each) are used toward the jetty’s seaward end where wave action is most powerful and overtopping waves are common. Despite their massive weight, strong waves and ocean currents can cause these stones to shift with seemingly little effort.

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