

# How bulkheads harm beaches

Bulkheads reduce fish habitat and block sand from replenishing beaches. The state approves about 130 new bulkheads a year.

## NATURAL BEACHES

### EROSION CONTROL

Wave energy dissipates and is absorbed by fallen trees and driftwood. This debris prevents erosion.

### HABITAT

Vegetation and debris provide food and protection for fish and eggs, and cool spawning areas.

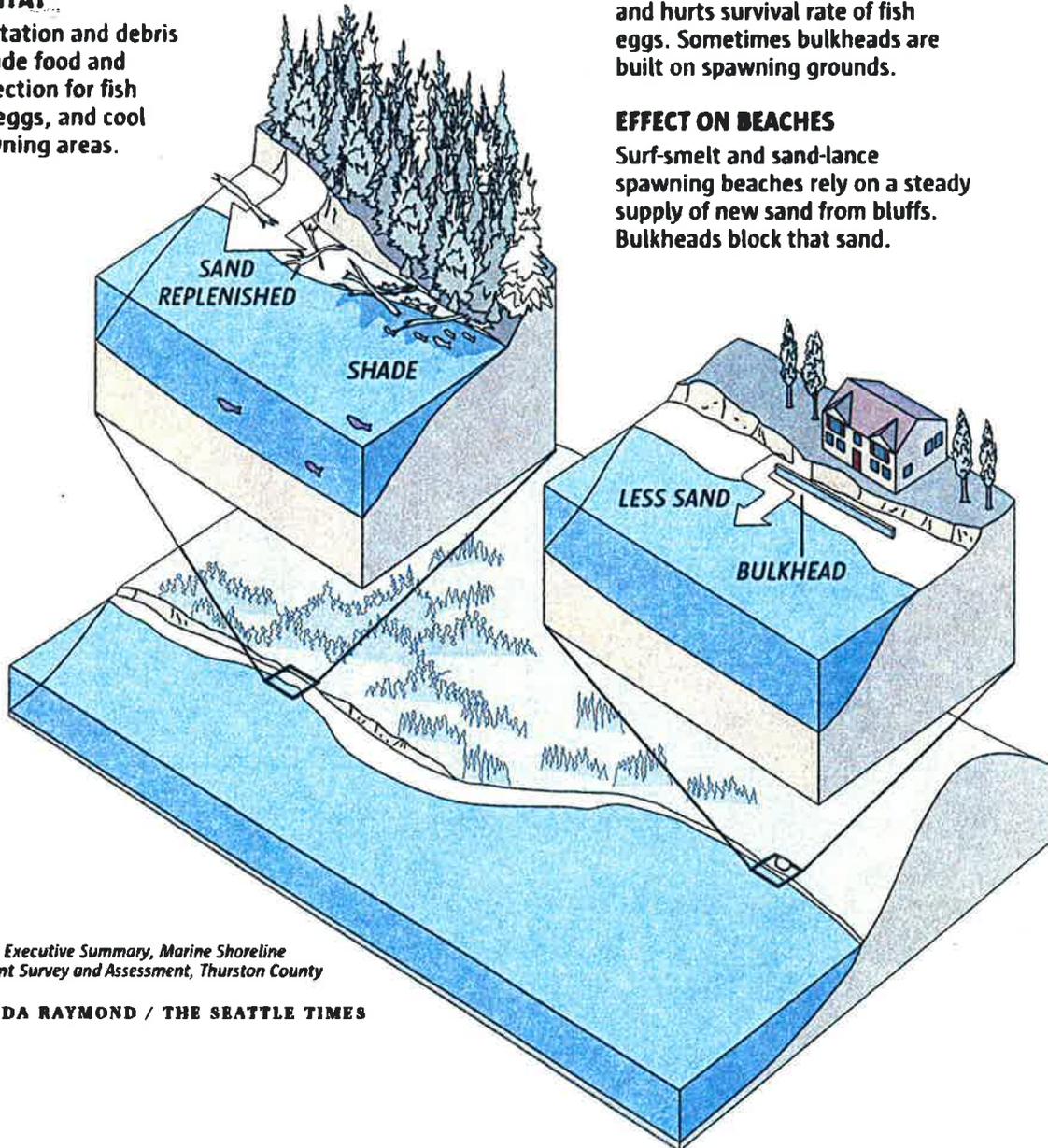
## THE EFFECTS OF BULKHEADS

### EFFECT ON FISH

Property owners remove trees and debris. This reduces shade and hurts survival rate of fish eggs. Sometimes bulkheads are built on spawning grounds.

### EFFECT ON BEACHES

Surf-smelt and sand-lance spawning beaches rely on a steady supply of new sand from bluffs. Bulkheads block that sand.



Source: Executive Summary, Marine Shoreline Sediment Survey and Assessment, Thurston County

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