

# Shoreline Vegetation Workshop

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**Friends** *of the*  
**San Juans**



# AGENDA

SJC shorelines & marine food webs

The big picture- your waterfront property

Short break

How to- practical tips for planting

Resources for waterfront landowners



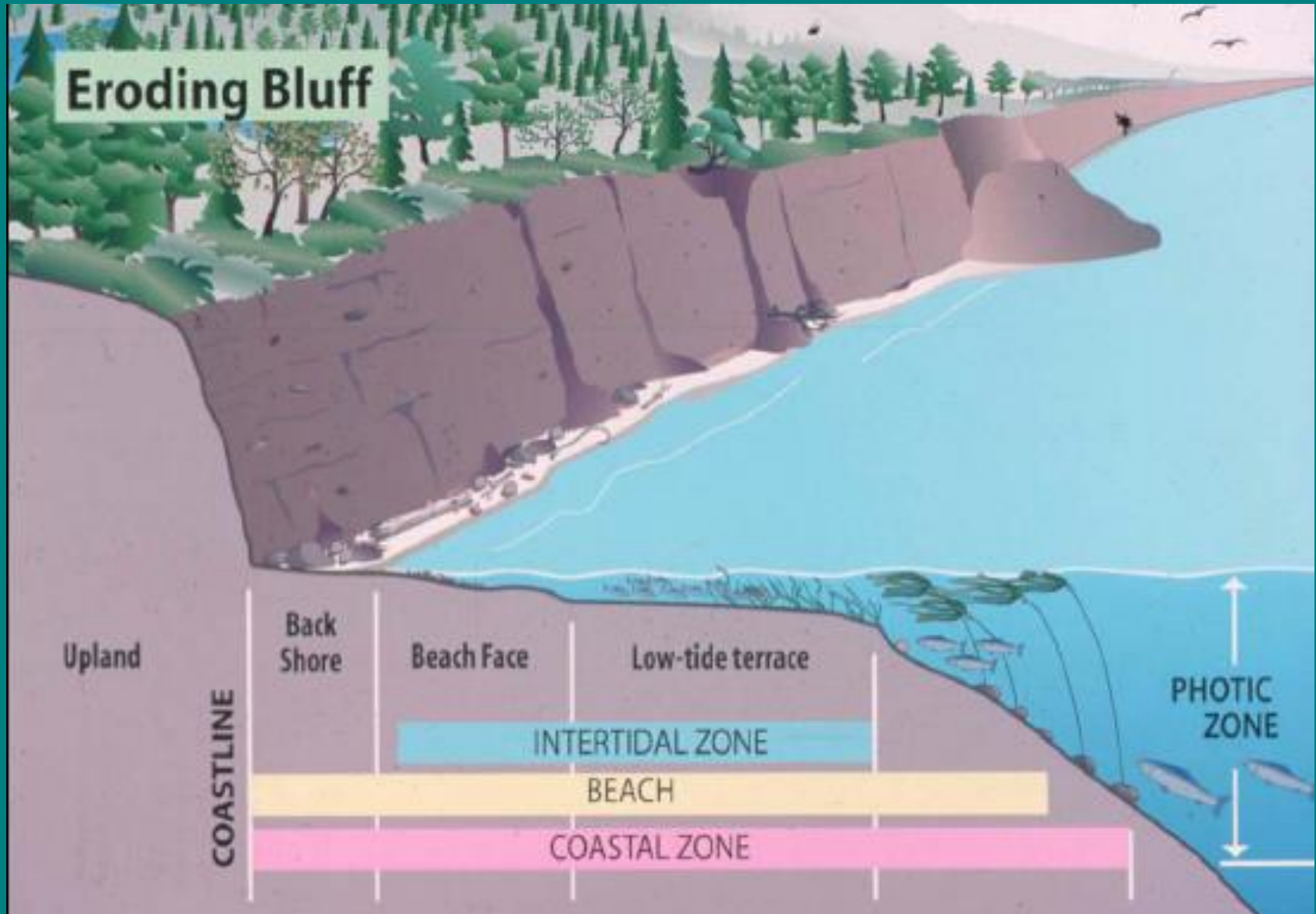
# Shorelines Dominate

- More than 400 Islands
- 621 square miles in SJC
  - 174 sq. mi LAND
  - 447 sq. mi WATER
- 410 miles of marine shoreline
- 90% shoreline parcels private
- Stretched out SJC shores would reach from Eugene, Oregon to Vancouver, BC!





# What counts as shoreline?



# SJC Shorelines Support the Regional Marine Ecosystem

rearing habitat for  
juvenile salmon

food web support:  
eelgrass  
kelp  
forage fish





# Healthy Food Webs Support Salmon, Whales and Our Tourism Based Economy

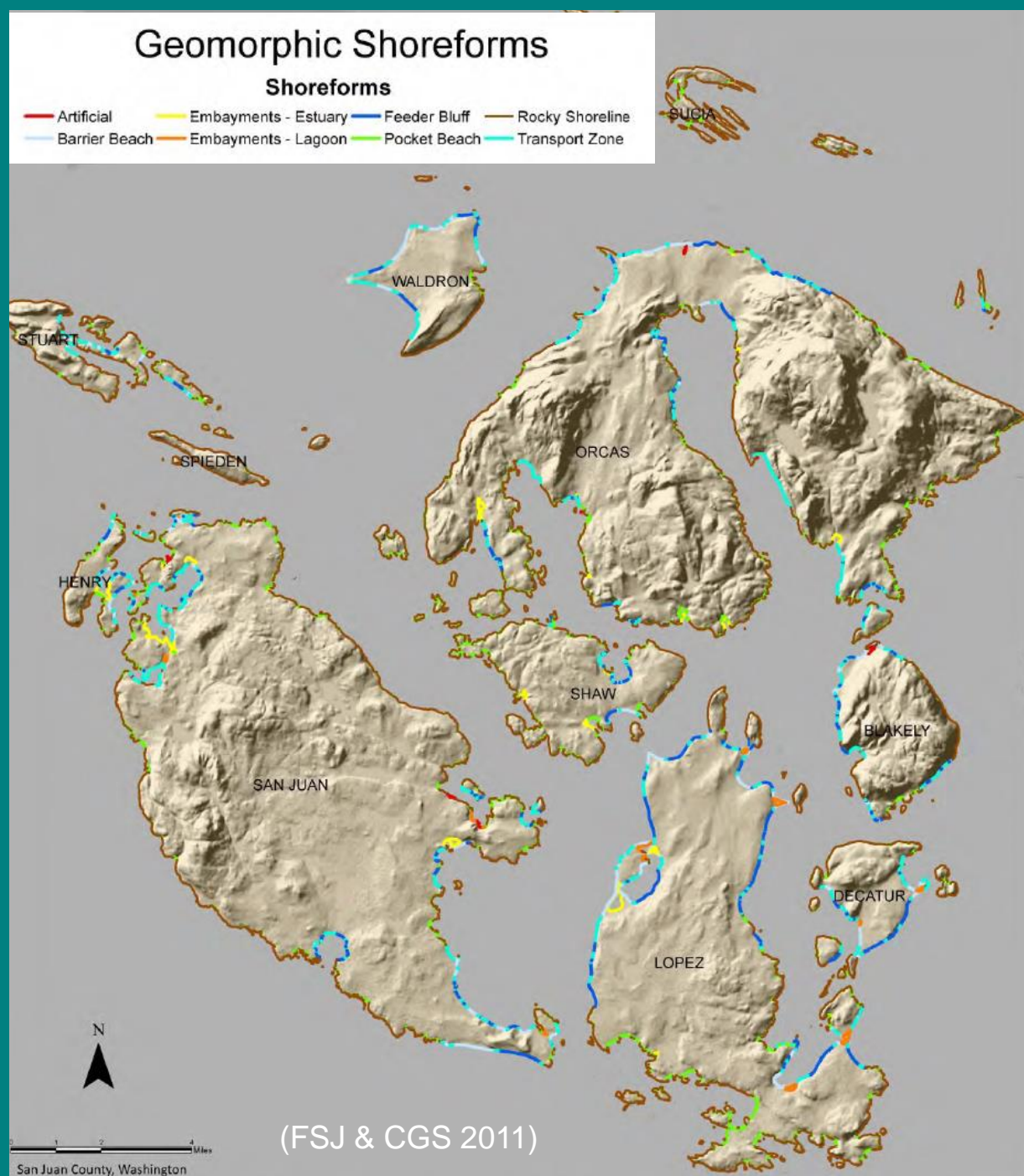


A. Reding



M. Gardner

Diverse  
Geology  
leads to  
Diverse  
Habitats





# Shoreline Geology- drift cells



35 miles transport zones



30 miles feeder bluffs



25 miles accretionary beaches  
(barrier beaches/spits)



# Shoreline Geology- no appreciable drift

270 miles rocky shores

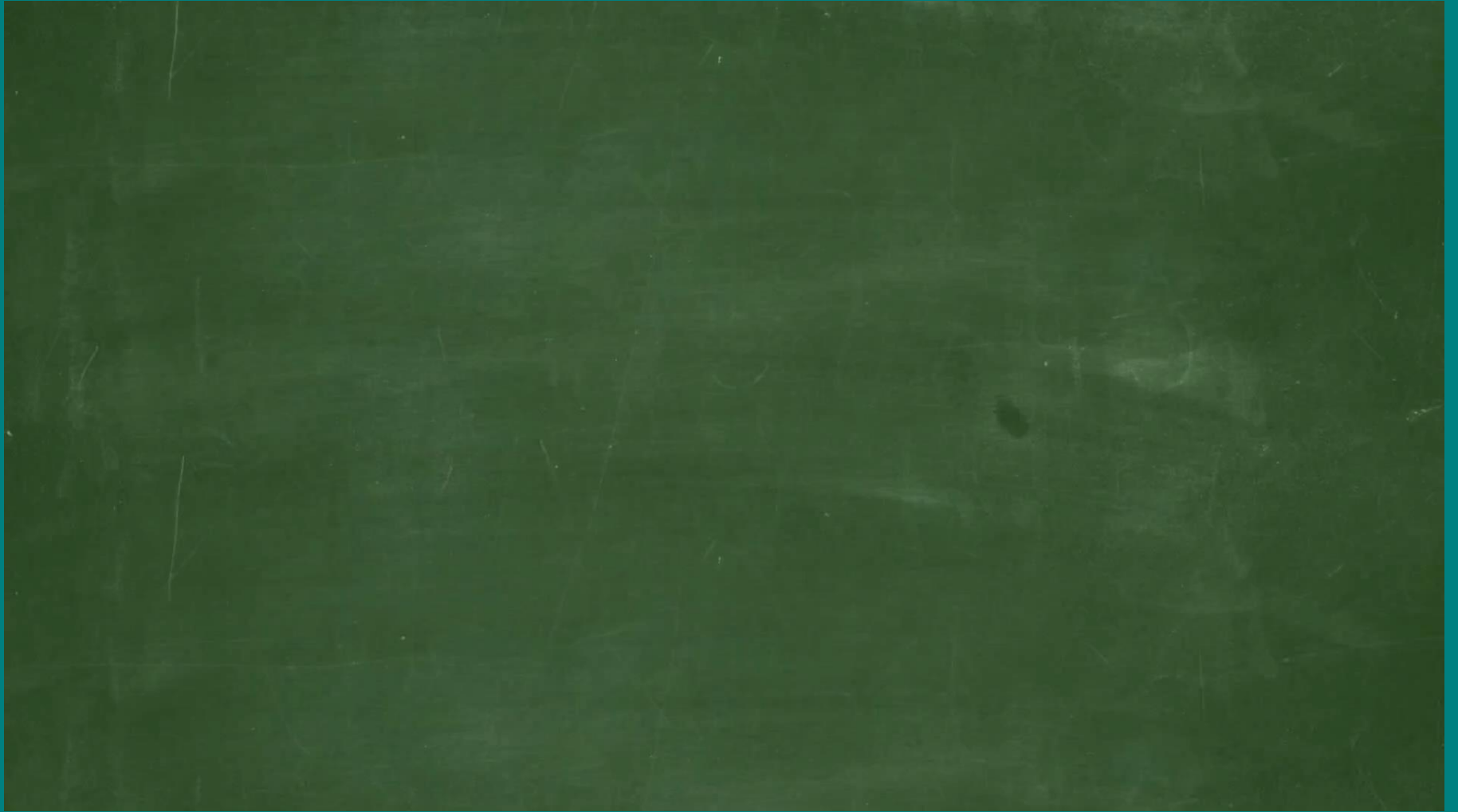


48 miles pocket beaches





# Marine Food Webs





# Forage Fish

Key San Juan County Forage Fish Species  
3 of the 4 depend on shoreline habitats to spawn

Pacific herring



Spawn on eelgrass & kelp



Pacific sand lance

Beach spawner

Northern  
anchovy



Pelagic spawner

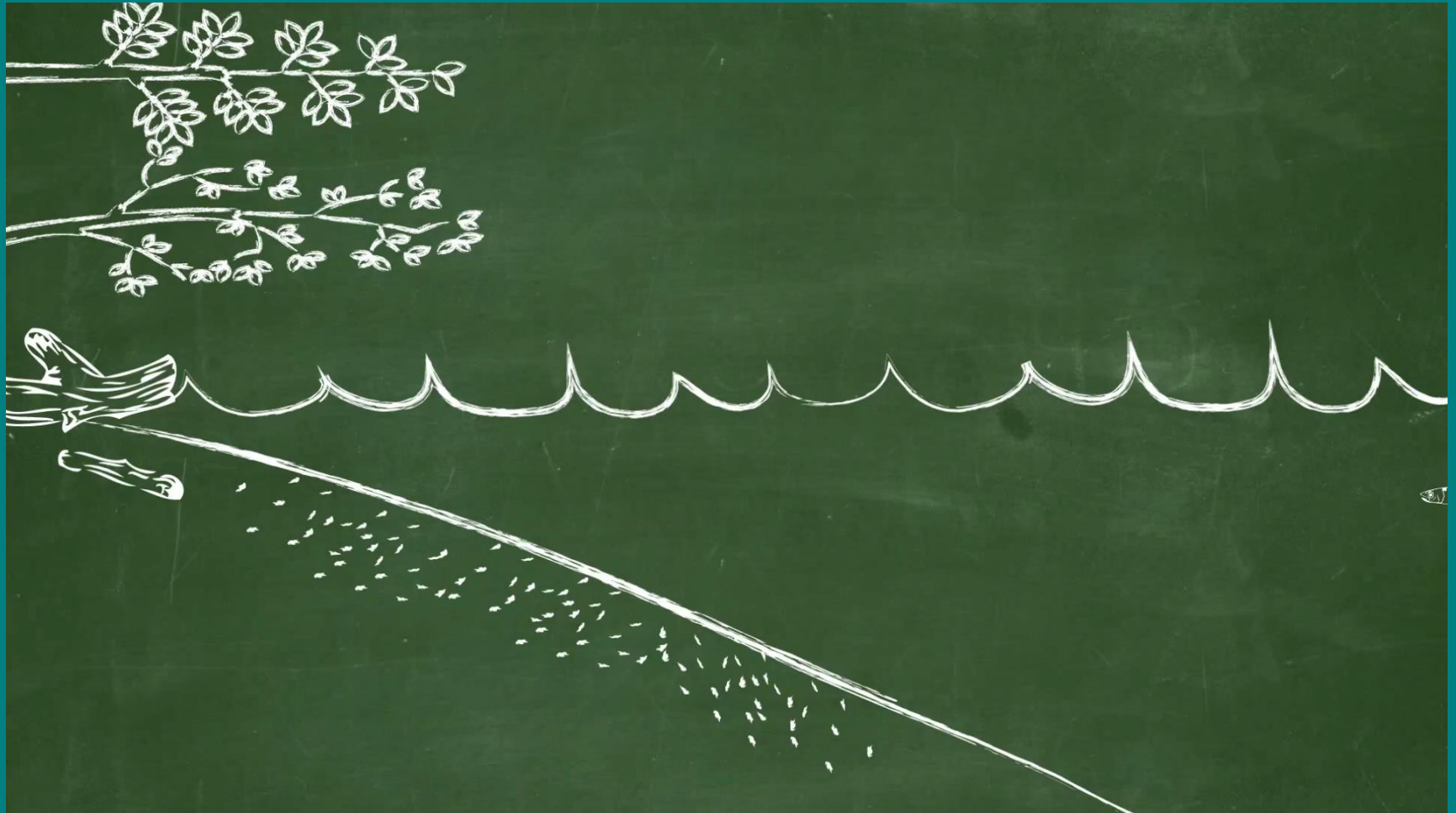
Surf smelt



Beach spawner



# Forage Fish Lay Eggs on Upper Beaches





# Forage Fish Spawning Habitat in SJC

## Legend

- Forage Fish Spawn Site
- Herring spawn Site

Just 10 miles of  
known spawning  
beaches of over  
400 miles of  
shoreline!





# Shade Improves Forage Fish Egg Survival





# Shoreline Plants Feed Young Salmon



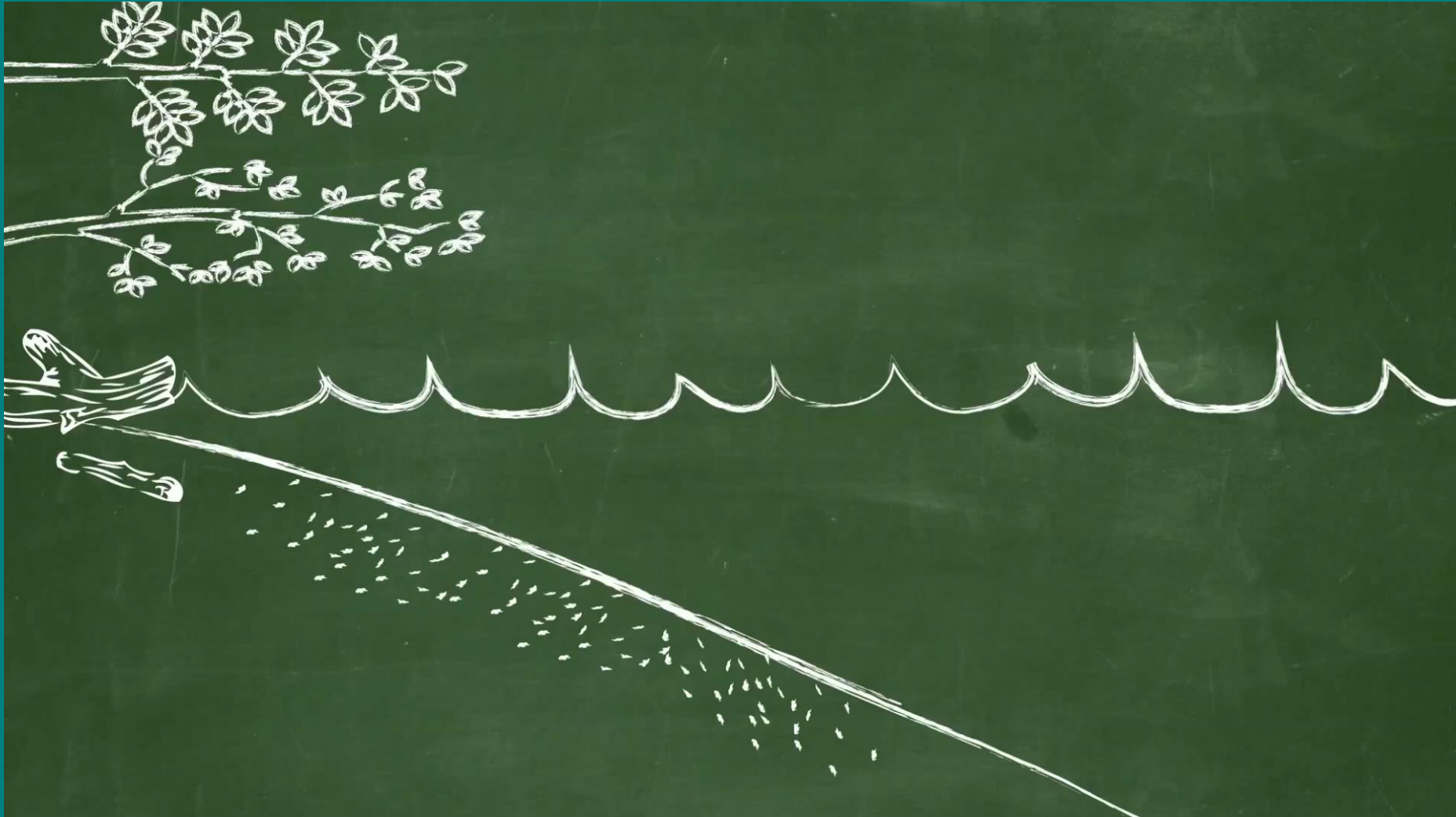


# Vegetation Reduces Erosion and In Turn Reduces Demand for Hard Armor





# Impacts of Armor on Spawn Habitat



# Services Shoreline Vegetation Provides

## Bank Stabilization & Water Quality:

- roots provide 70-95% of a slope's sheer strength
- forested areas intercept up to 40% of rainfall

## Fish and Wildlife Habitat:

- birds, mammals & fish

## Aesthetics, Views

- property values, tourism

