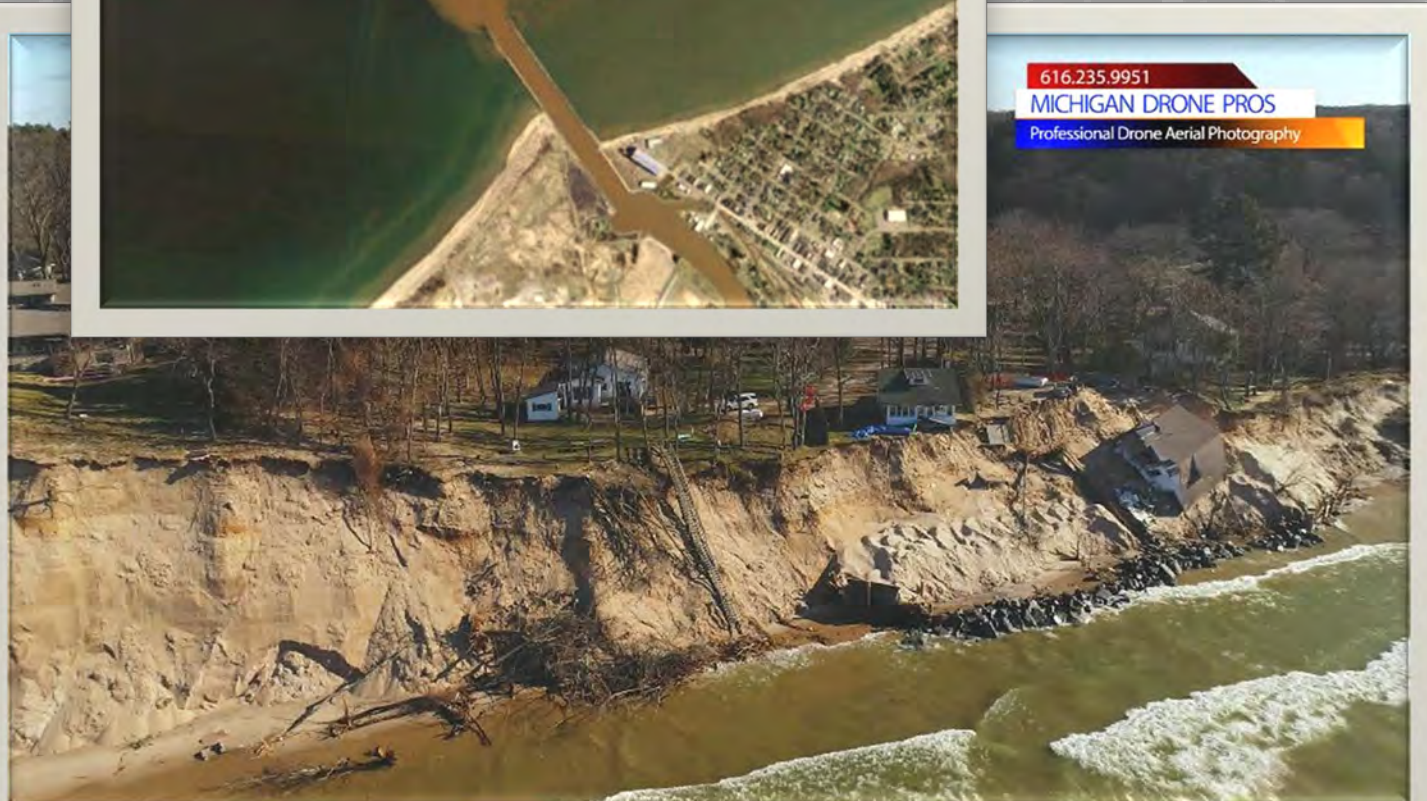
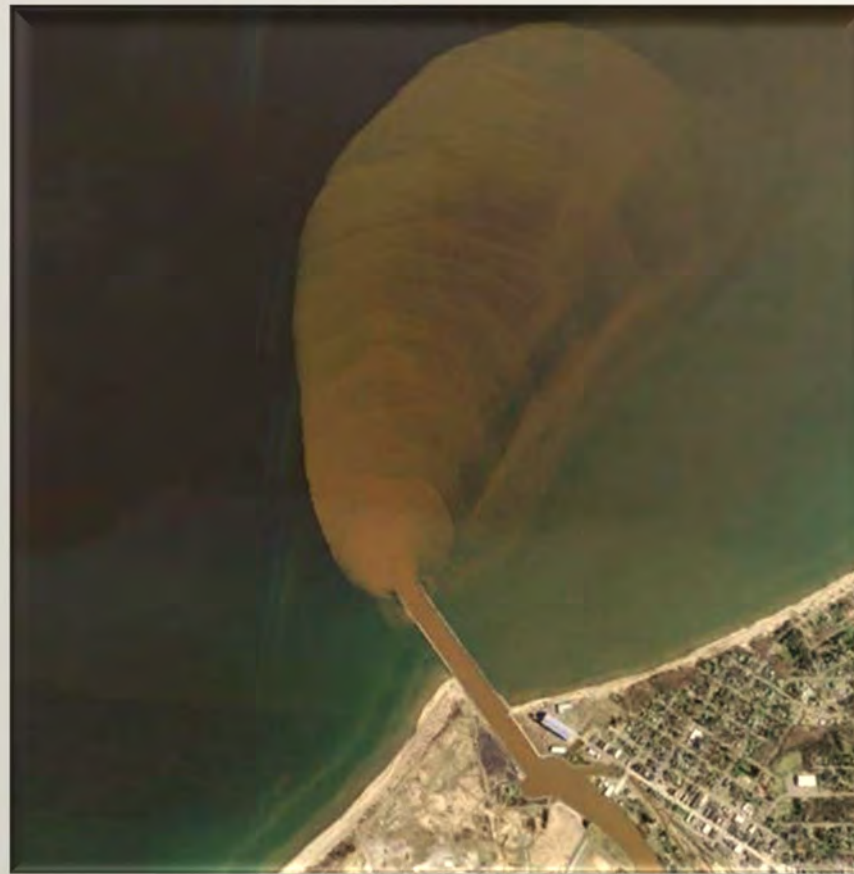


MIMICKING MOTHER NATURE – A DETROIT PERSPECTIVE

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Detroit District
Date: 24 Jan 2023



US Army Corps
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MICHIGAN DRONE PROS

Professional Drone Aerial Photography

Mimicking Mother Nature

A Detroit Perspective

- EWN is different
 - Designs make some uncomfortable (designers and regulators)
 - Success may look 'messy'
- River Restoration Community as an Analog
- Look to Mother Nature for Inspiration and Approval

Mother Nature's Shore Protection

Offshore Bars



Mother Nature's Shore Protection

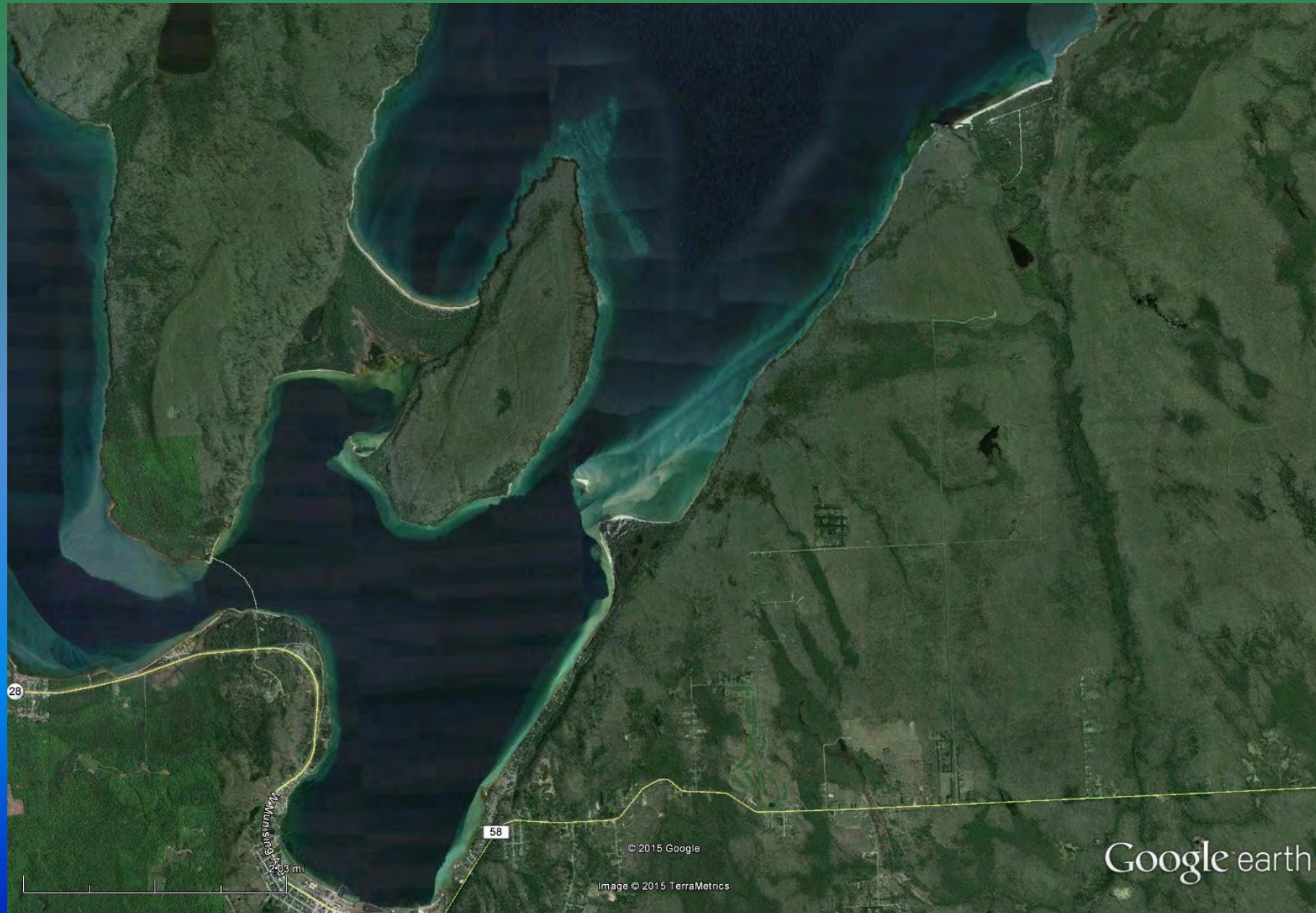
Offshore Bars



Mother Nature's Shore Protection

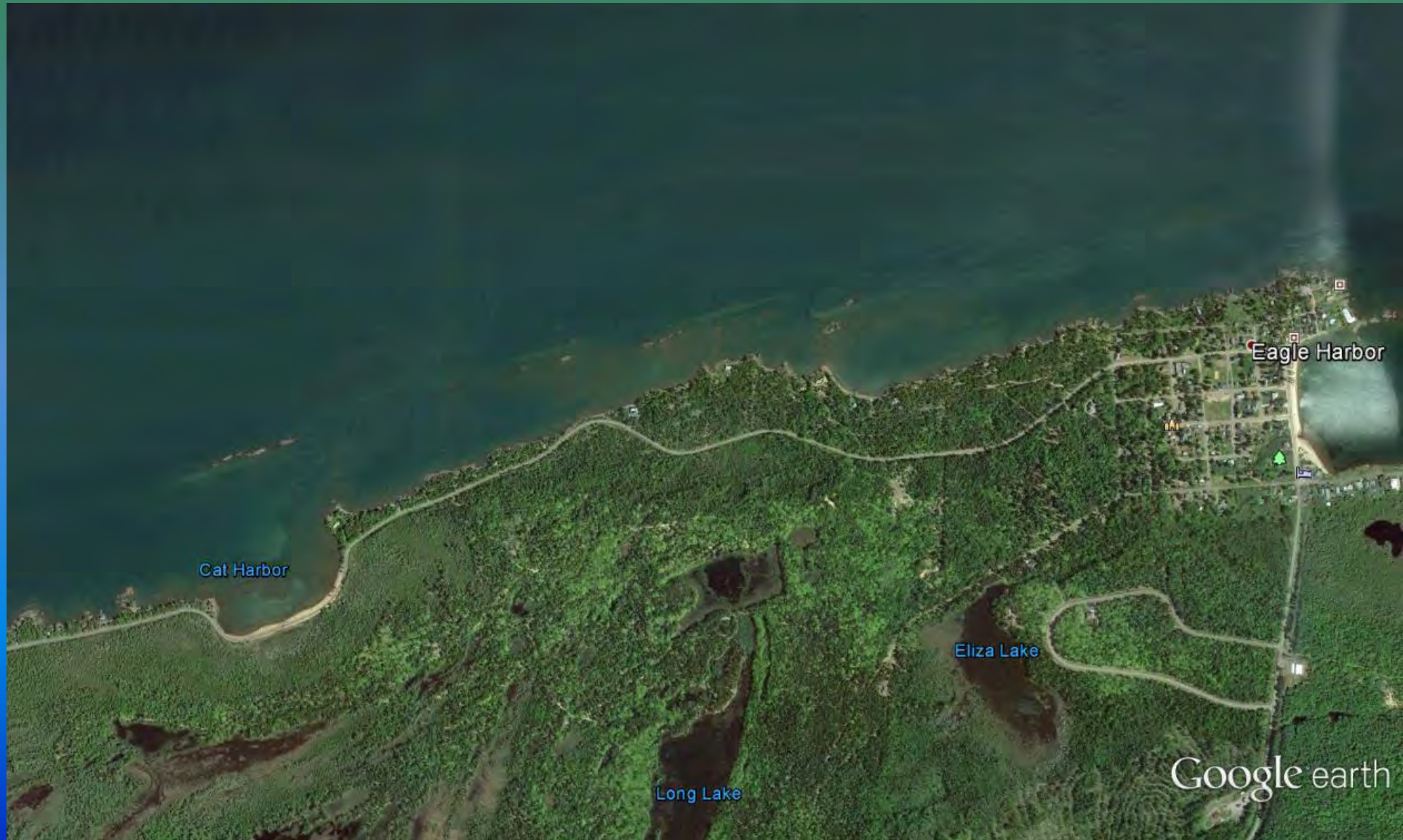


Mother Nature's Shore Protection



Mother Nature's Shore Protection

(submerged and subaerial offshore breakwater)



Segmented Offshore Breakwater

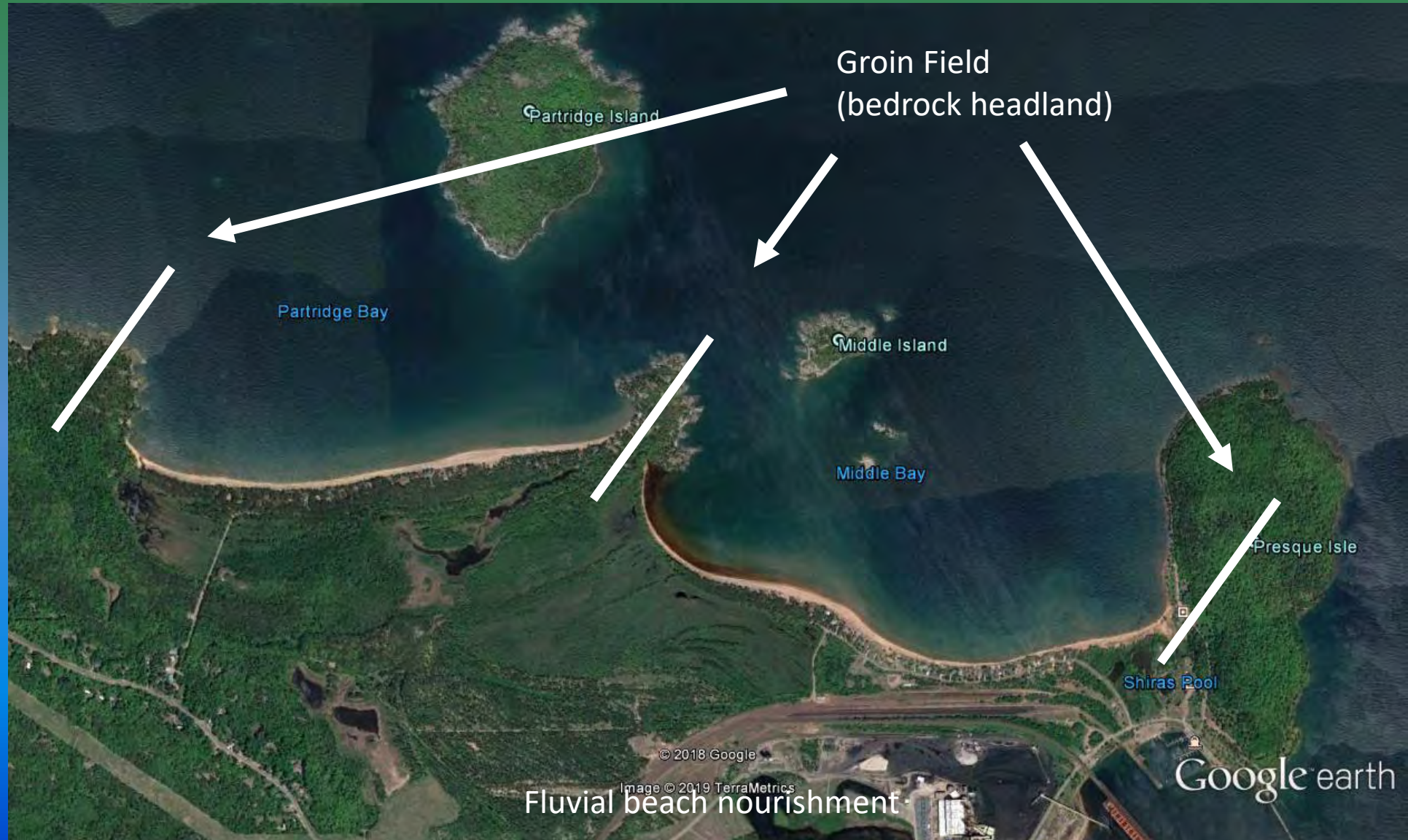
(submerged and subaerial offshore breakwater)



U.P. Examples of Engineering Imitating Nature



U.P. Examples of Engineering Imitating Nature



Mother Nature's Shore Protection

Offshore Reefs



Mother Nature's Shore Protection

Offshore Reefs



Outline

- Imitating Natural Features (Engineering with Nature)

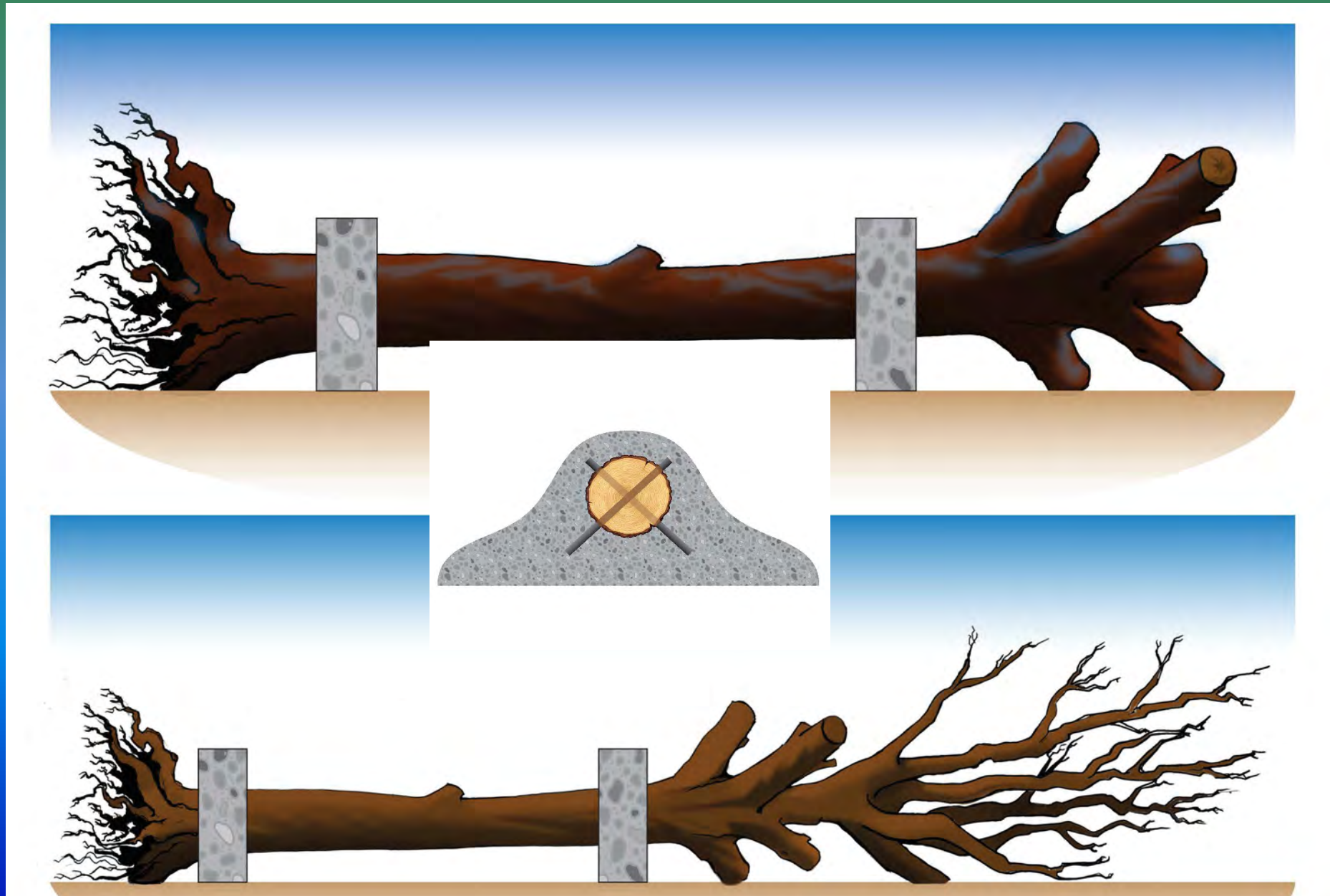
Imitating Mother Nature's Shore Protection

Offshore Reefs



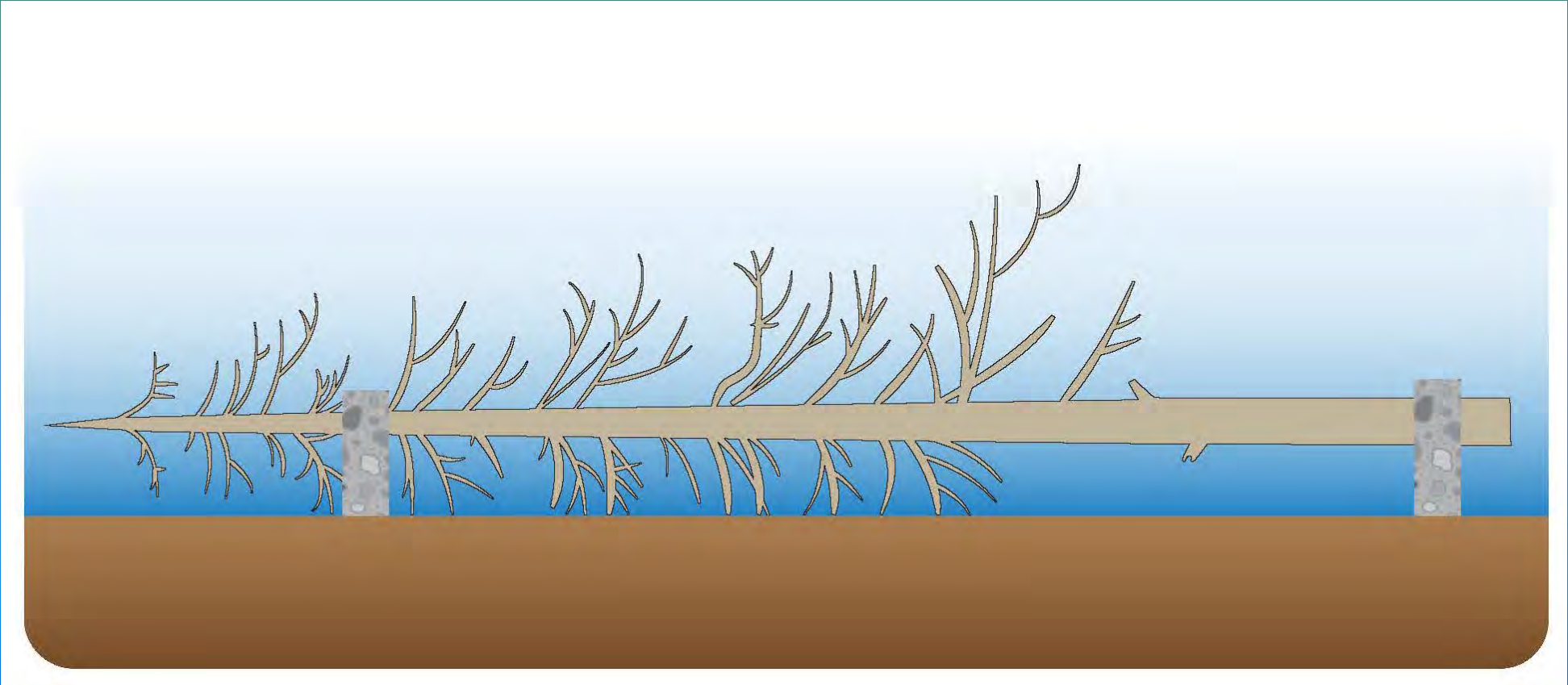
Imitating Mother Nature's Shore Protection

Habitat Armor Unit



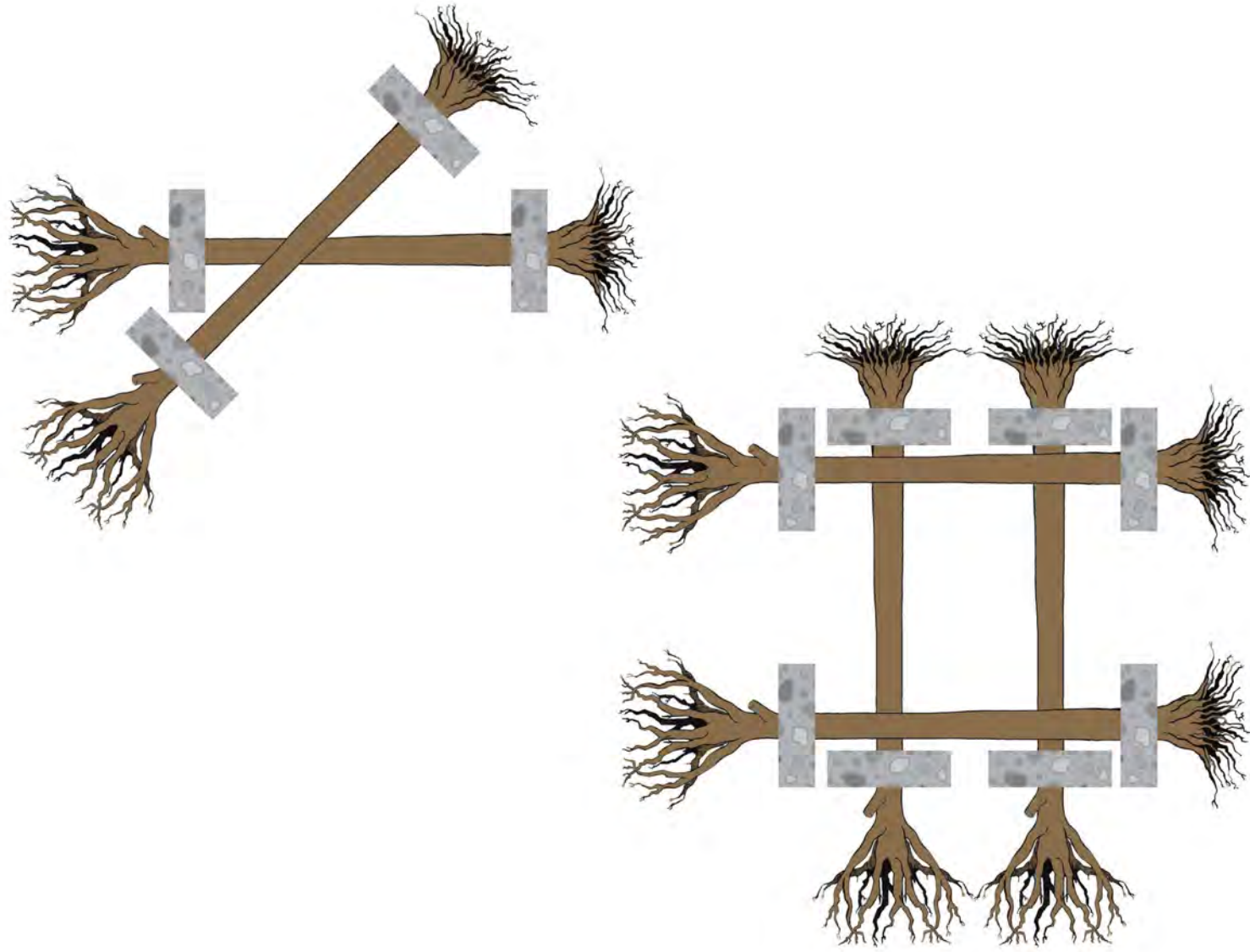
Imitating Mother Nature's Shore Protection

Habitat Armor Unit

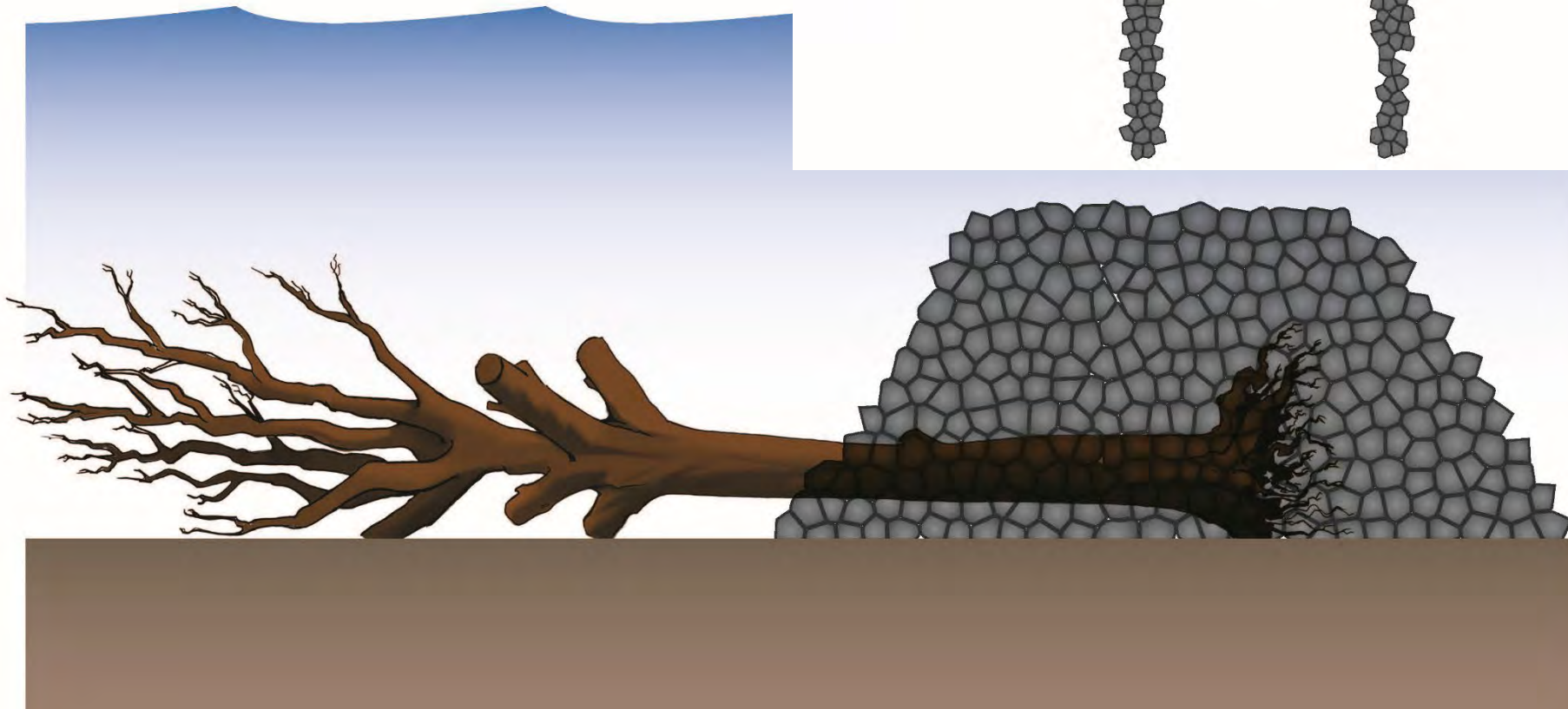
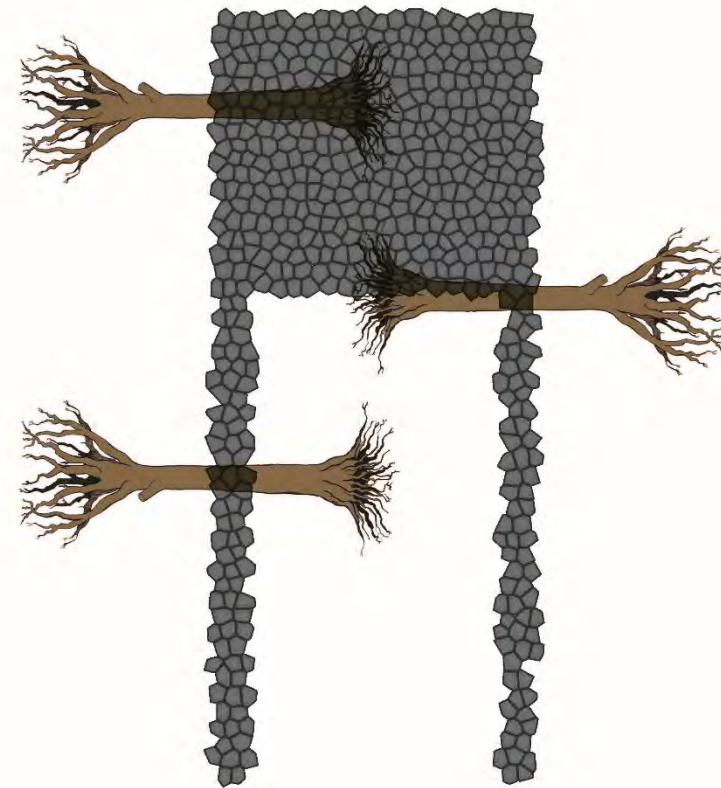


Imitating Mother Nature's Shore Protection

Habitat Armor Unit



Imitating Mother Nature's Shore Protection Habitat Armor Unit





Questions

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