



STATE OF THE BAY:

Controlling Shoreline Erosion

Explore the shorelines of Meredith Creek in Anne Arundel County, Maryland with Chesapeake Bay Foundation (CBF) Captain and Educator, Tiffany Granberg, in CBF's LEARN OUTSIDE, LEARN AT HOME video Shoreline Erosion Control Methods. Listen carefully as she explains the advantages and disadvantages of different methods for controlling shoreline erosion. If you were in charge of stabilizing the shorelines of Meredith Creek, how would you address its erosion problems?

Driving Question

How do different natural and engineered shorelines affect my local waterways?

Step 1: Watch the Video

[Watch the Shoreline Erosion Control Methods video.](#)

cbf.org/news-media/multimedia/video/cbf-education-videos/living-shorelines.html

Step 2: Investigate

Use these resources to help you answer the investigative questions below.

[CBF: Living Shorelines](#)

cbf.org/document-library/cbf-publications-brochures-articles/Living_Shorelines011a.pdf

[NOAA Natural and Structural Measures for Shoreline Stabilization](#)

coast.noaa.gov/data/digitalcoast/pdf/living-shoreline.pdf

[Engineering Design Process Steps](#)

teachengineering.org/k12engineering/designprocess

[New York State Department of Environmental Conservation](#)

dec.ny.gov/permits/67096.html

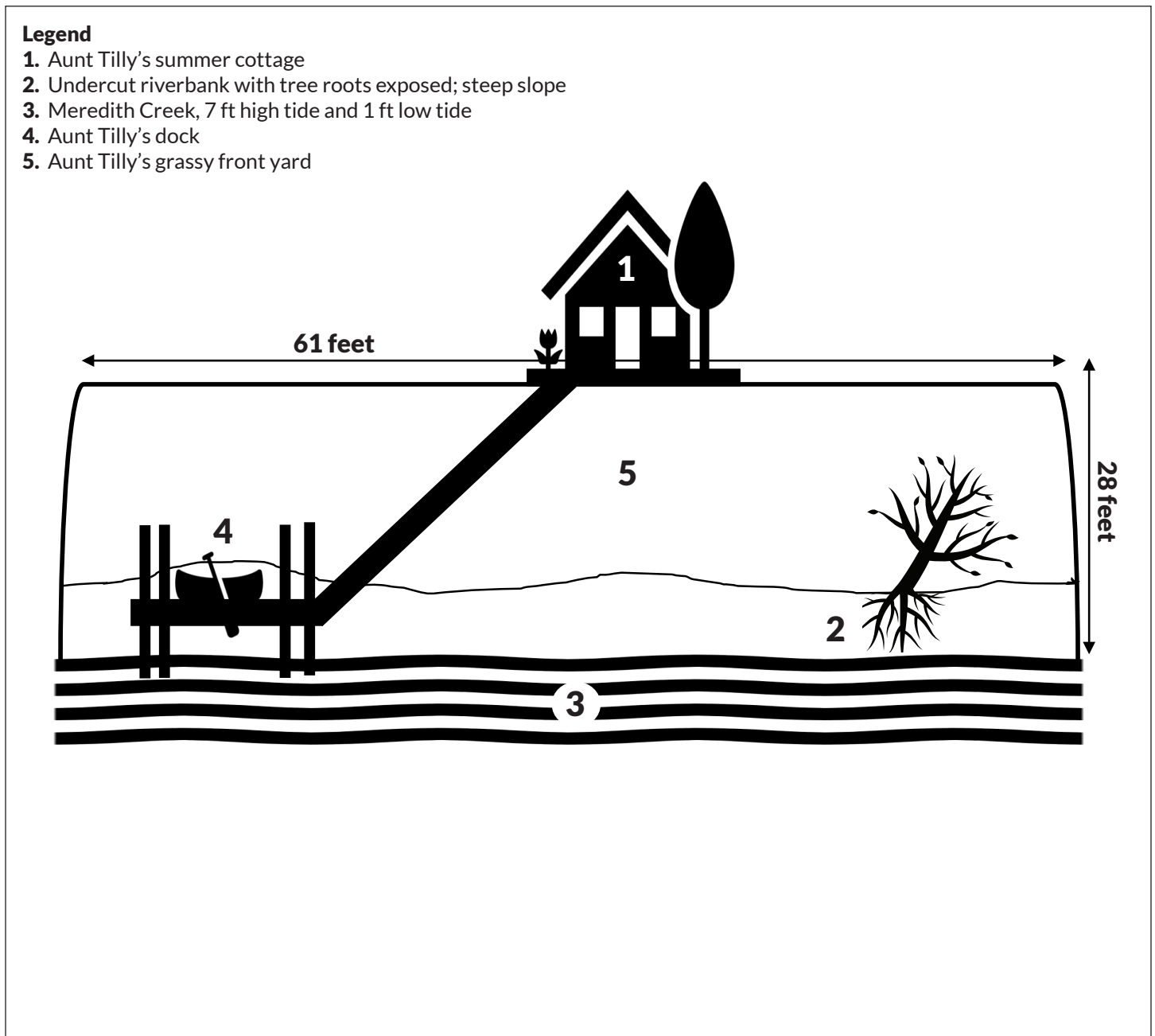
1. What is shoreline erosion?
2. What are the basic principles of shoreline protection?
3. What are some benefits of living shorelines?
4. What are some challenges of living shorelines?

Step 3: Be the Engineer

Scenario: Your Great Aunt Tilly needs your help with her summer cottage on Meredith Creek. Over the last 10 years, she has noticed significant erosion along her waterfront property, especially near the undercut riverbank. The shoreline around her cottage consists mostly of grass and one of her trees is beginning to fall over into the creek. Her budget is \$10,000.

Use the five Engineering Design Process Steps to create an erosion control project to better stabilize the shoreline along your Great Aunt Tilly's summer cottage.

Draw your strategy directly onto the graphic below.



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INVESTIGATION

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