



# OUR SHORE: The Guide, Training, & Certification

John MacLaine  
Nonpoint Source Training Center

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

*Protecting Maine's Air, Land, and Water*

# Maine's Natural Resources



**~6,000 Lakes &  
Ponds**



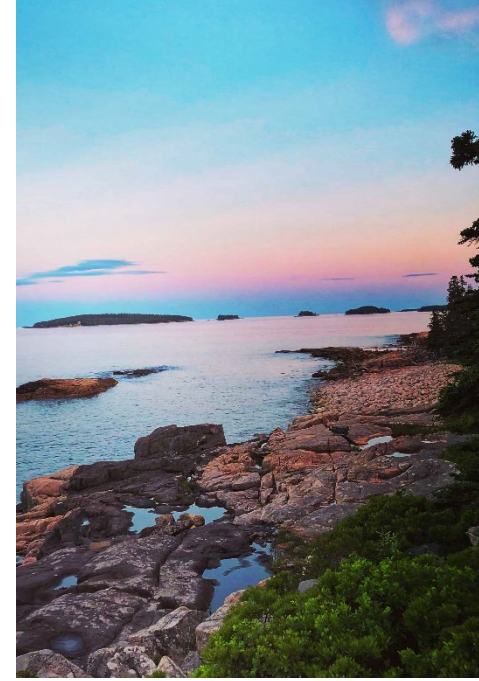
**>45,000 Miles of  
Rivers & Streams**



**5 Million Acres of  
Wetlands**



**157,500 acres of  
Coastal Wetlands**



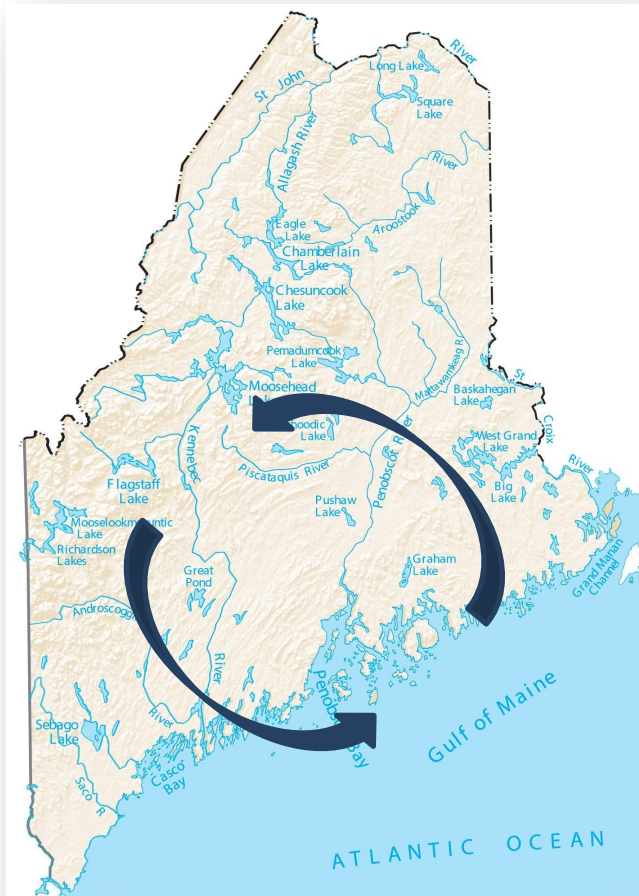
**3478 miles of  
Coastline**



**MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION**

[www.maine.gov/dep](http://www.maine.gov/dep)

# “OUR SHORE” CONCEPT



## Assessment & Selection of Stabilization Tools that:

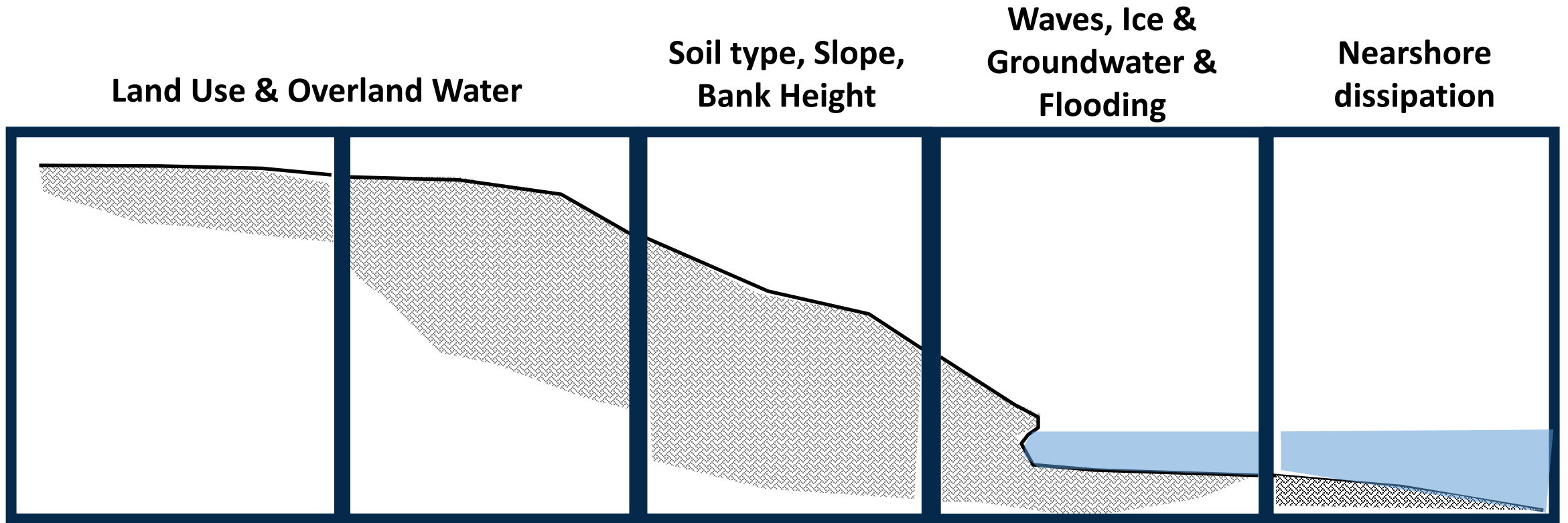
1. Use the least amount of intervention and disturbance necessary
2. Allow shorelines to function as natural systems as quickly as possible

*This is key to protecting the shoreline stability, water quality, and habitat for fish and wildlife in the long term*





# A Combination of Factors





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# Materials

## Non-Biodegradable Materials

Gabions and Variations (e.g. marine mattresses)  
Turf Reinforcement Mats (TRM)  
Cellular Confinement Systems

## Mixed Materials

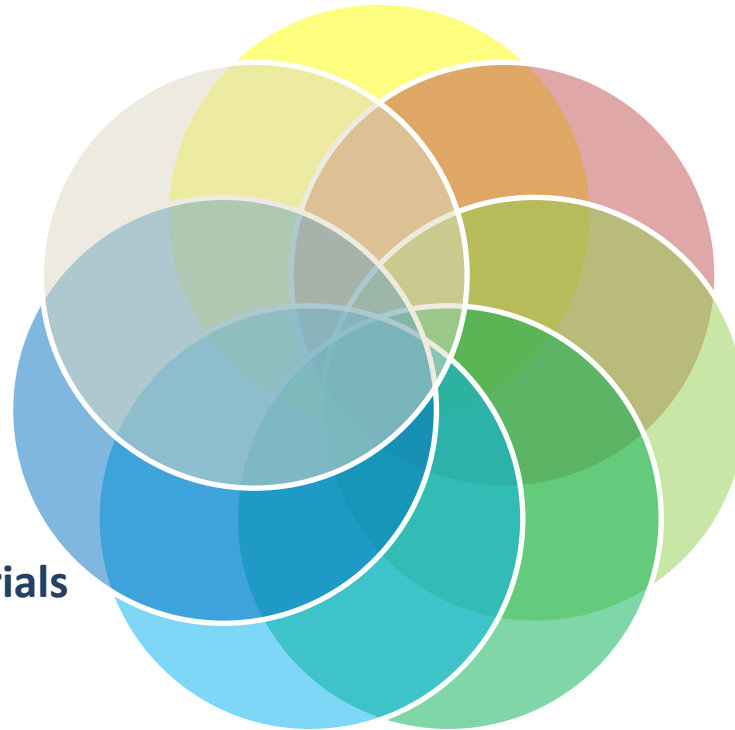
Infilled Riprap with Soil, Erosion Control Mix or variations for growing vegetation  
Cobbles Mixed with Erosion Control Mix

## Stone, Soil & Aggregate Materials

Riprap Stone  
Bank-Run Stone & Cobbles  
Crushed Stone  
Pea Stone  
Oyster Shells  
Coarse Sand  
Loam

## Manufactured Products

Biodegradable Erosion Control Socks  
Coir Logs  
Natural Fiber Blankets & Filter Fabrics (long-lived, fully biodegradable), Burlap, Heavy Coir blankets  
Temporary Erosion Control Blankets



Low > Medium > High  
Erosion Contribution

## Mulches & Organic Matter

Erosion Control Mix (permanent)  
Fine Erosion Control Mix, super humus  
Hay or Straw Mulch (*temporary erosion control/seed establishment*)  
Natural Mulches (duff, leaves, pine needles)  
Other Natural Wood-Based Mulches & Chips  
Hydraulically Applied Mulches & Biotic Soil Media  
Plant-Based Compost

## Dead Wood & Tree Materials

Tree Root Wads  
Dead Brush Bundles  
Logs & Posts, Anchored Tree Material

## Living Materials

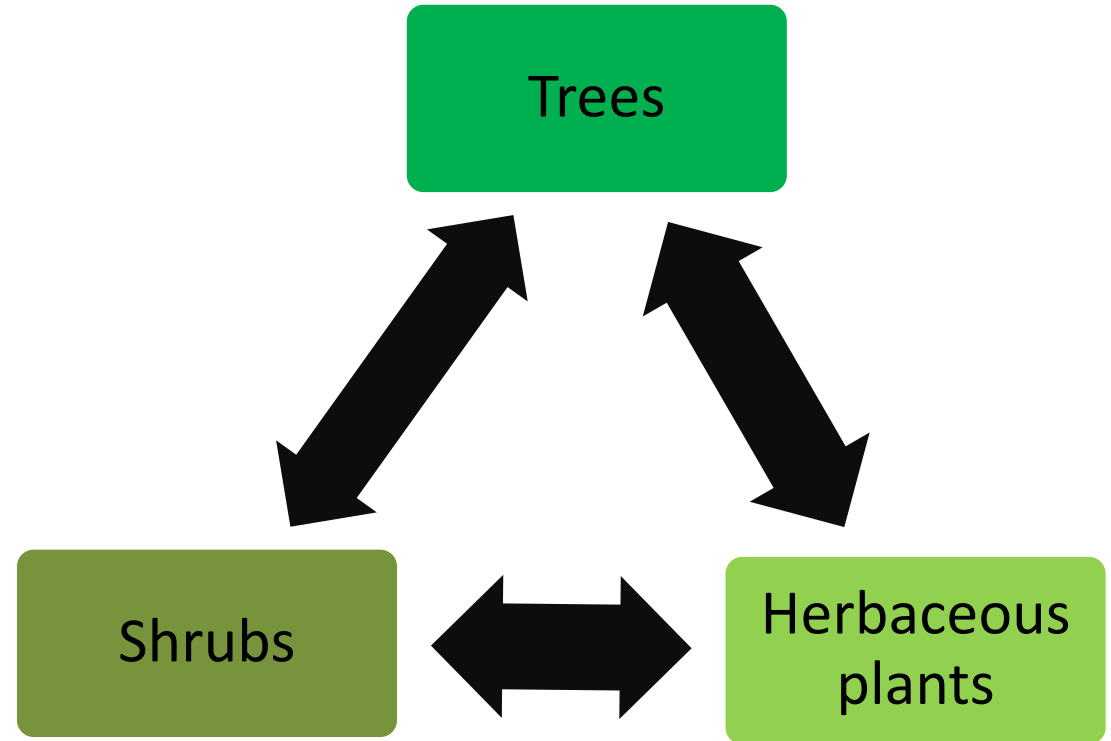
Live Stakes  
Live Poles  
Live Posts  
Living Brush  
Living Fascines  
Living Wattles



# Establishing Vegetation

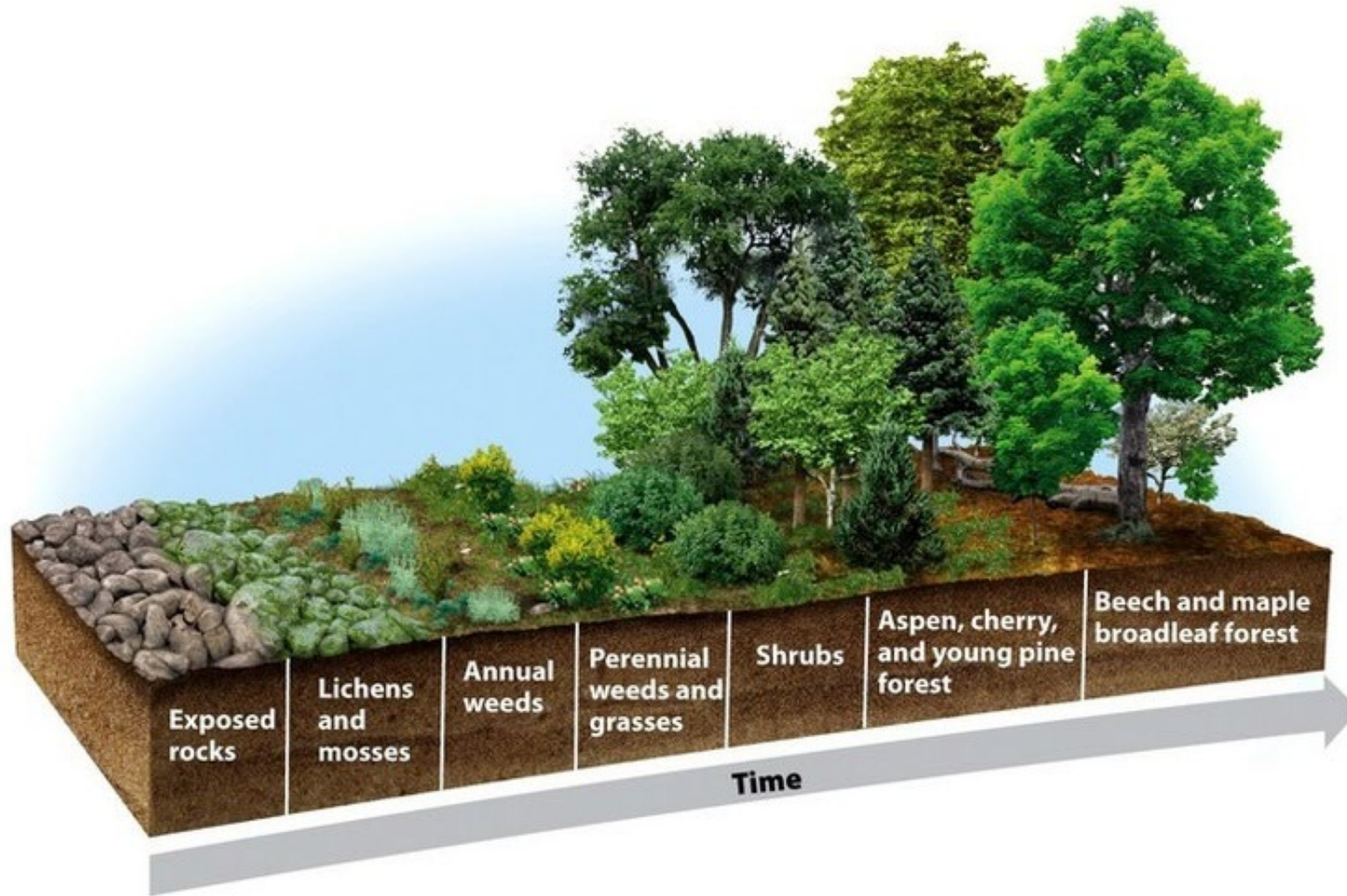
(Don't get in nature's way)

- Seeding
- Potted plants
- Dormant bare-root
- Transplanted natives
- Live-staking & self-rooting variations
  - Living brush
  - Fascines
  - Living wattles
  - Living Poles & Posts
- Creating places for wild seeds to collect
- Using graded soil from the site (seed bank)

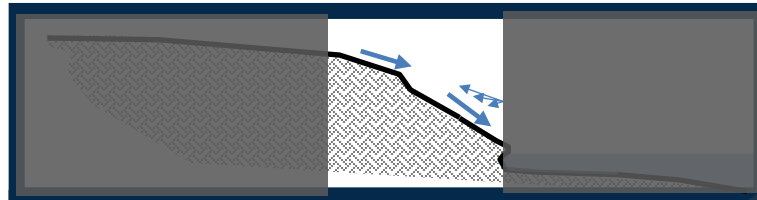




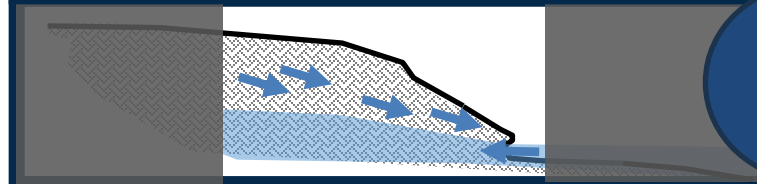
# Ability to Naturalize Over Time



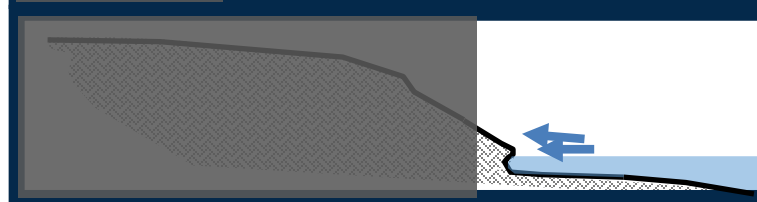
Overland Erosion & Wave Spray



Groundwater & Saturation

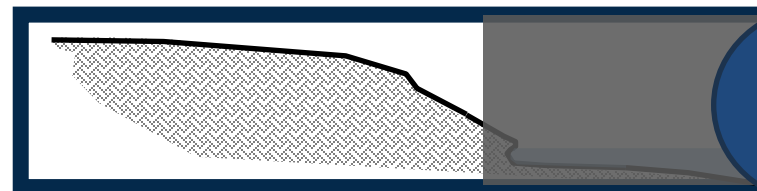
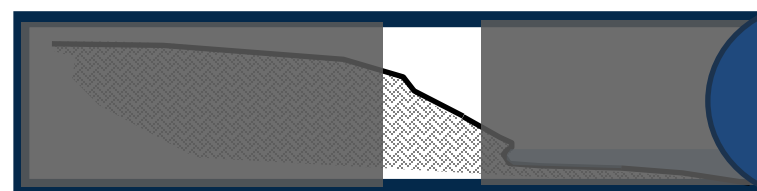


Toe Erosion



Slope Alterations

Slope Protection



S

Source of Erosion

H

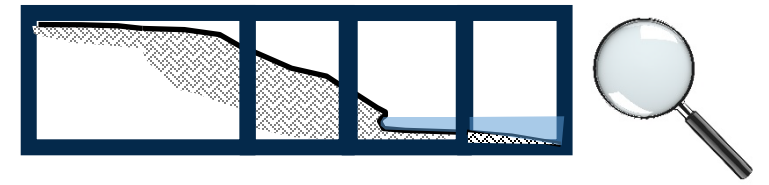
Height & Slope

O

Overland Water from Land Use

R

Revegetate & Restore Habitat







## Sources of Erosion & Instability:

- Toe Erosion from waves/ice
- Overland Flows/Spray
- Groundwater/Saturation

### Assessing & Selecting Tools - Site #1

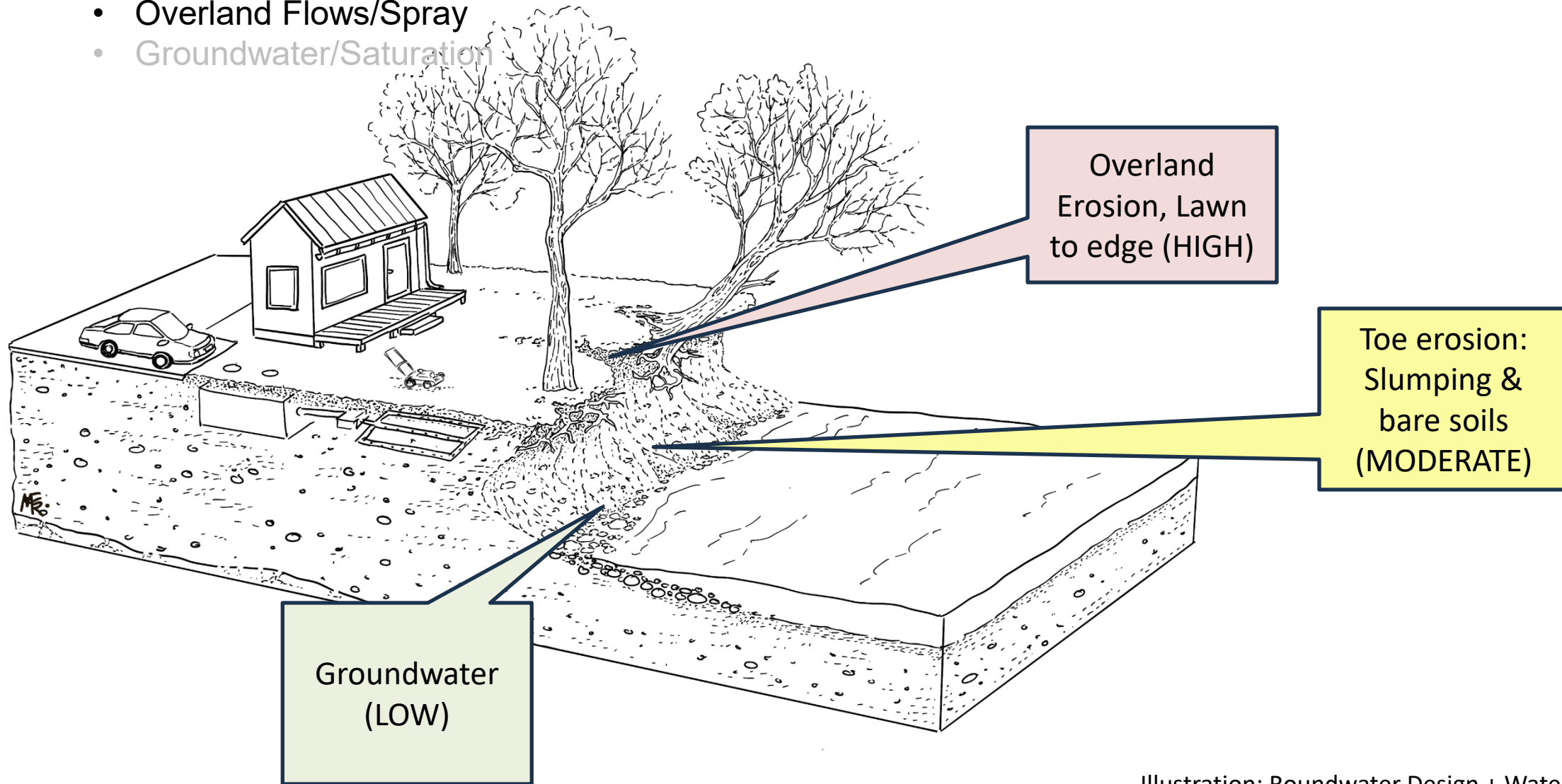


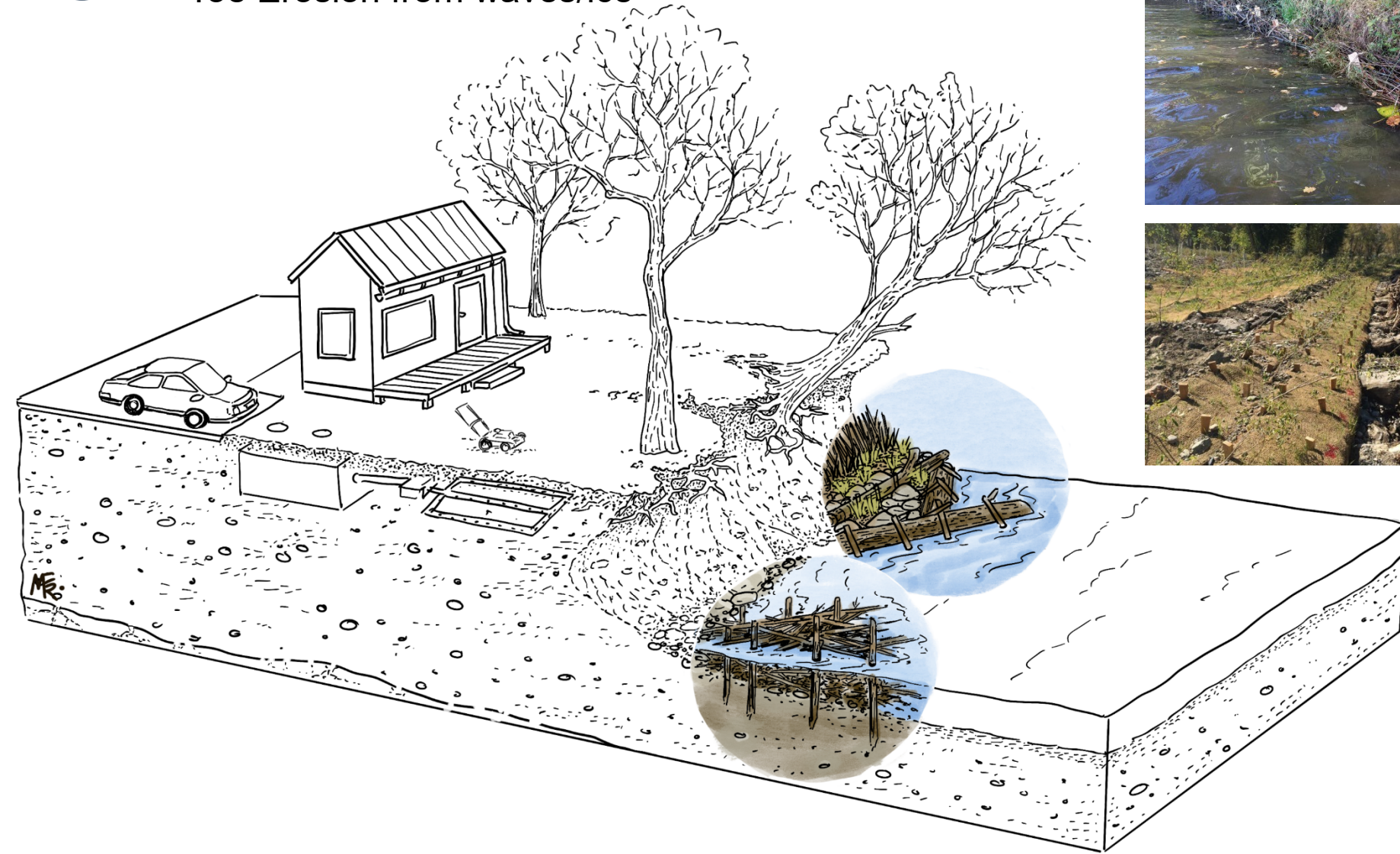
Illustration: Roundwater Design + Waterview Consulting



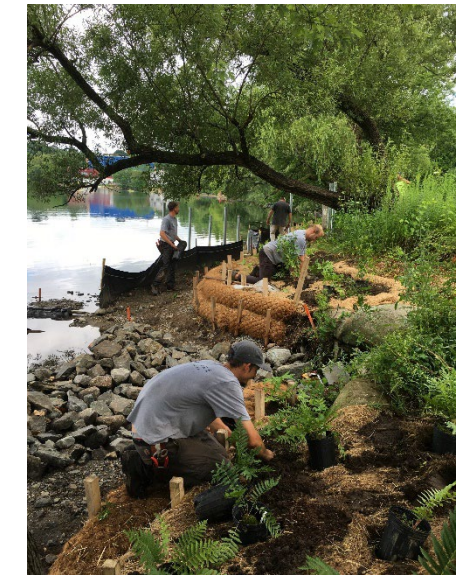


# S Sources of Erosion & Instability:

- Toe Erosion from waves/ice



The Home Place Team



Parterre Ecological

Illustration: Roundwater Design + Waterview Consulting



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# Sources of Erosion & Instability:

- Overland Erosion/Spray

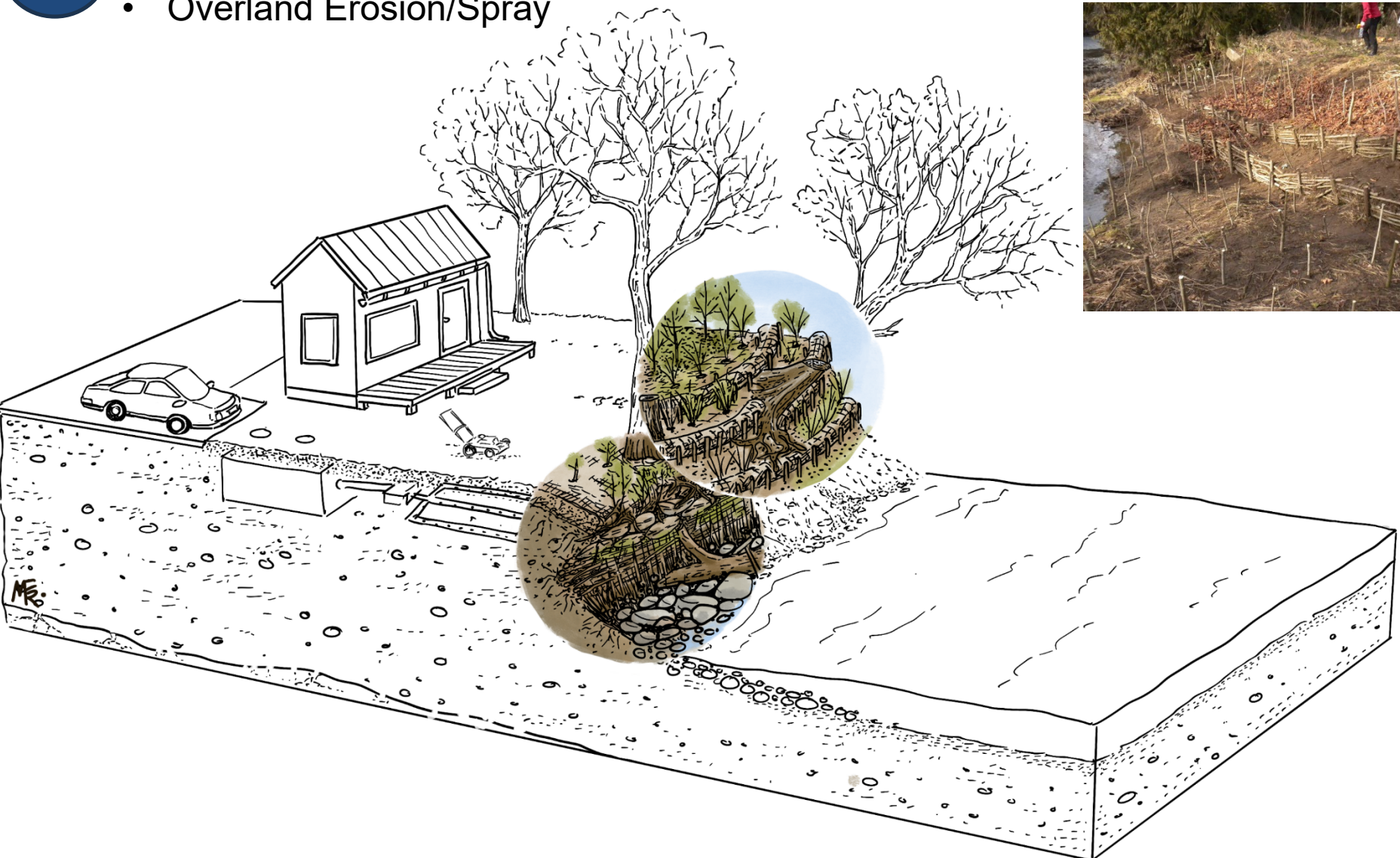


Illustration: Roundwater Design + Waterview Consulting



# Height & Slope Risks

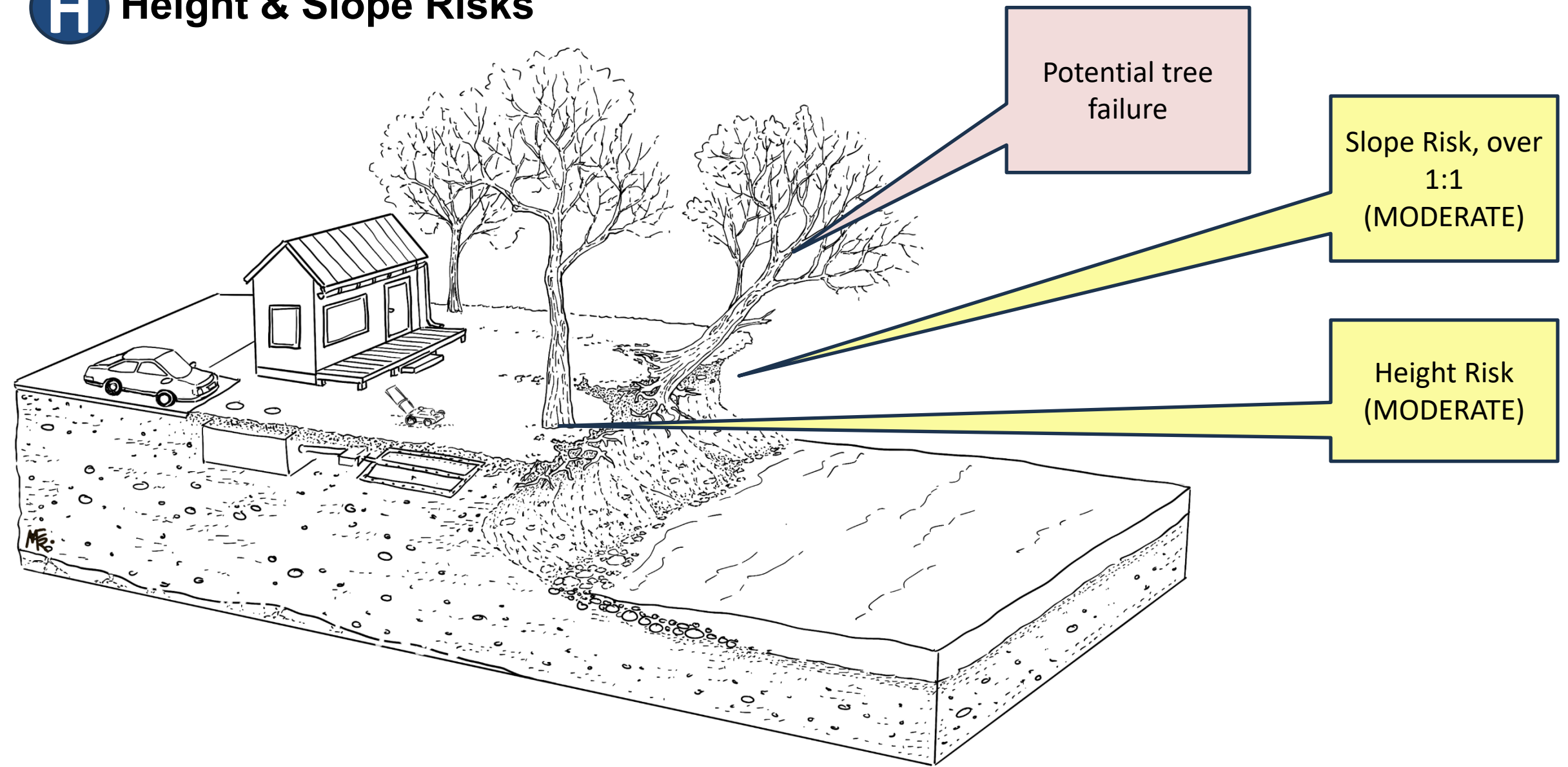


Illustration: Roundwater Design + Waterview Consulting

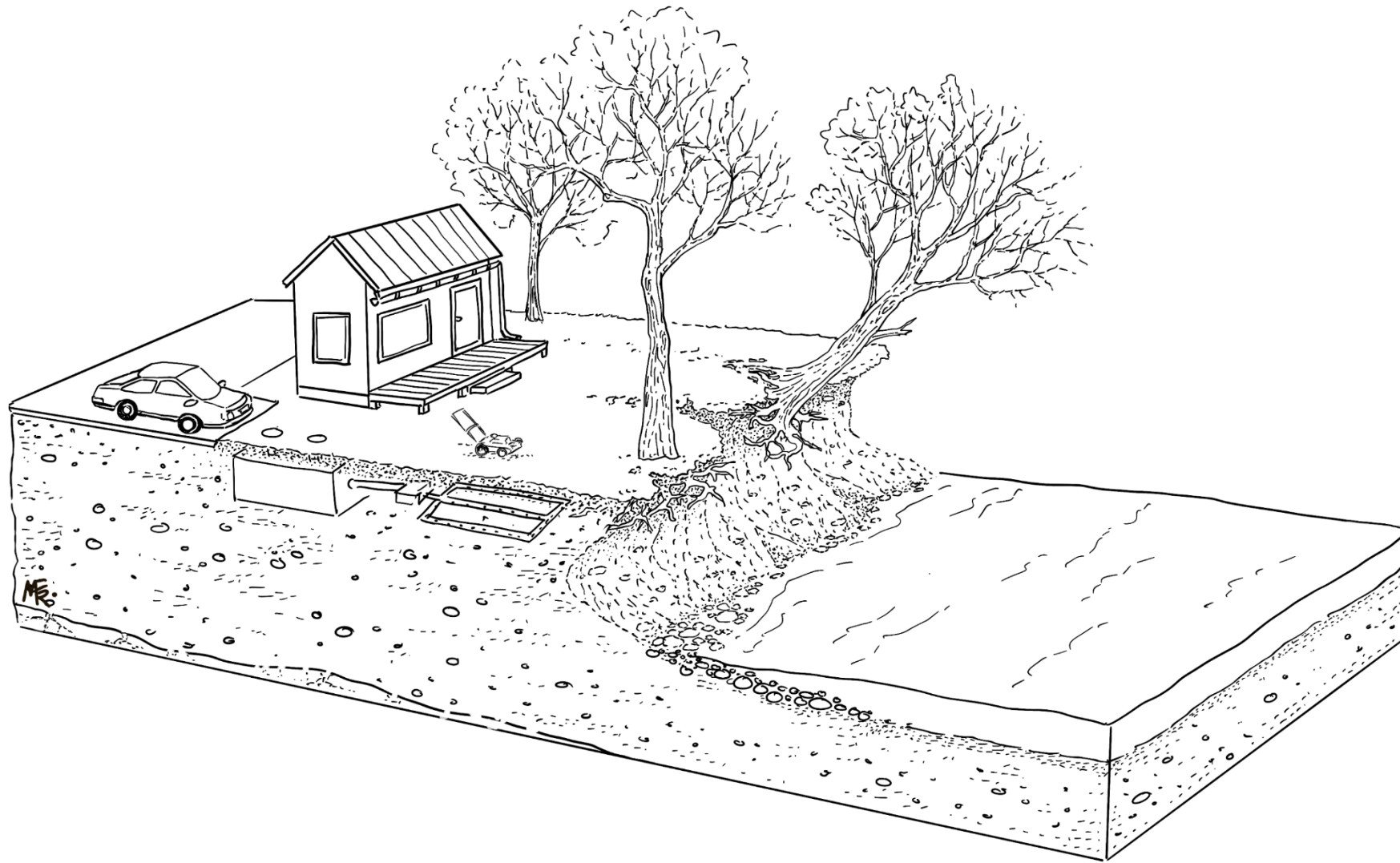


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# Height & Slope Risk: Regrading



SLOPE GRADING PRACTICES

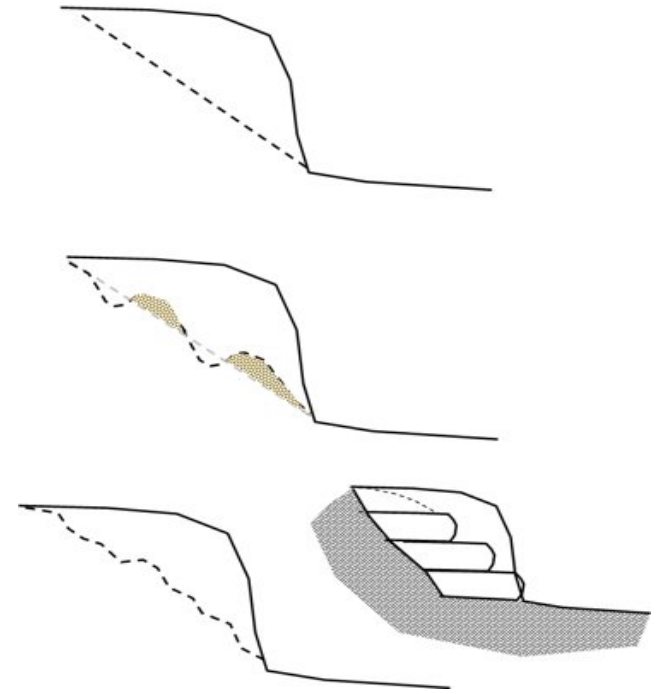


Illustration: Roundwater Design + Waterview Consulting



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# Overland Water From Land Use

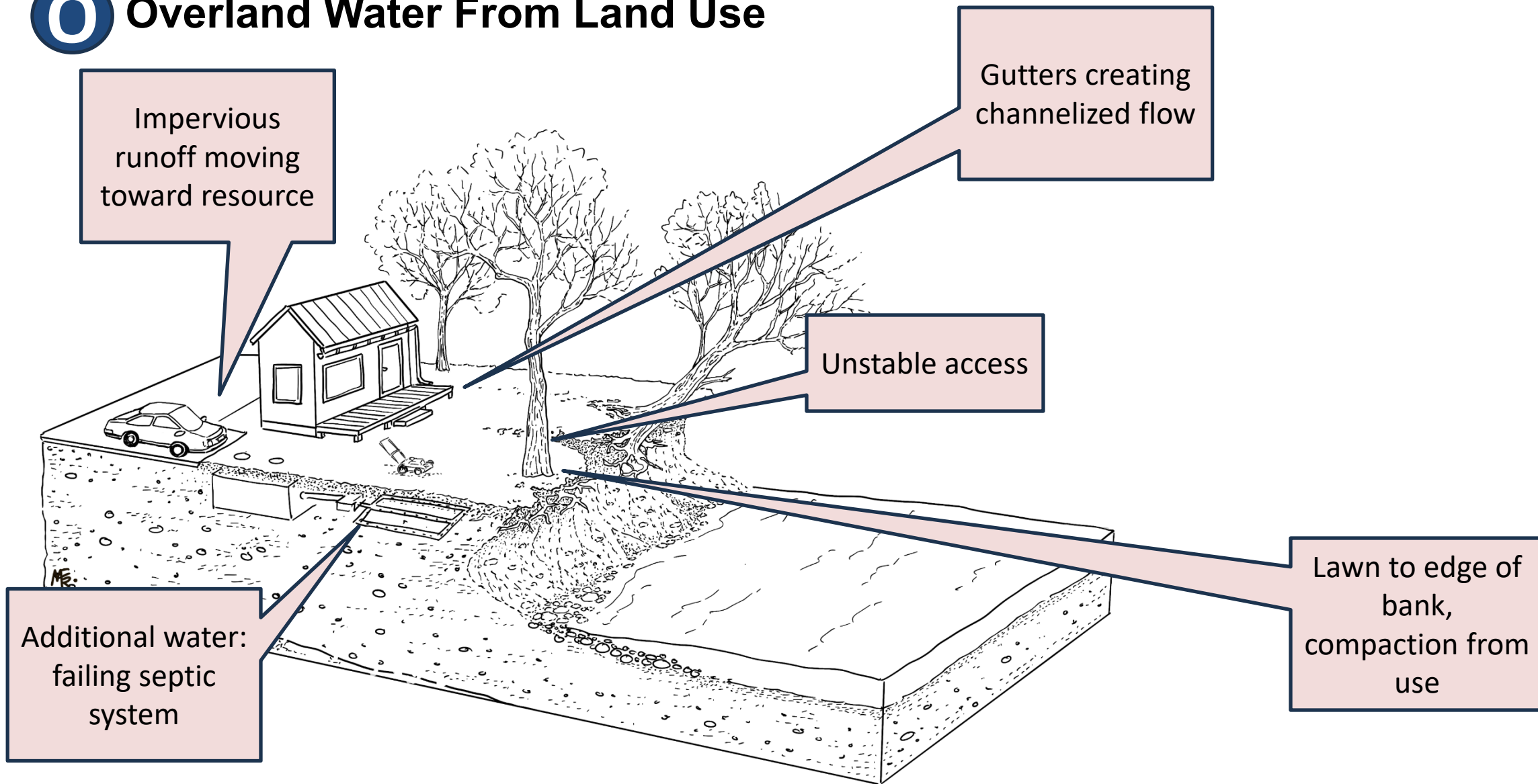


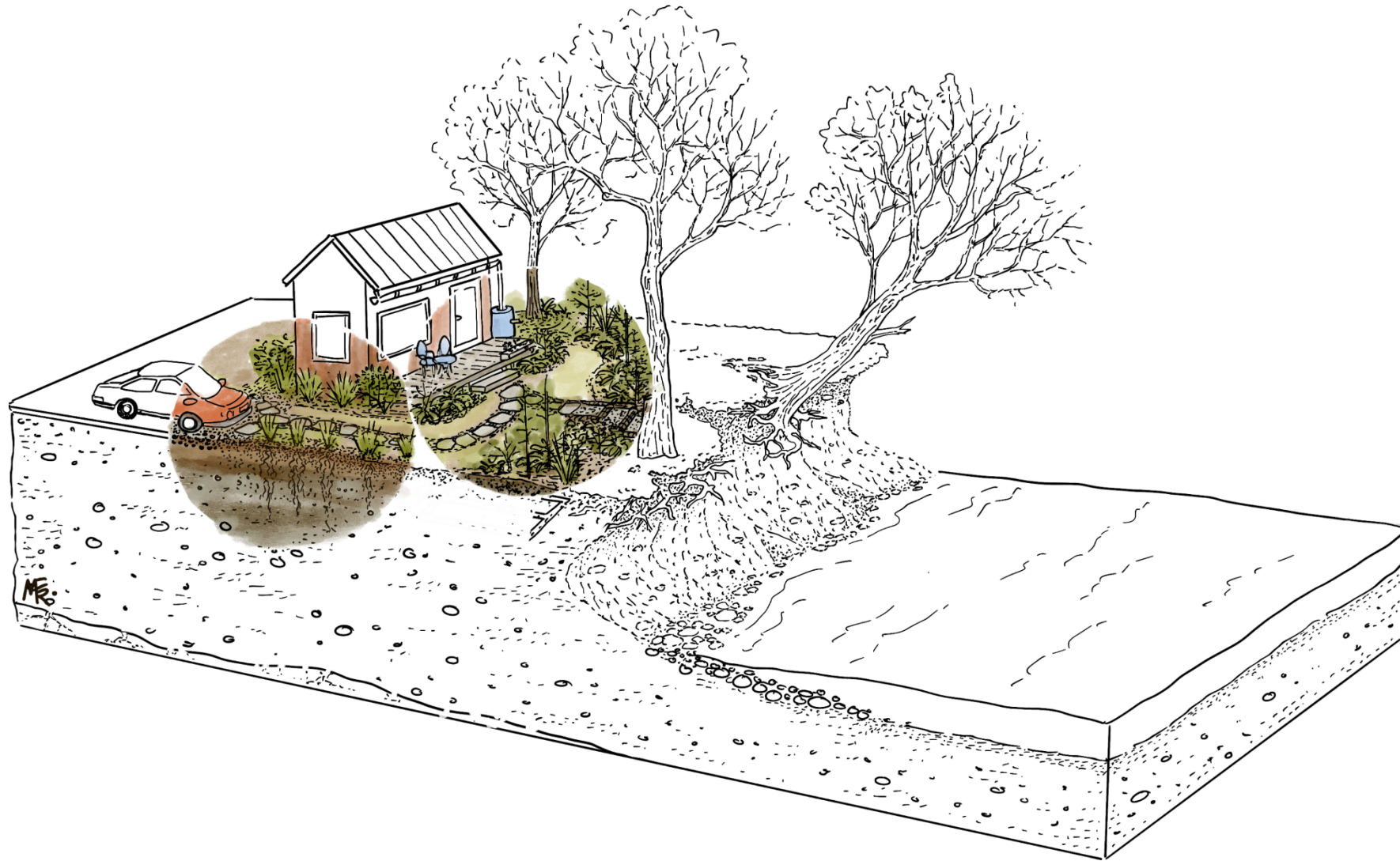
Illustration: Roundwater Design + Waterview Consulting



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# Overland Water From Land Use



**Minimize water  
volume**

**Slow it down &  
Spread it out**

Illustration: Roundwater Design + Waterview Consulting



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## Restore & Revegetate

### Installed Tools - Site #1

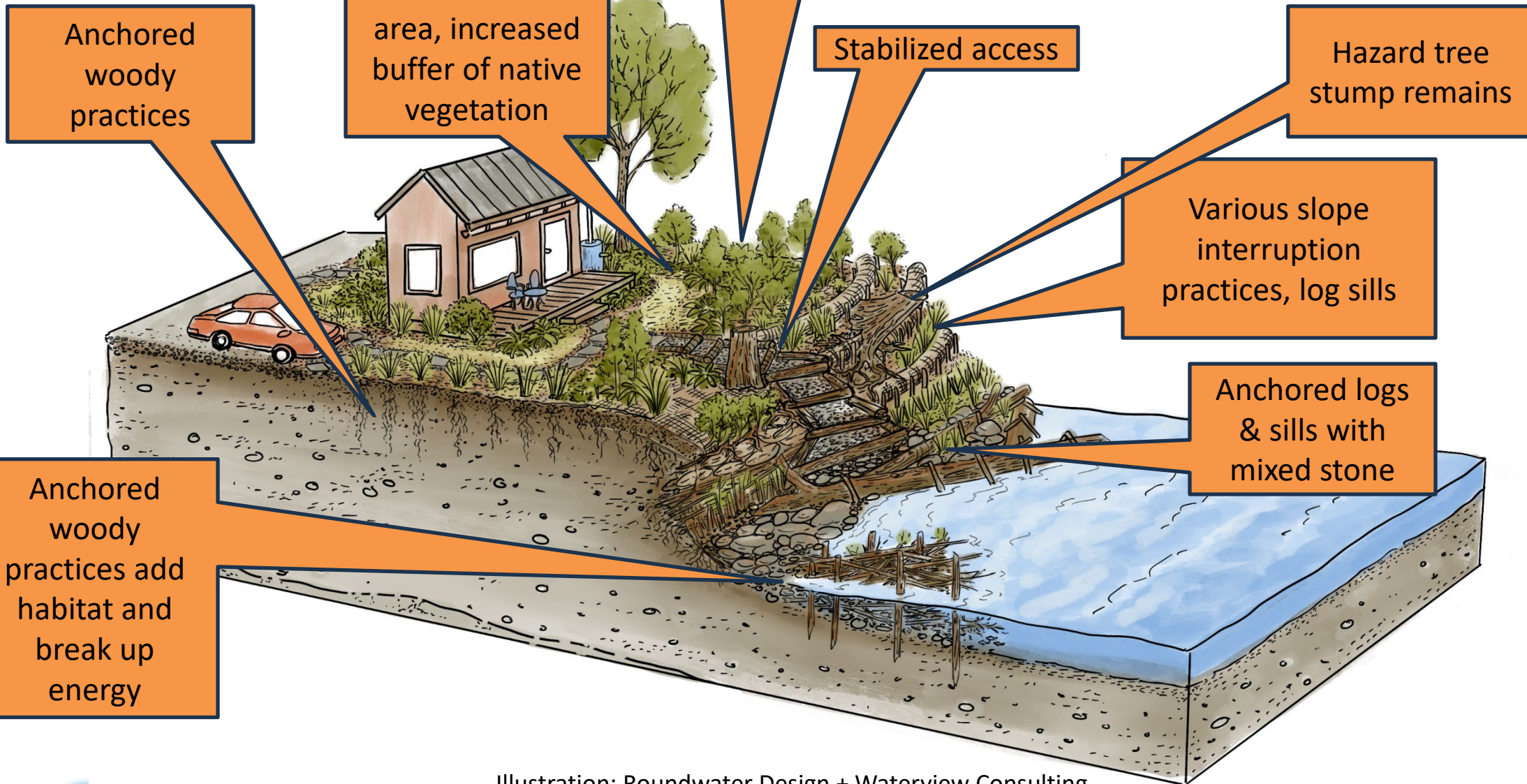


Illustration: Roundwater Design + Waterview Consulting

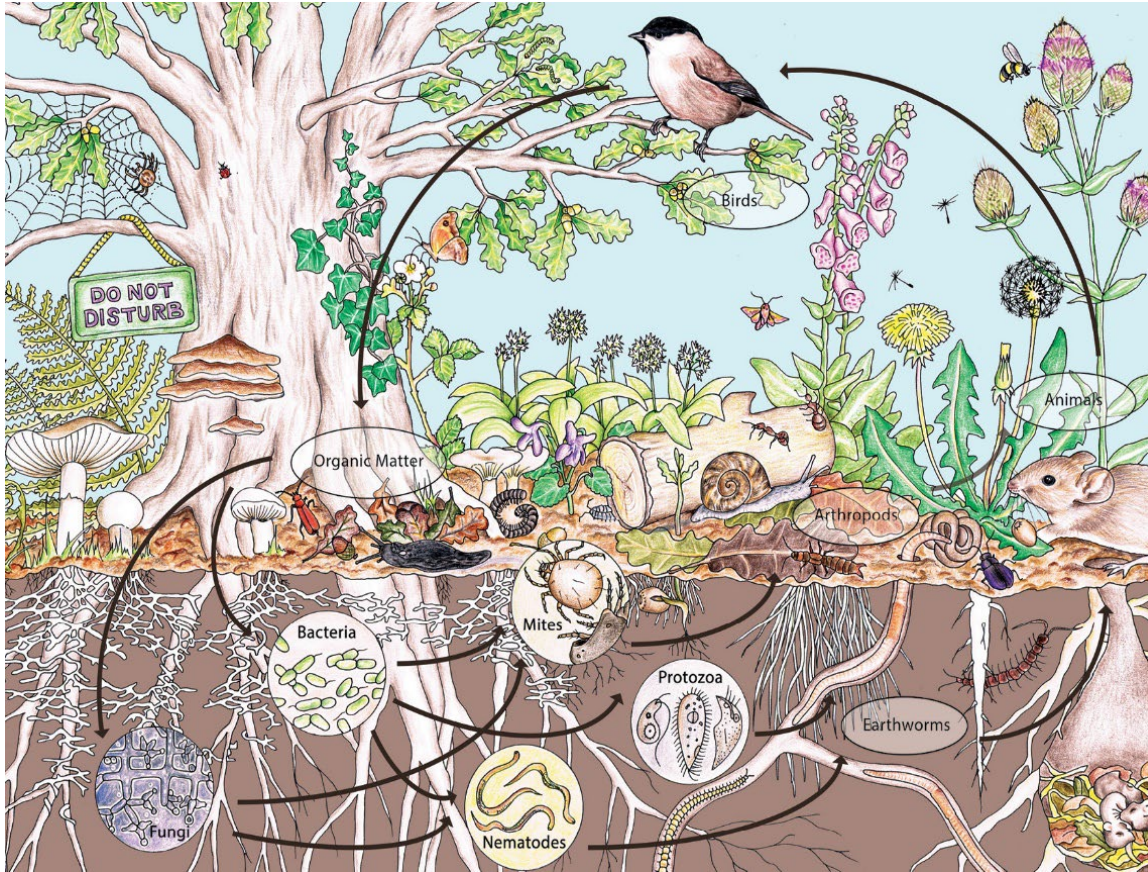


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# Restoring Shoreline Habitat



## Habitat elements:

- Terrestrial Shade/cover
- Aquatic Shade & nearshore habitat
- Cover Diversity, duff (Surface)
- Natural vegetation diversity (species/types)
- Woody Material Inputs
- Travel Corridor
- Soil Health and structure
- Sediment Transfer?
- Specific wildlife/fisheries considerations



# S Sources of Erosion & Instability:

- Toe Erosion from waves/ice
- Overland Flows/Spray
- Groundwater/Saturation

## Assessing & Selecting Tools – Site #2

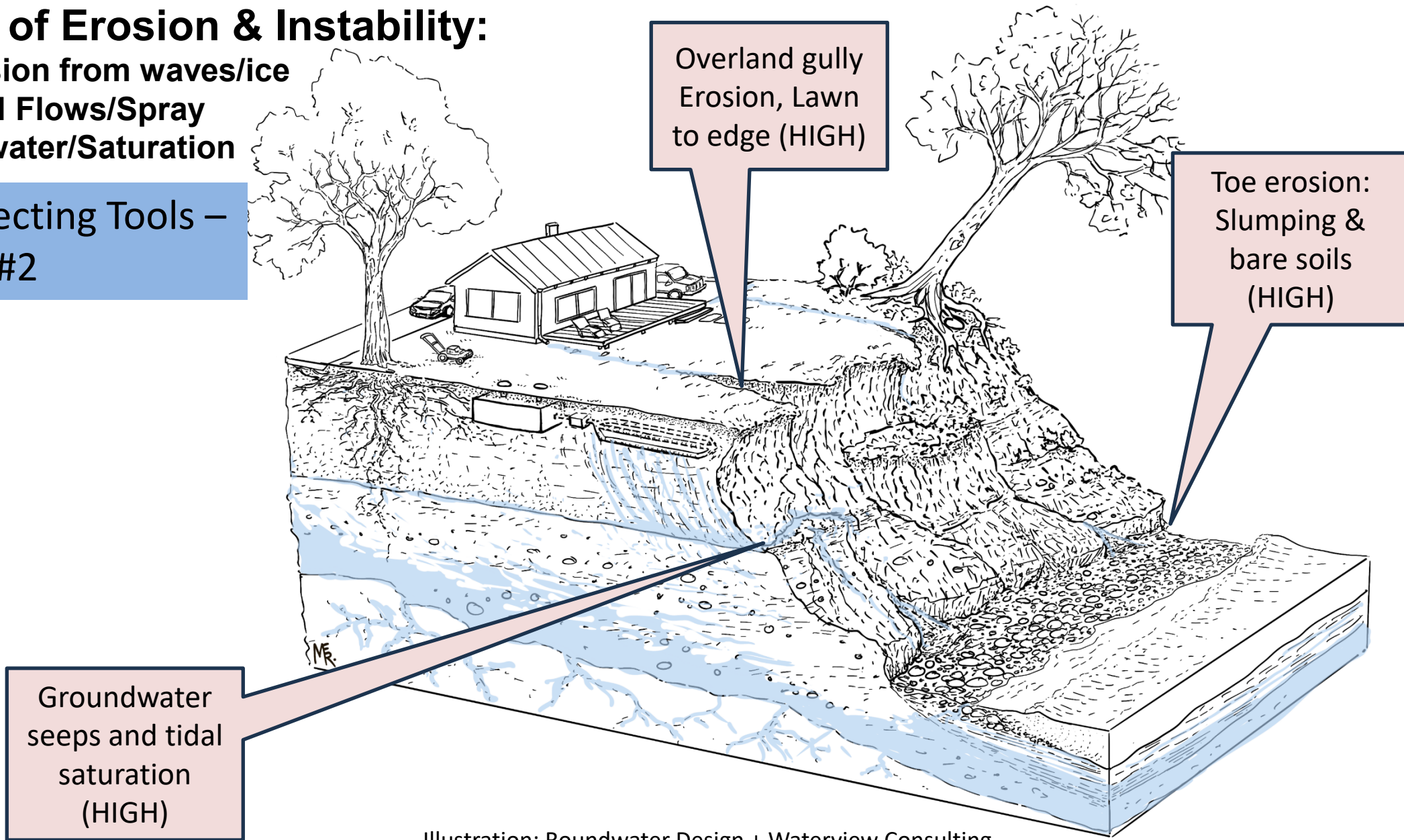


Illustration: Roundwater Design + Waterview Consulting







# Sources of Erosion & Instability:

- Toe Erosion from waves/ice

Higher energy site

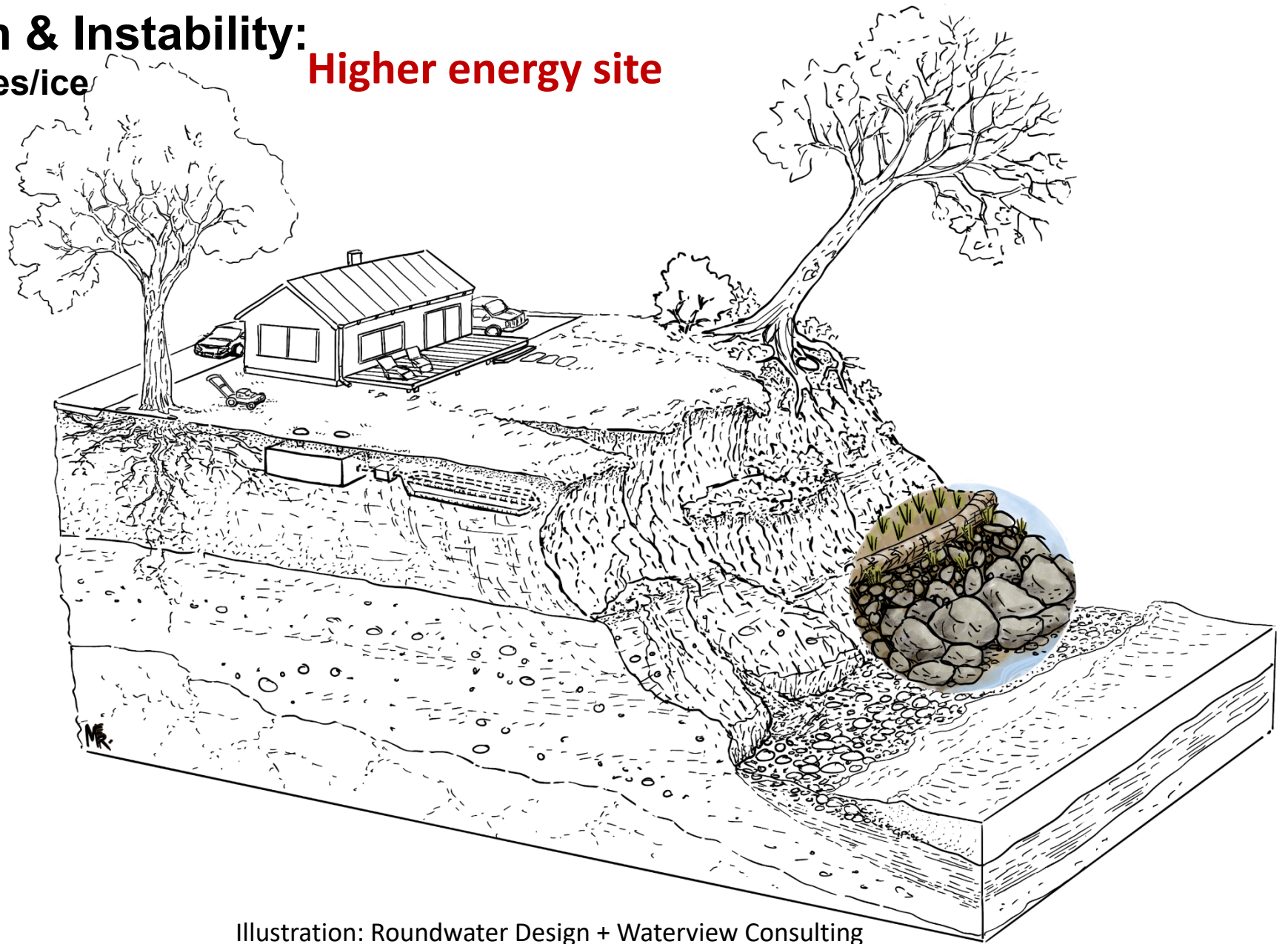


Illustration: Roundwater Design + Waterview Consulting



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# S Sources of Erosion & Instability:

- Toe Erosion from waves, saturation



The Home Place Team

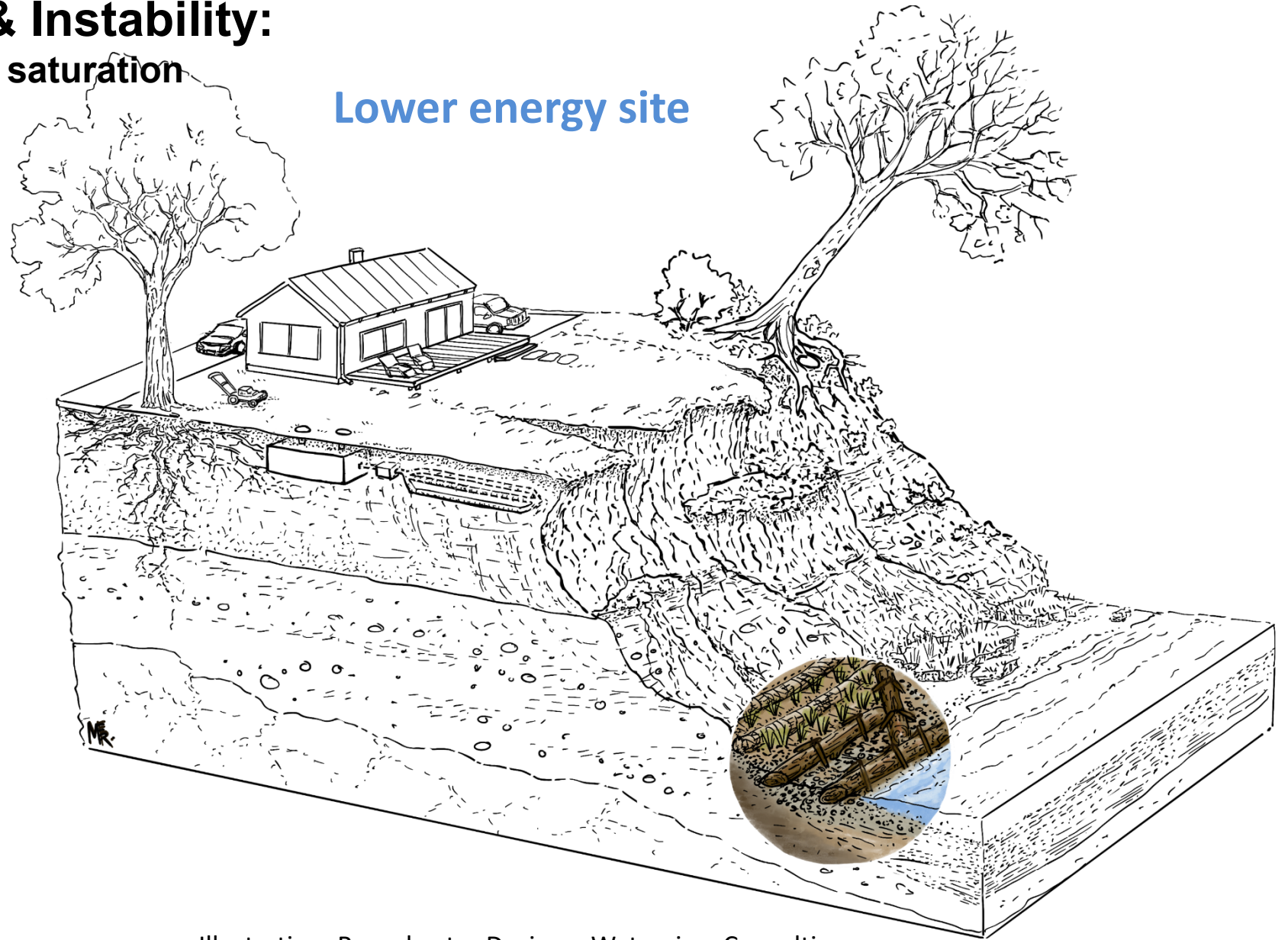


Illustration: Roundwater Design + Waterview Consulting





# S Sources of Erosion & Instability:

- Overland Erosion/Spray

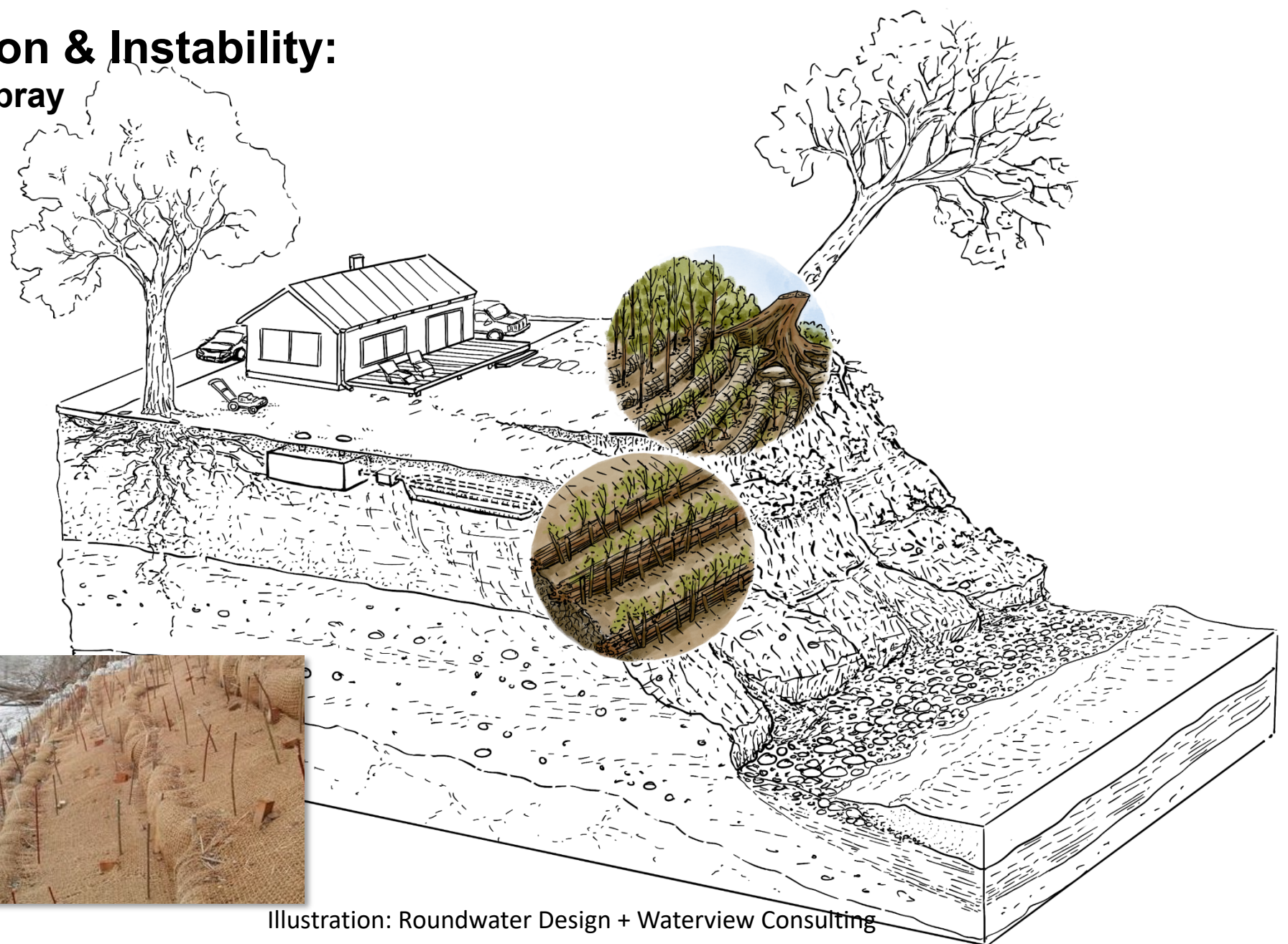


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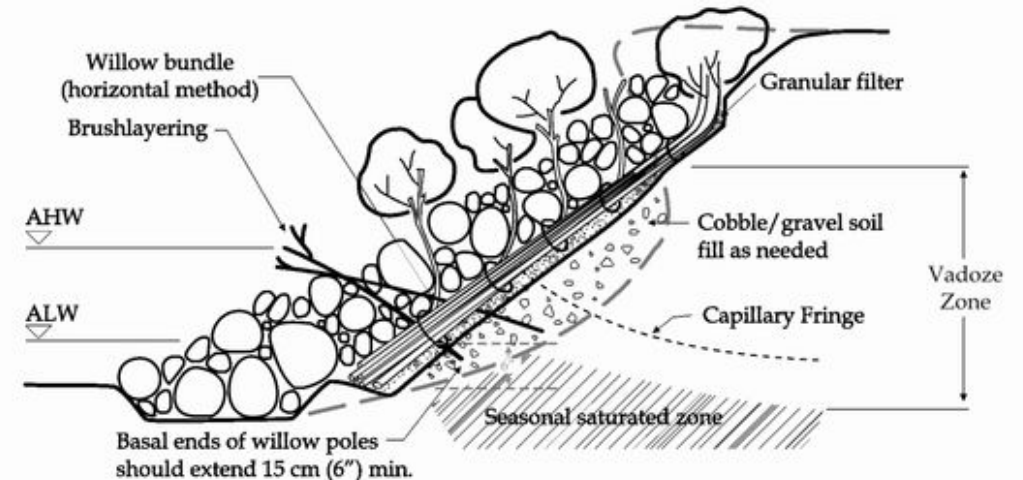
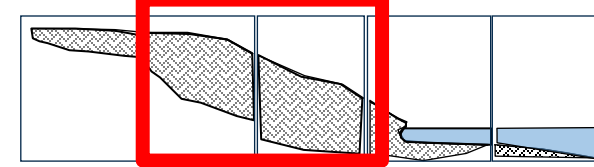


# Sources of Erosion & Instability:

- Groundwater & Saturation

## Filter layers

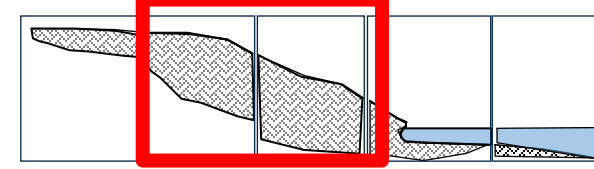
- Nonwoven geotextile (filter fabric)\*
- Filter gravel/granular filters
- Temporary biodegradable filter fabrics/blankets with vegetation
- Live brush/brush mattress





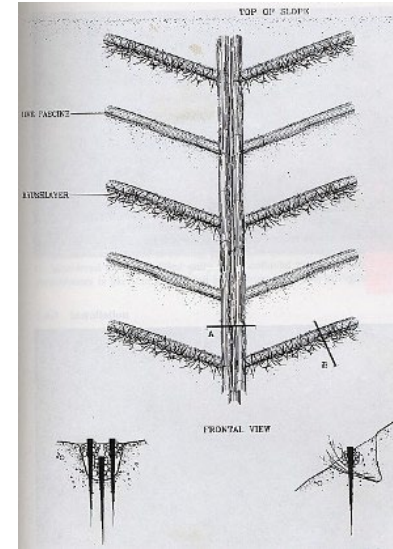
# S Sources of Erosion & Instability:

- Groundwater & Saturation



## Groundwater Interception

- French drains
- Drain tile
- Correct septic/sprinkler/other water contributions



## Targeted stabilization of seep areas





**H** Height & Slope

**O** Overland Water From  
Land Use

**R** Restore & Revegetate  
for Habitat



Illustration: Roundwater Design + Waterview Consulting

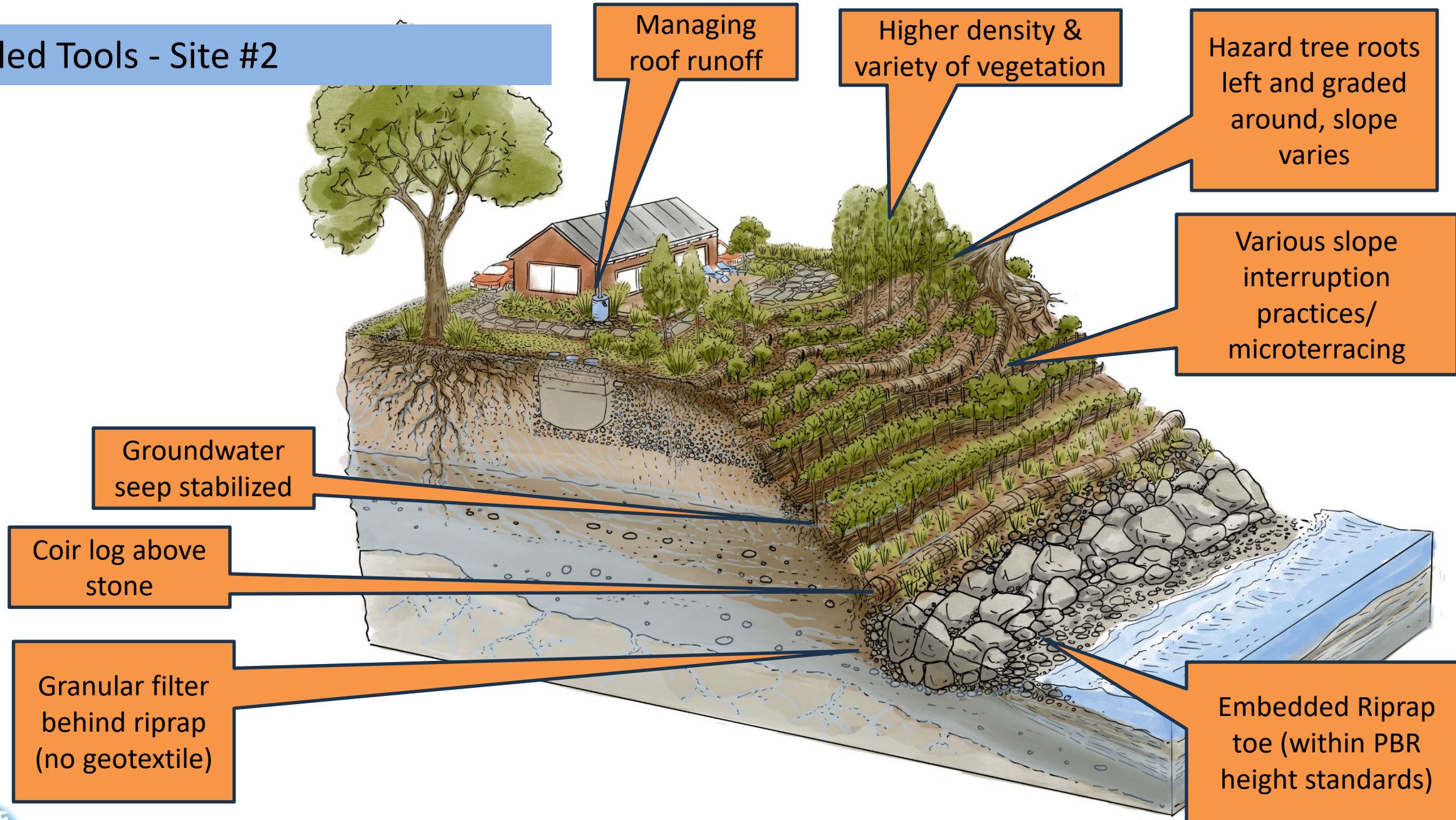


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## Installed Tools - Site #2





# Sandy River, Farmington Falls





# Advanced Certification & Training



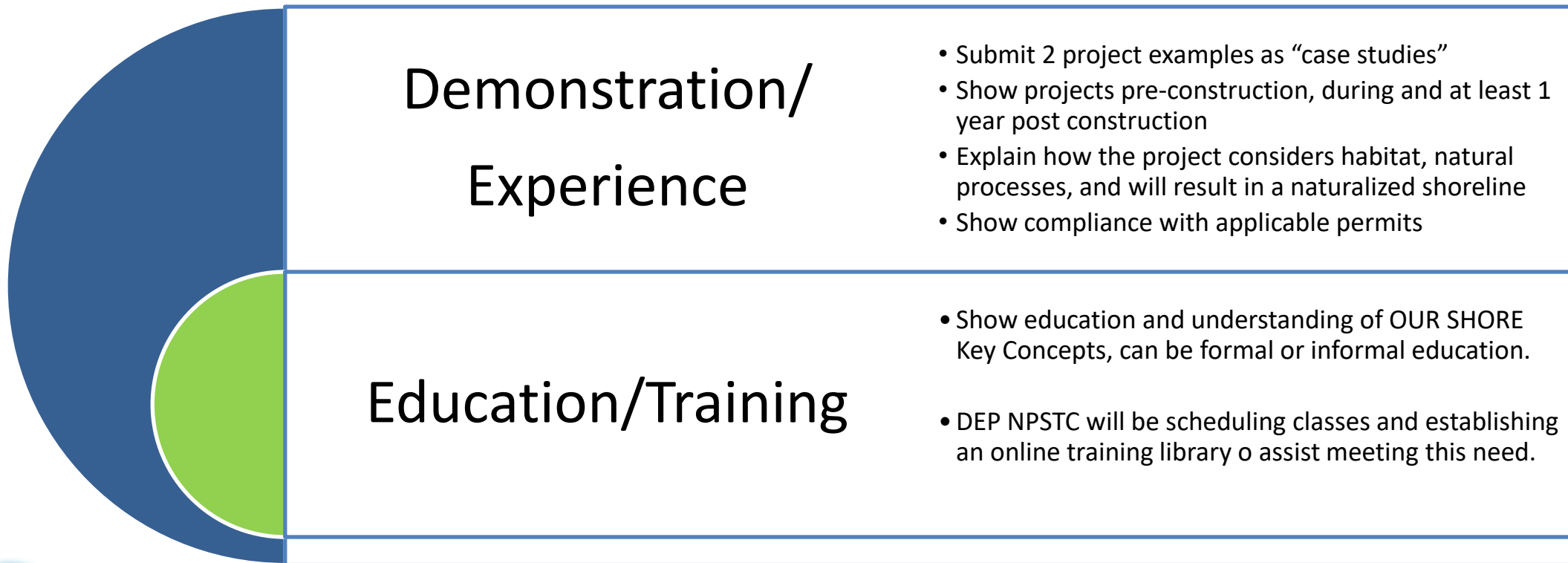
DEP's Nonpoint Source Training Center (NPSTC) will be offering Voluntary Advanced Certifications in specialized areas starting 2026

1. Nature-based Shoreline Stabilization Practitioner List
2. Stream Smart Crossings
3. Other areas such as Erosion & Sediment Control Inspectors, Large site construction will be added



# Advanced Certification for Nature-based Shoreline Stabilization

1. Be Certified in ESC by Maine DEP (doesn't apply to provisional certifications)
2. Attend THIS Workshop (will be an annual event)
3. Meet combination of education & experience in design or implementation of OUR SHORE Concepts (Reviewed by Committee)





**Training & Certification:**  
[Maine.gov/dep/land/training](https://www.maine.gov/dep/land/training)



**Resources:**  
[Maine.gov/dep/land/ourshore](https://www.maine.gov/dep/land/ourshore)

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