



# Rain Gardens: A useful thing of beauty

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Drawing provided by  
Emmons & Olivier Resources, Inc.



# What is a Rain Garden?

- **Bio-Retention-” Bio-retention is an up-land water quality and water quantity control practice the uses the chemical, biological and physical properties of plants, microbes and soils for removal of pollutants from storm water runoff.”**  
(from [www.bioretention.com](http://www.bioretention.com))

# In English, please?

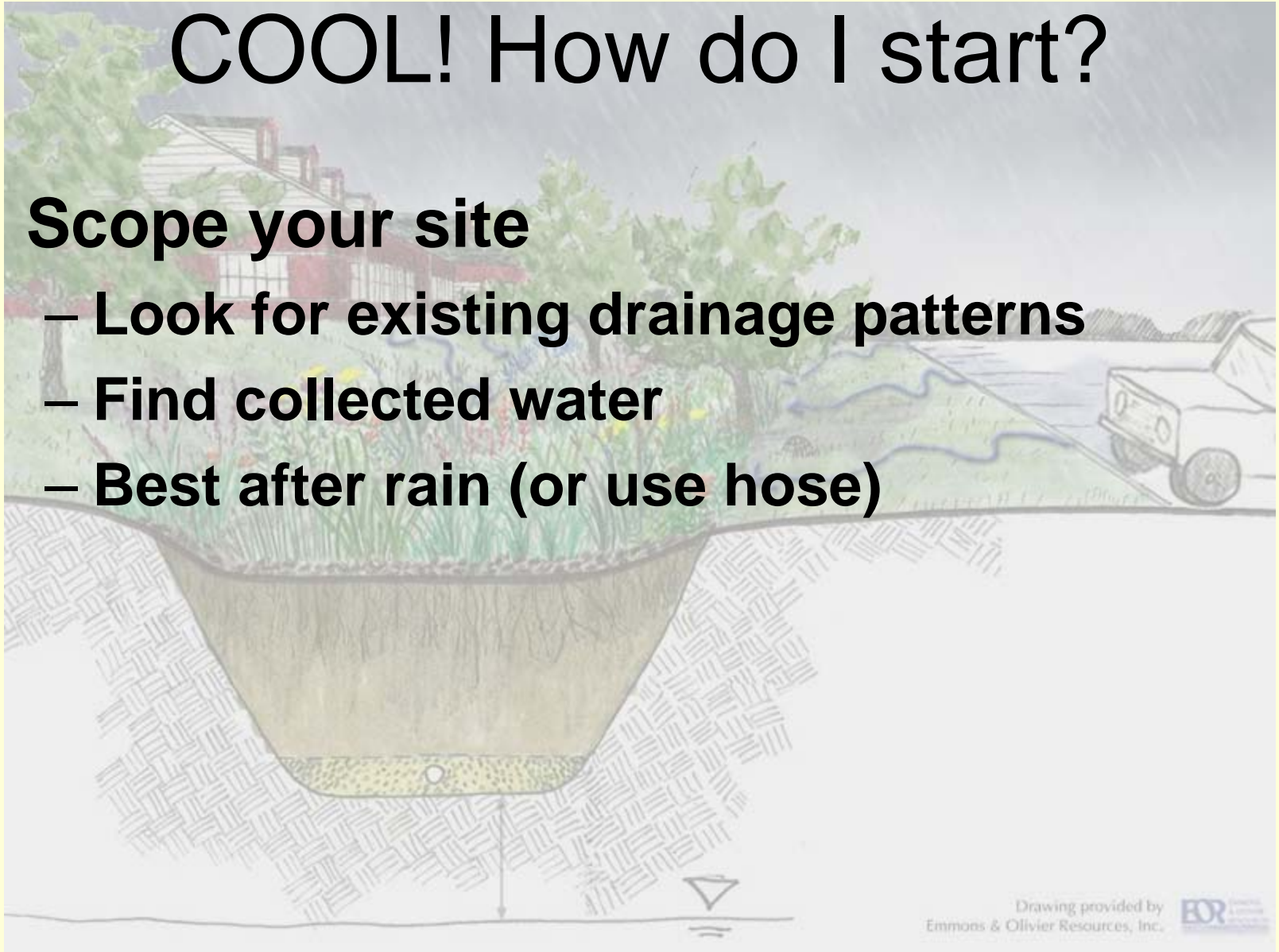
- **It's a garden that:**
  - works hard to control pollution from storm water run-off
  - creates wildlife habitat
  - Saves **\$** on water, fertilizer, etc.
  - Looks pretty!





# COOL! How do I start?

- **Scope your site**
  - Look for existing drainage patterns
  - Find collected water
  - Best after rain (or use hose)



# What's next?

- **Evaluate your Soils**
  - Sandy soils=OK
  - Clay soils=bad!
  - Best mix:
    - 50-60% sand, 20-30% topsoil, and 20-30% compost
- **Test Drainage**
- **Add drain system if necessary**
- **Loosen compacted soils**

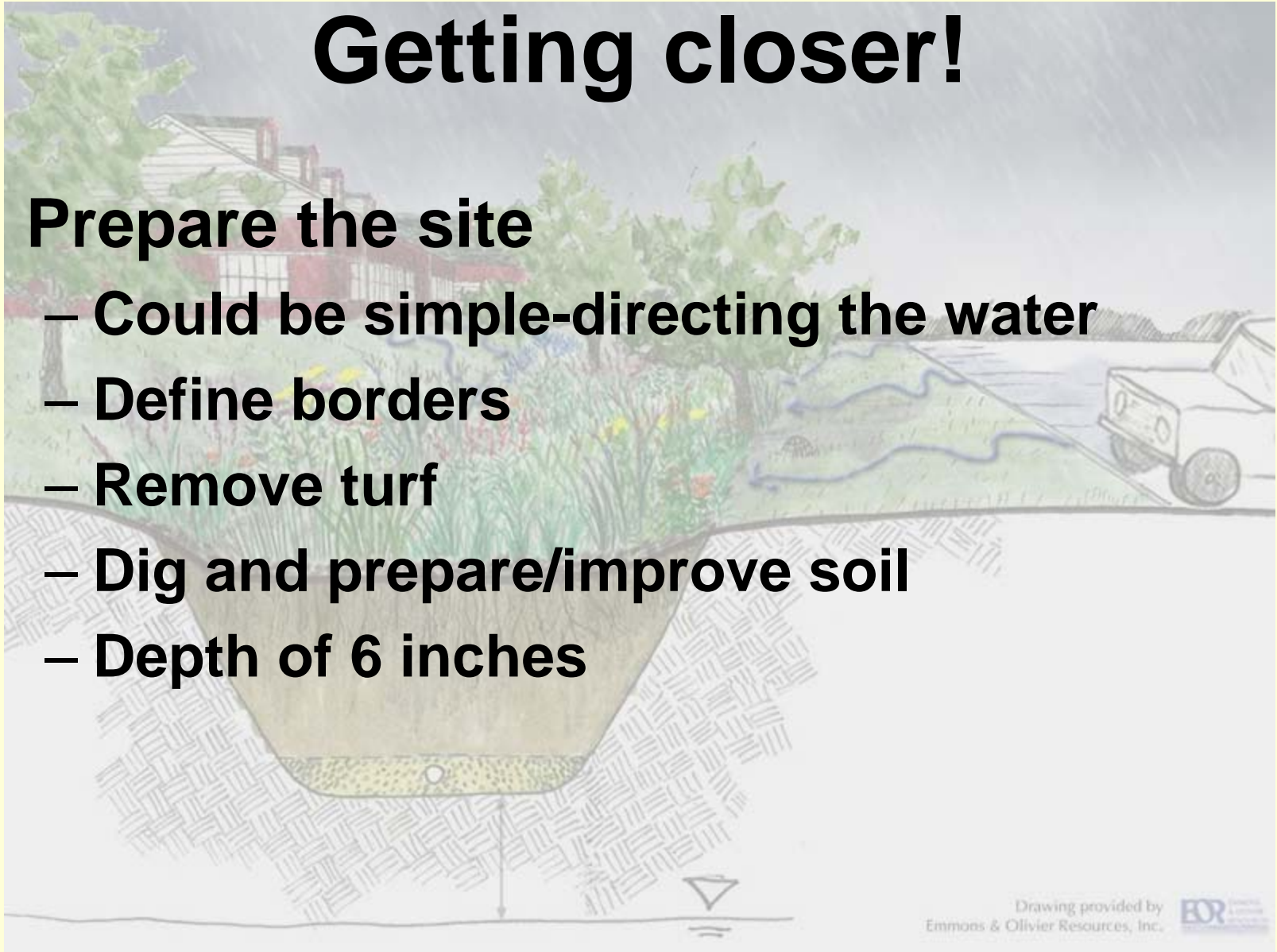
# Soil...CHECK! Now What?

- Design the garden
  - Calculate size
    - Find sq. footage that will drain into the garden (roof and paved surfaces)
    - With good soil mix, garden= **20-30%** of sq. footage
    - **ANY SIZE IS STILL GOOD FOR WATER QUALITY! NO GARDEN IS TOO SMALL!**



# Getting closer!

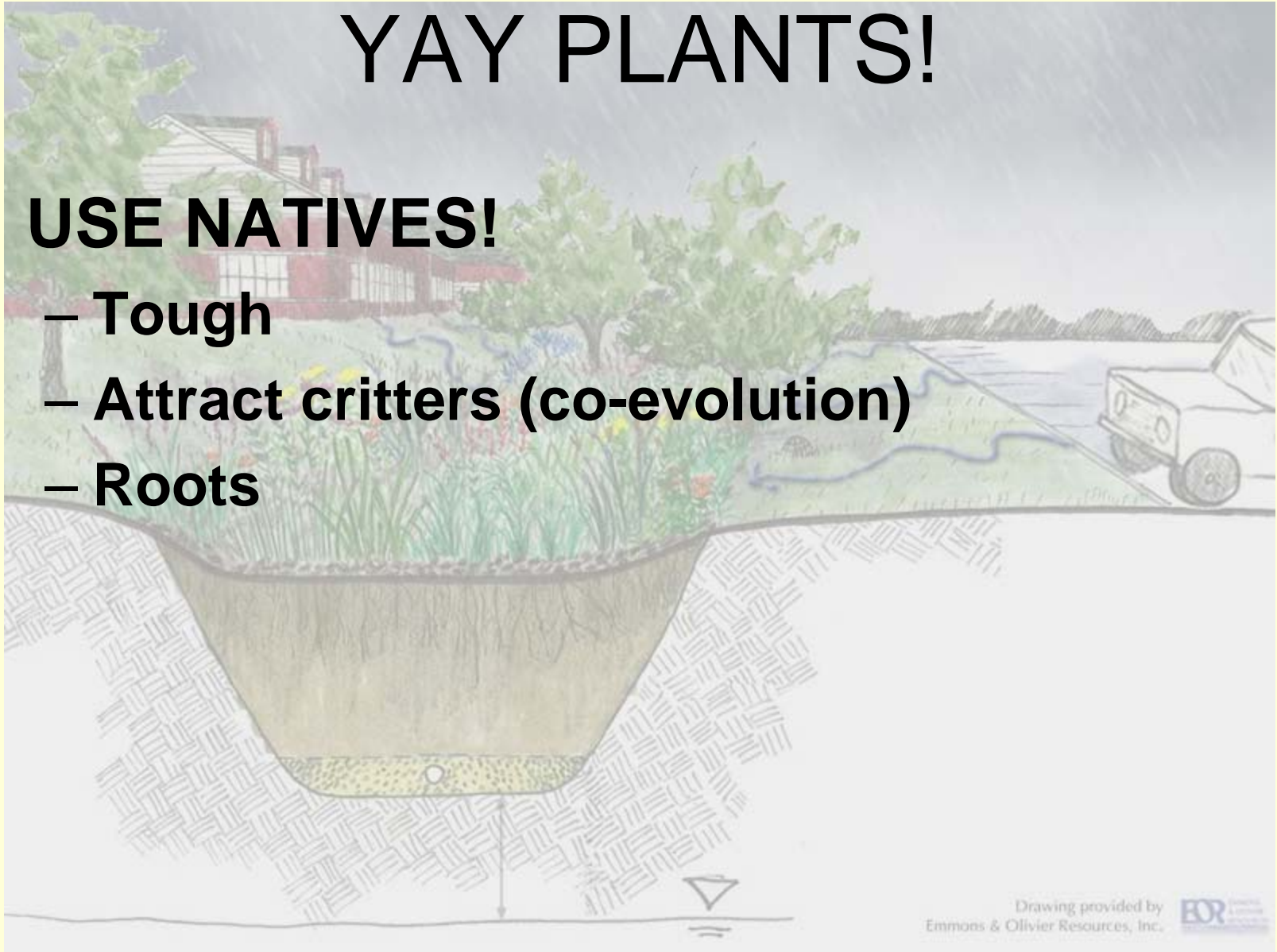
- **Prepare the site**
  - Could be simple-directing the water
  - Define borders
  - Remove turf
  - Dig and prepare/improve soil
  - Depth of 6 inches

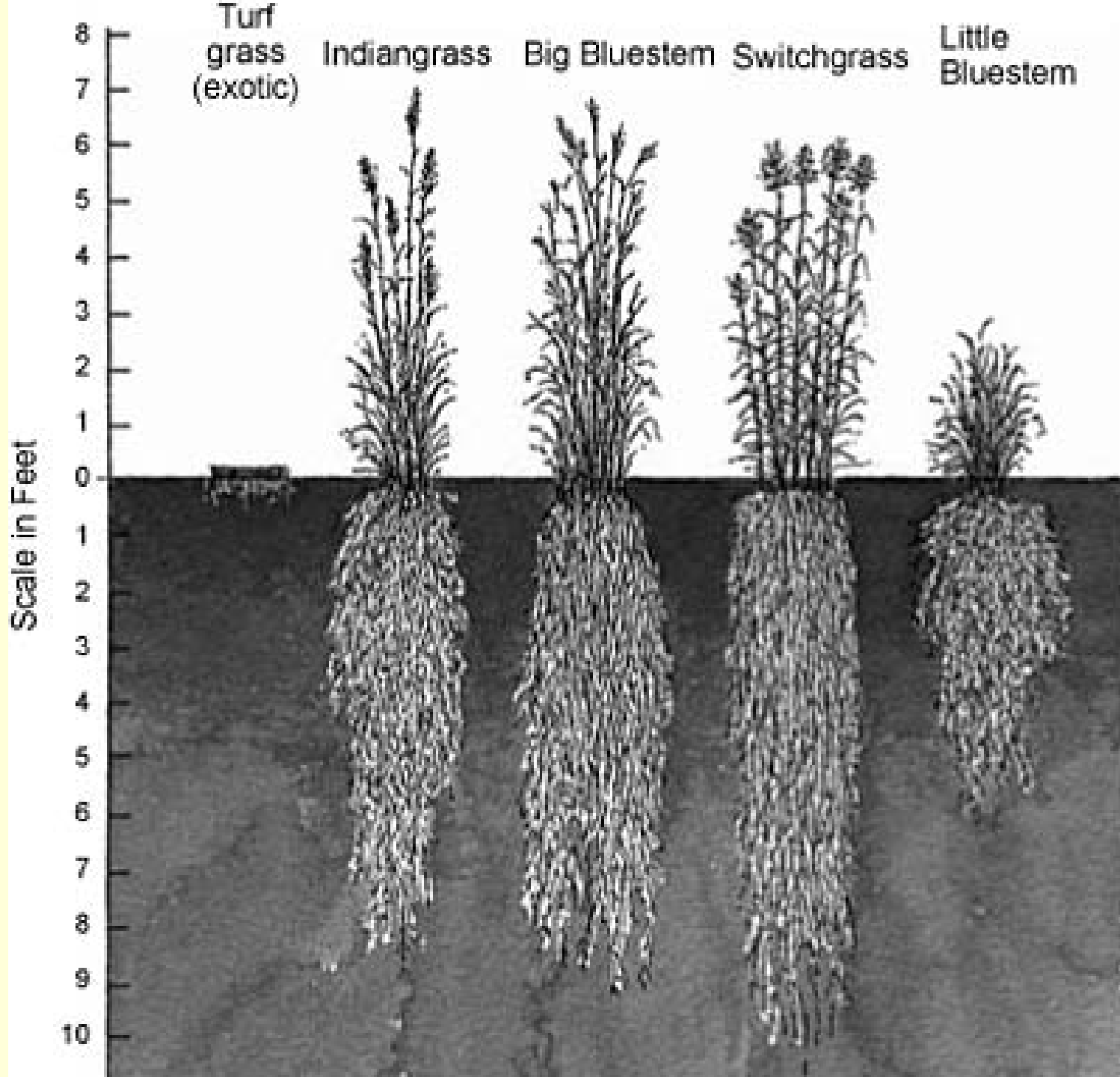




# YAY PLANTS!

- **USE NATIVES!**
  - Tough
  - Attract critters (co-evolution)
  - Roots





# Blue False Indigo

- Grows 3-5 ft. above soil
- **Roots can be 25 FEET below soil!**



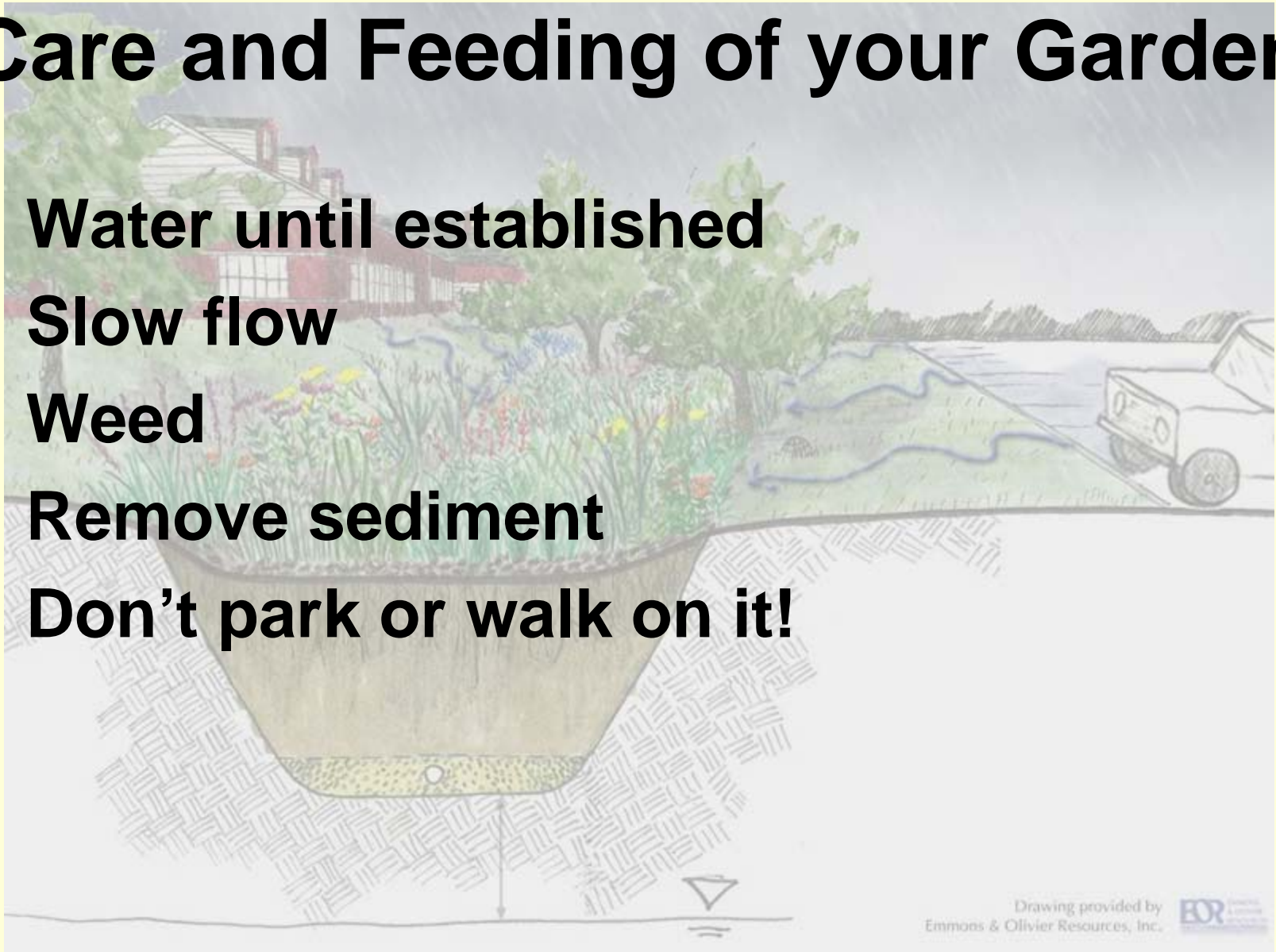
# Plant Your Garden

- **Zones**
- **Move unhappy plants**
- **Prepare for growth**
- **MULCH!**
- **Rocks to slow erosion at entrance**



# Care and Feeding of your Garden

- **Water until established**
- **Slow flow**
- **Weed**
- **Remove sediment**
- **Don't park or walk on it!**



# Free Rain Garden Designs!

- Rain Gardens of West Michigan

[http://www.raingardens.org/Garden\\_Designs.php](http://www.raingardens.org/Garden_Designs.php)



# Michigan Boulevard Rain Garden





# Dorothy Buell Memorial Visitor Center







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