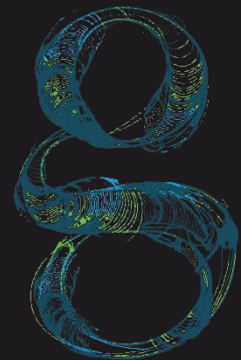


# *UM'S SEEKING SUSTAINABILITY LECTURE/ACTION SERIES:*

## *RESTORING AND SUSTAINING ECOSYSTEMS*

*Amy Sacry, Restoration Ecologist  
Geum Environmental Consulting, Inc.*





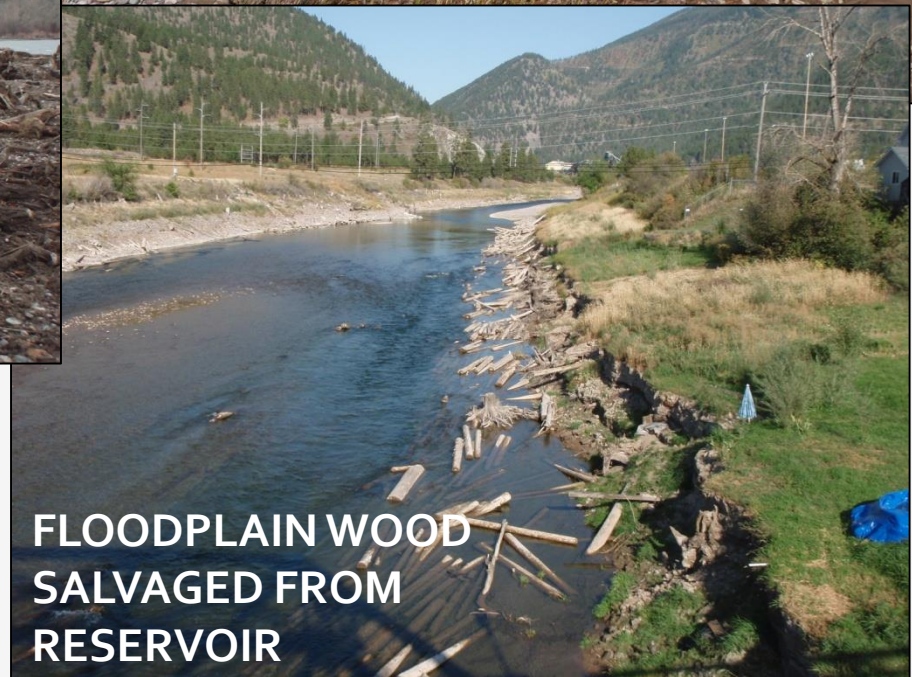
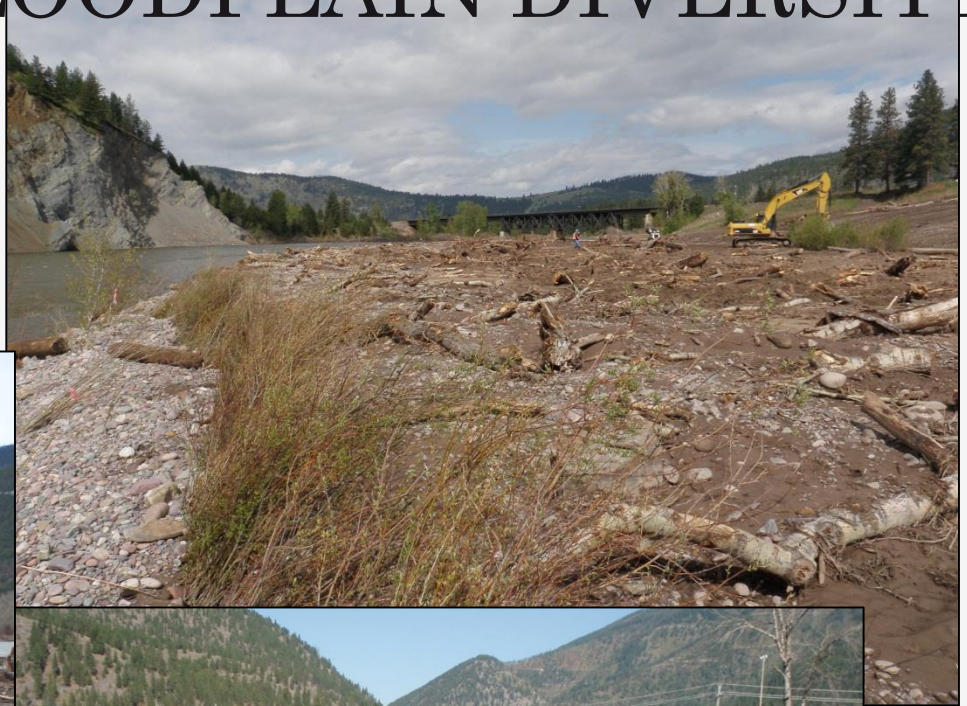


# CREATING FLOODPLAIN DIVERSITY





# CREATING FLOODPLAIN DIVERSITY



**FLOODPLAIN WOOD  
SALVAGED FROM  
RESERVOIR**

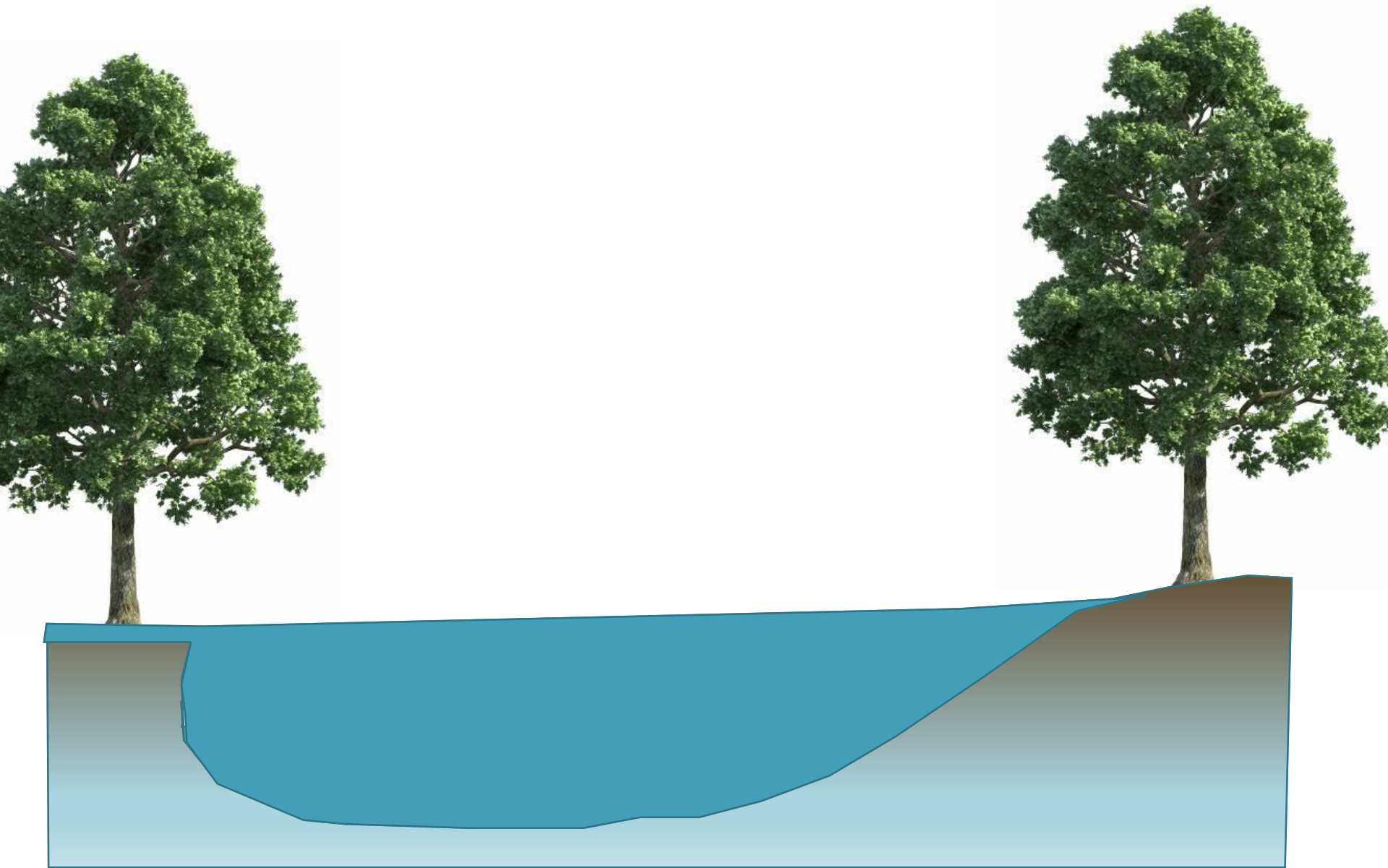


**RELY ON NATURAL  
PROCESSES TO DO THE  
WORK**

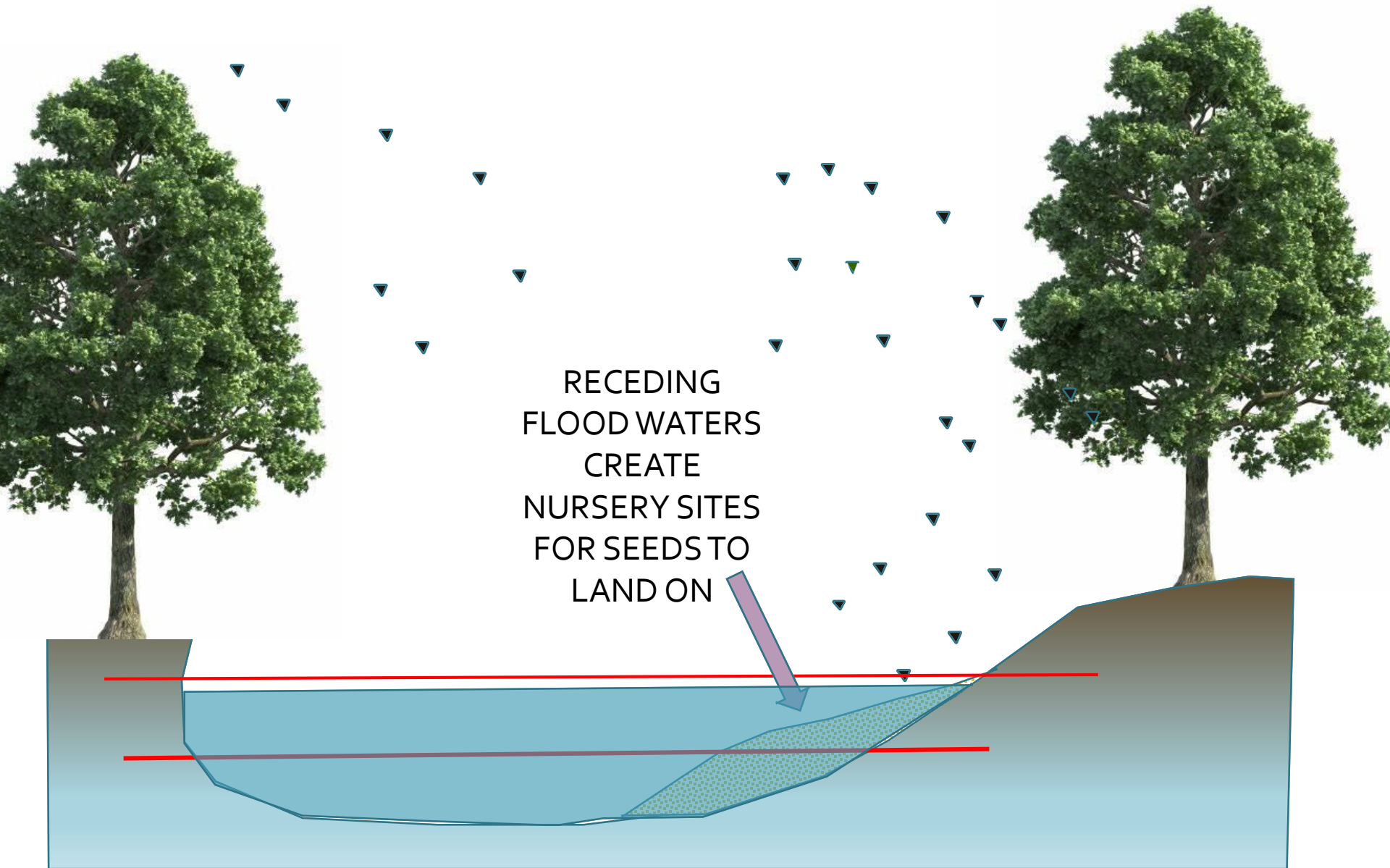




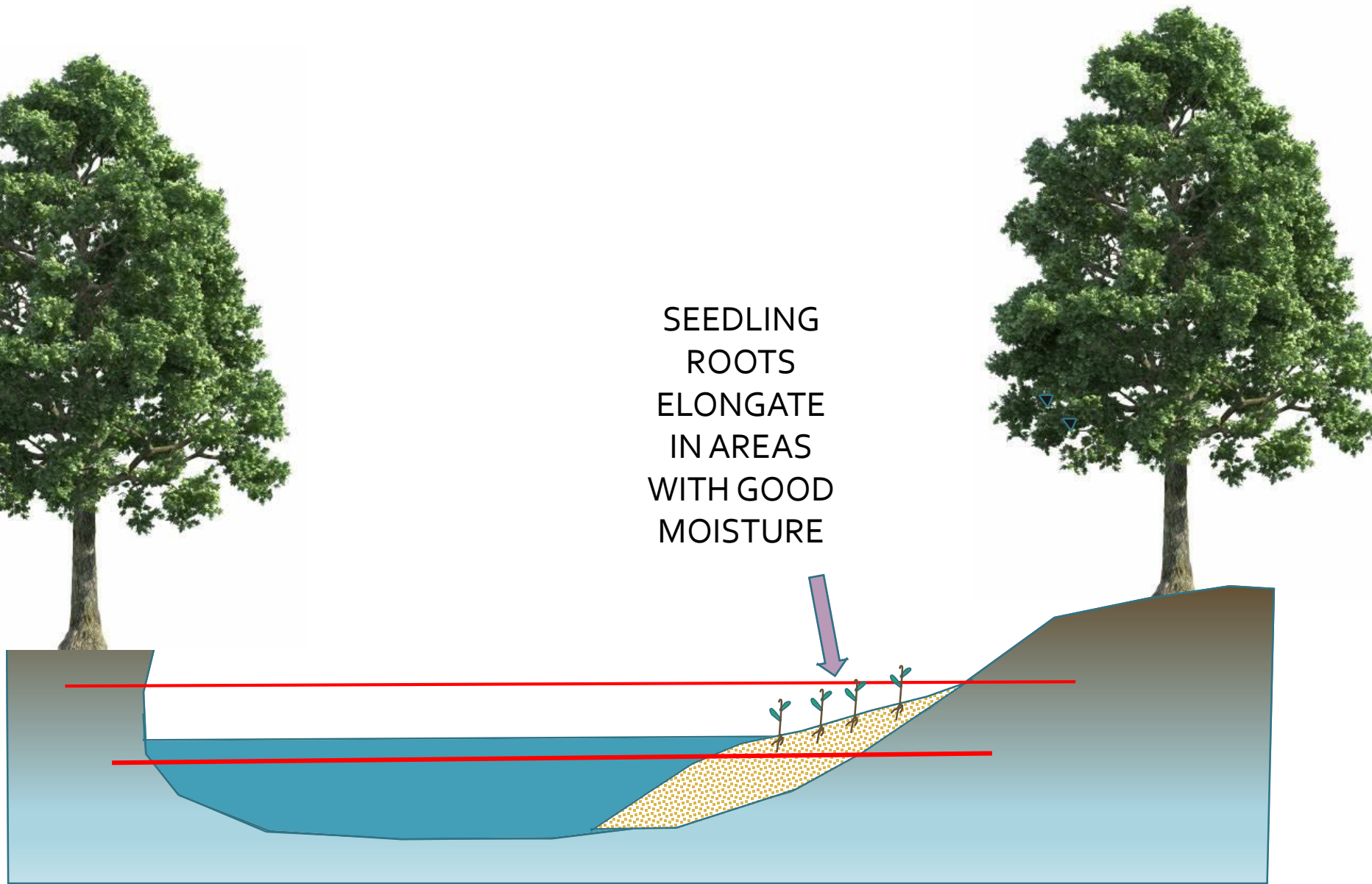
# RIPARIAN PLANT COMMUNITY INITIATION & SUCCESSION



# RIPARIAN PLANT COMMUNITY INITIATION & SUCCESSION

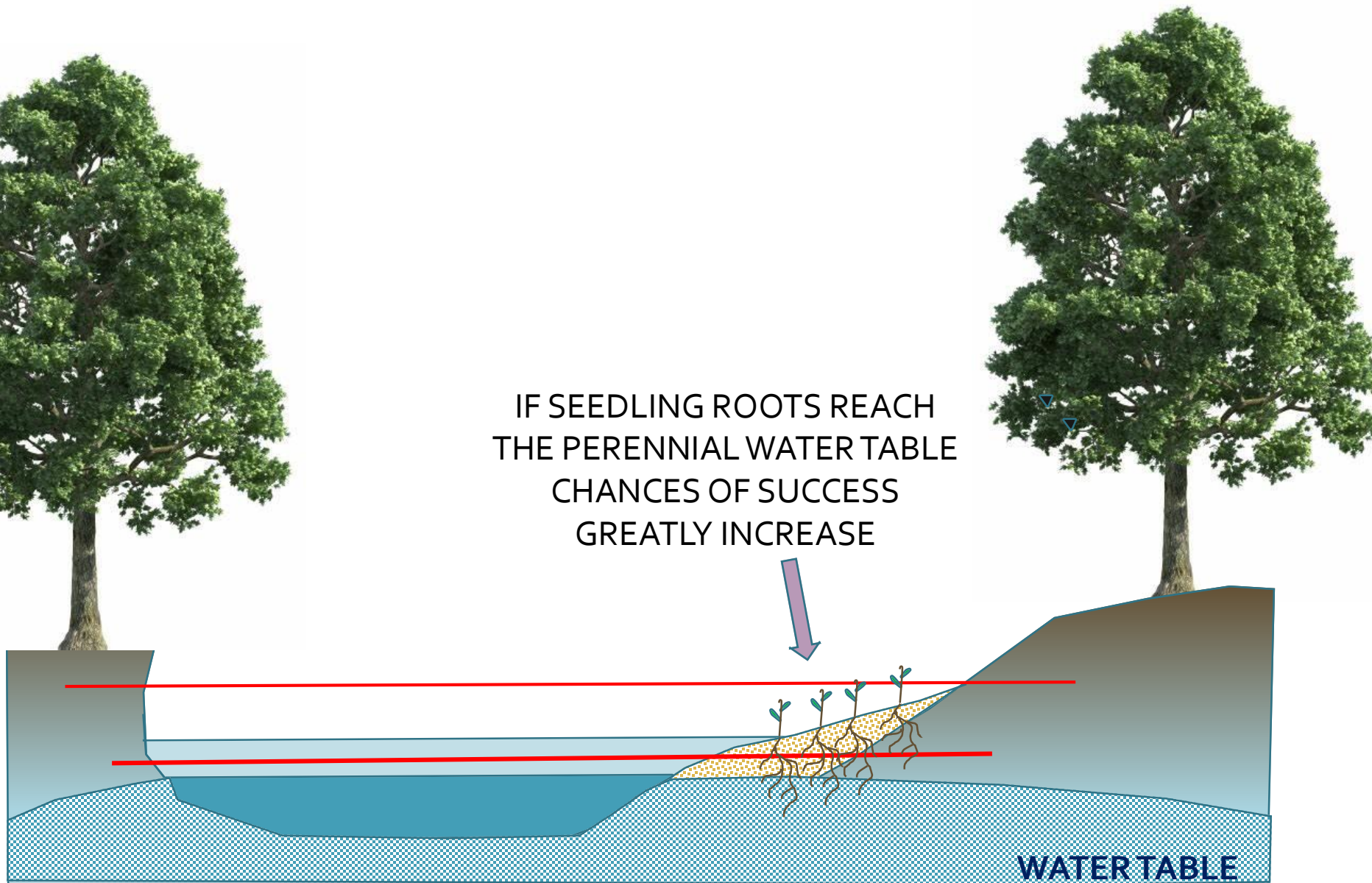


# RIPARIAN PLANT COMMUNITY INITIATION & SUCCESSION

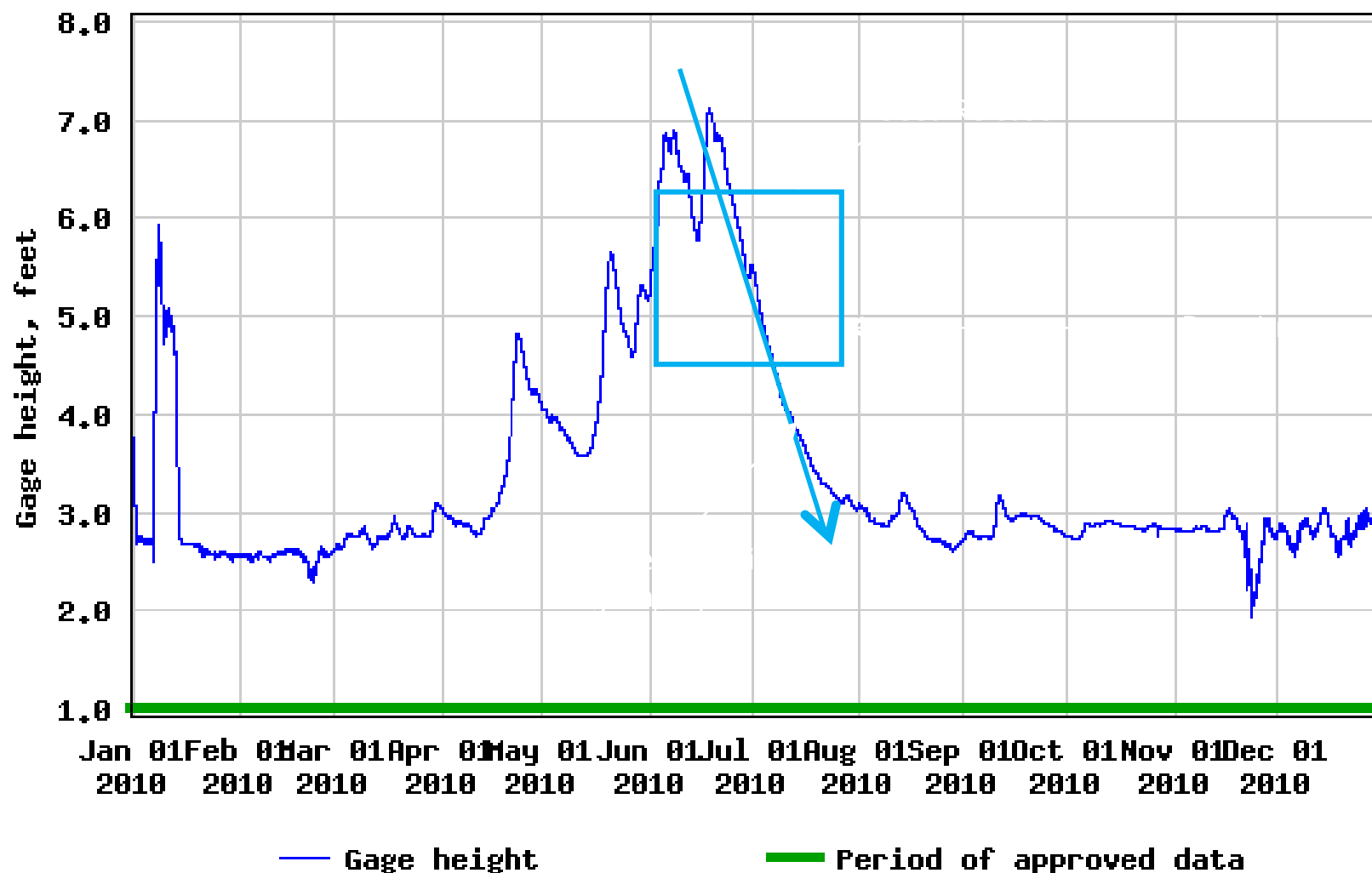




# RIPARIAN PLANT COMMUNITY INITIATION & SUCCESSION



## USGS 12340500 Clark Fork above Missoula MT



2010 Hydrograph of the Clark Fork River with  
COTTONWOOD RECRUITMENT BOX MODEL (Rood 1998)







## Observed Recruitment Elevation & Exposed Alluvium

*(Existing Condition showing most suitable surfaces for cottonwood recruitment)*



## Observed Recruitment Elevation & Exposed Alluvium

*(Design Condition showing maximized surfaces for cottonwood recruitment)*







10/24/2012





**Work with natural  
processes to create  
resilient, self-sustaining  
floodplains**





**UNDERSTANDING ECOLOGICAL  
POTENTIAL IS KEY TO  
RESTORING SELF-SUSTAINING  
ECOSYSTEMS**



Centennial Valley, Montana







# MIDDLE CREEK ABANDONED FLOODPLAIN RECONNECTION

Reactivated floodplain  
distributary channels  
and abandoned beaver  
complex – floodplain  
width 300+ feet

Plug

6-ft deep incised  
channel – floodplain  
width 20 feet







# STAGE 0 RE-SET MCKENZIE RIVER



**BEFORE**

