Woody Plants for Riparian Buffers Come to the Bay

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Riparian Buffers

- Riparian buffers are natural vegetative filters located between upland landscapes and waterways.
- NOT ONLY ADJACENT TO WATERWAYS, Suburbia increasing more impervious area.
- Most Riparian deals with rural open areas , now expand idea to urban areas for more infiltration and potential increased business opportunity.

- Benefit flood control

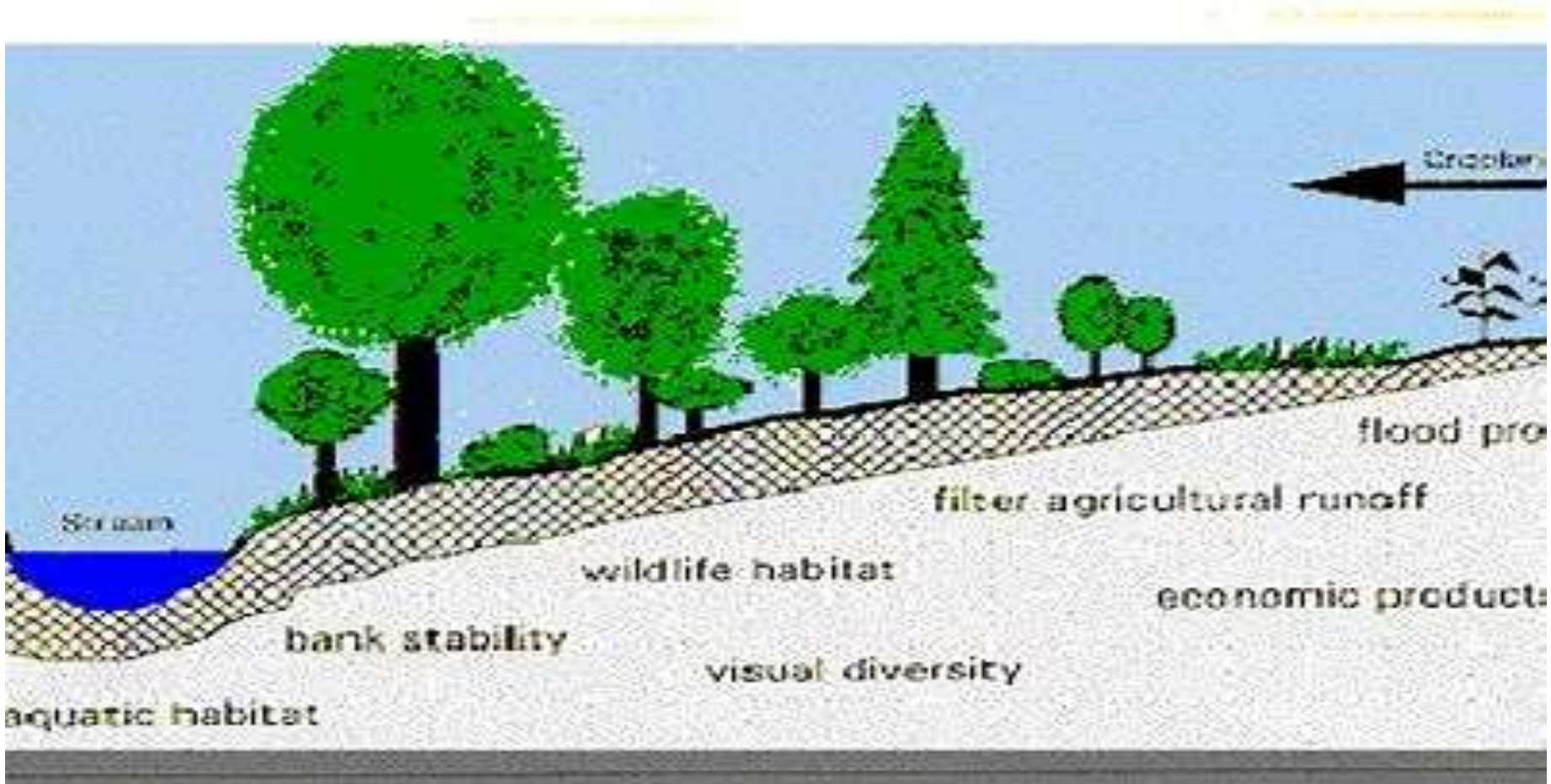
- Increase ground water recharge
- Reduce erosion, increase shore stabilization
- Stream temperature stabilization
- Pollution trapping sediment and chemical

Non Point Source

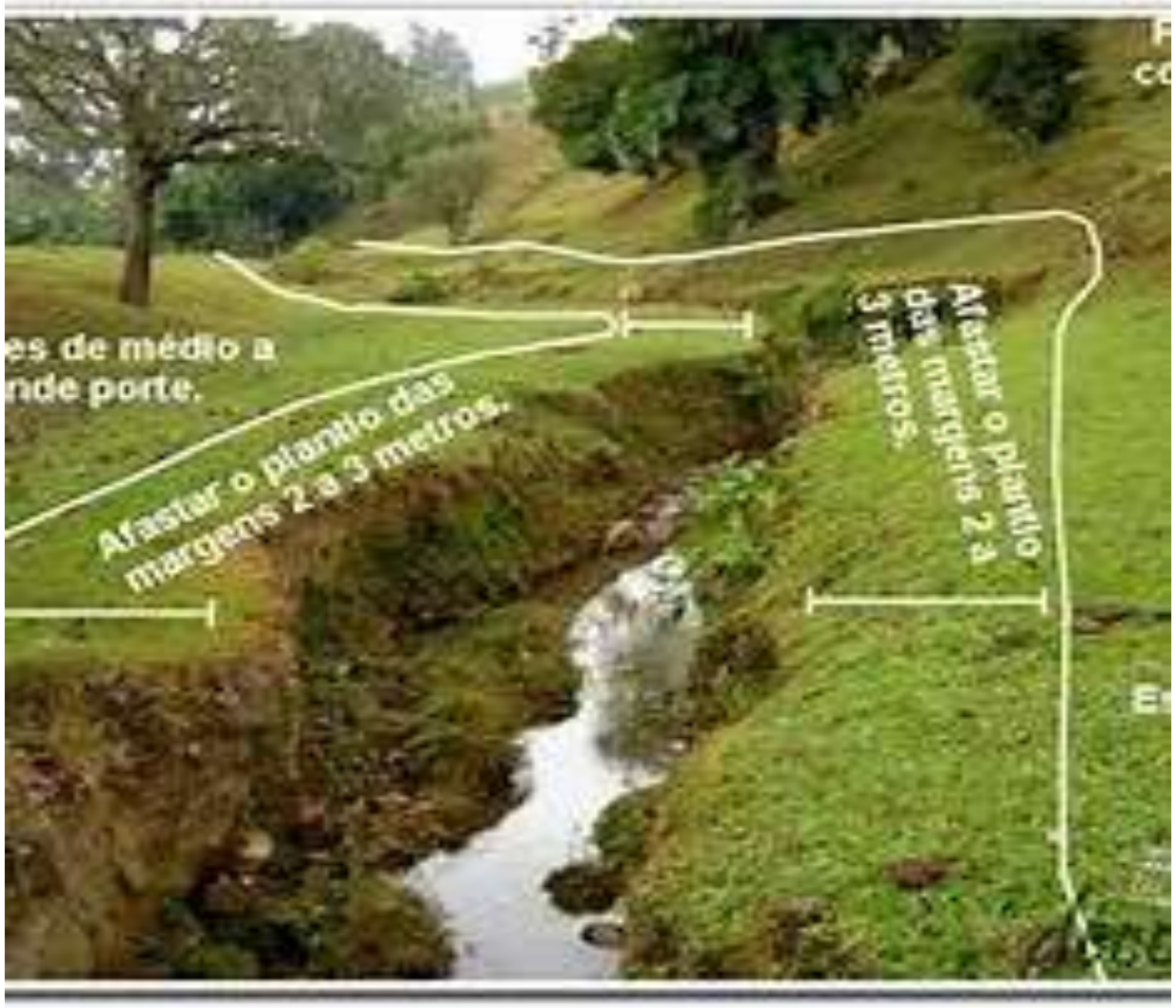
Natural Buffers
Natives and Invasives Fill the Buffer

Slope and Vegetation

Diagram of Riparian Buffer
Width of Buffer Important



Slope Grading 3:1 33.5%
Before work, Check with Soil Water District



Urban Use of Riparian Buffers
This Is Non-Point Many Areas In Urban Site

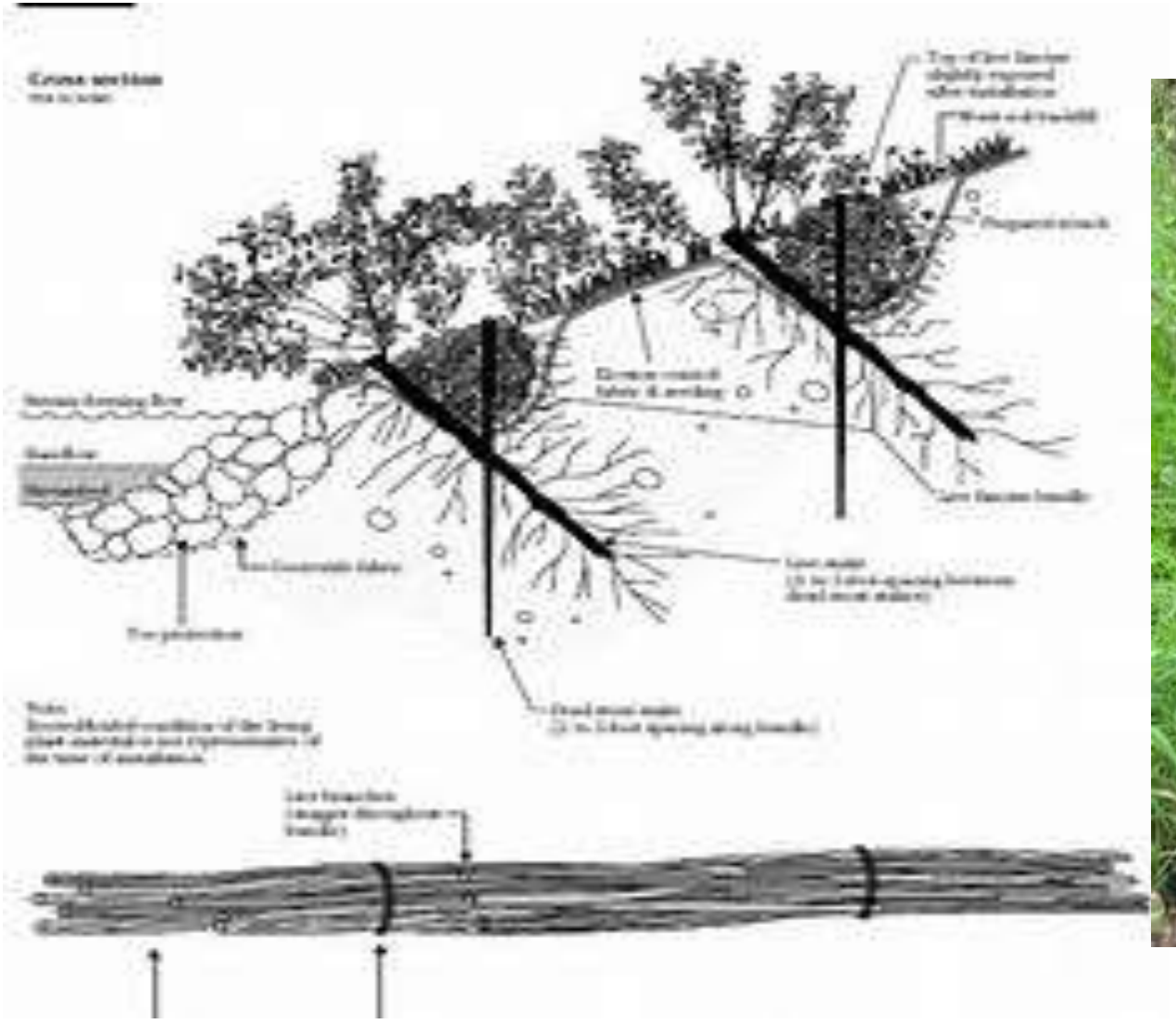
Erosion Carries Soil with Nutrient Ions

Plants For Riparian Buffers
Right Plant for the Site

- Natural Establishment, Let Nature Run its course. Cheapest way. Allow natives to grow up in the area, no introduced . Natives allow more beneficial insects to thrive. Natural Succession.
- Invasives need to be removed, Invasives will take over if not removed. This is labor intensive.

- Herbaceous Plants, (non woody), low growing that trap sediment and slow water velocity and flower and harbor insects.
- Shrubs, Woody plants , flowering add aesthetics, aid beneficial.
- Trees, Shade the area water, 80% infiltration, harbor vertebrates and invertebrates.
- Check with soil/water dist. For plant suggestions, or select those from area.

Live Stakes :Inexpensive Way to Revegetate



Tree Shelters Larger Plants and Costly

Temporary Buffer Would Help
The Impervious Surfaces Lead to Waterway

Engineers Riparian Buffer

Run Off Coefficients of Water

- Roof ,75-95% of rain run off
- Paved Area, 70 -90% run off
- Turf, compacted 70% run off, uncompacted 30% run off
- Wooded /trees 30% run off, increased flow through
- Formula for Gallons from a rain event.
- Surface area in sq.’ X coefficient X inch of rain X .083 (1/12 of 1ft.) = cubic of water X 7.48 (gal /water weight) = Gals of rain in area.
- 15’x30’ cement patio, 450sq.’ with 1” rain 90% coefficient
- 450sq’x.90x.083 = 33.61 cub ft. of water x 7.48 (gal weight) = 251.4 gals of water from 1” rain on a 15x30 surface.

Why Know Amount of Water

- Proper pipe sizing for down spouts
- Proper size of rain garden
- Impress on customer the amount of water you are dealing with
- Better to over build because of intensity and duration of current rain events.
- Try to reduce impervious surfaces.

Buffer Benefits

- Improve stability/ reduce erosion
- Add aesthetics to the property, and value
- Once established reduce maintenance
- Intercept pollutants (soil, fertilizers, petroleum products etc)
- Create habitat for various Fauna/Flora
- Collectively aid in Bay clean up which helps Recreation, Waterman, and the Health of Bay.
- Everything in Nature is INTER-DEPENTANT we are in a closed system

Questions / Discussion

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