

River Science: What is it?

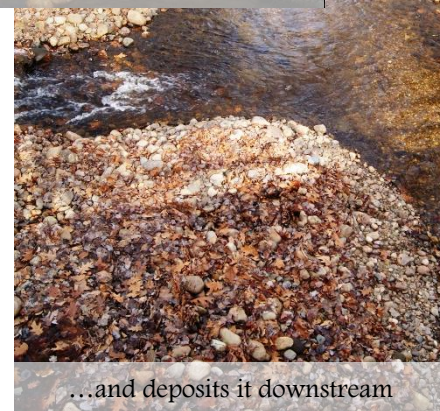
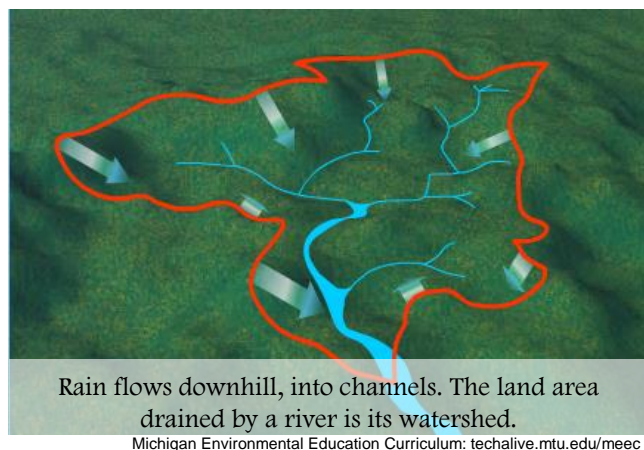
Large-scale thinking that helps those
most vulnerable to flood impacts.



Rivers are much more than just water. They are sources of energy, food, drinking water, and irrigation. They are spaces for sports and recreation. They are ecosystems that connect mountains to oceans. River science recognizes the complexity of rivers, and strives to understand and quantify their behaviors.

Flowing Earth

Water can pick up, carry, and deposit materials. There is a balance between the flow of water and of sediment and materials through a river system. Changes made to any one section may impact others. Removing logs from a channel allows water to flow faster, increasing erosion risk downstream. Building an undersized bridge slows water, increasing flood risk upstream. Planting an upland forest lowers stormwater height throughout a region.



How wide should a bridge be to prevent it from being damaged in a storm? Will armoring a bank with large boulders affect farmland downstream? How can we protect property and public safety while keeping rivers clean, healthy, and full of life? Approaching a river as a series of connected processes helps answer questions about the impacts and effectiveness of management decisions, and guides communities towards resilient, affordable, long-lasting river management solutions.