

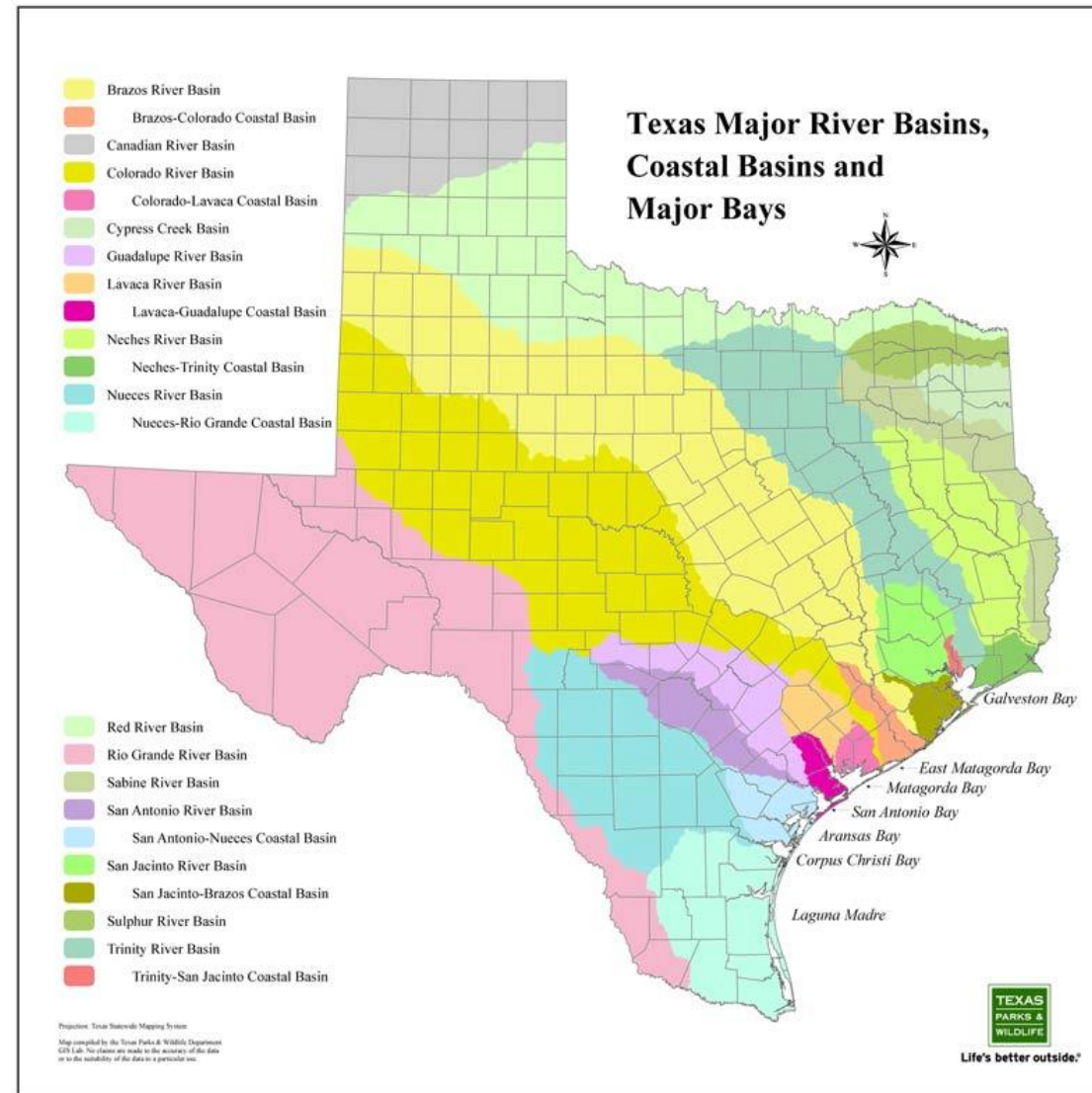
Protecting water resources from the impact of urbanization

Fouad H. Jaber, PhD, PE
Professor and Extension Specialist
Biological and Agricultural Engineering
Texas A&M AgriLife Extension
Dallas Research and Extension Center

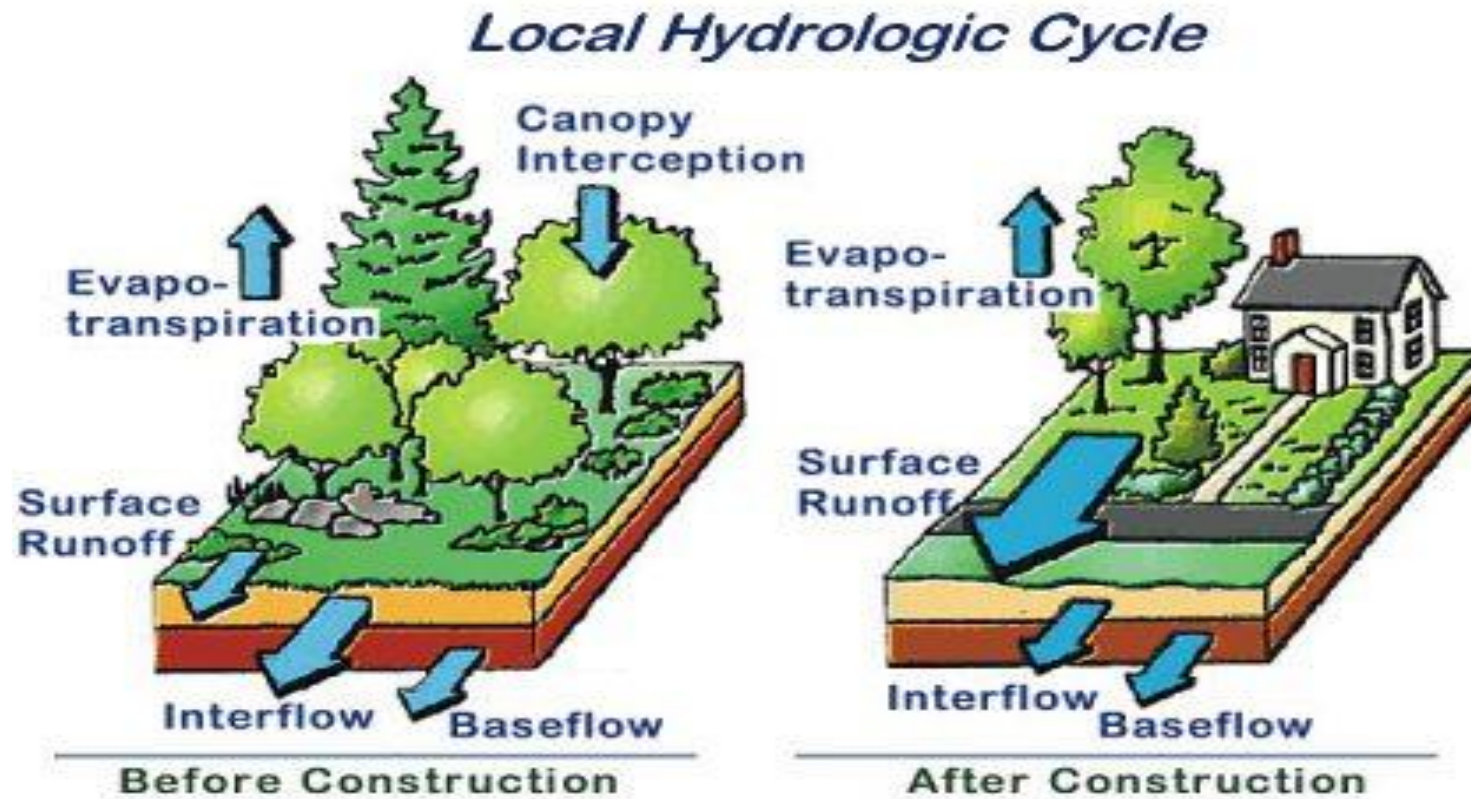
Water on Earth: a Cycle



We all live in a watershed



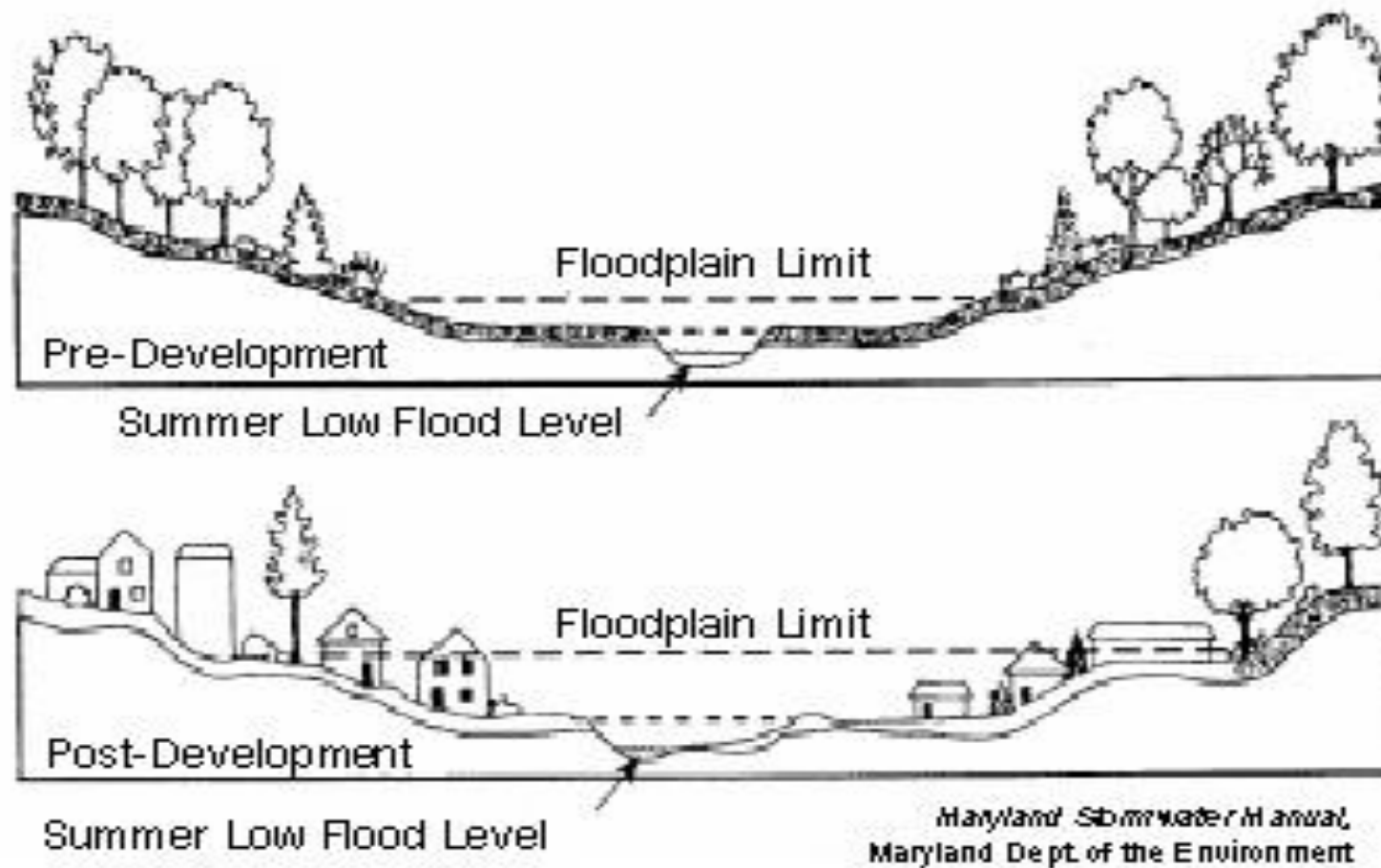
Urban vs. Natural

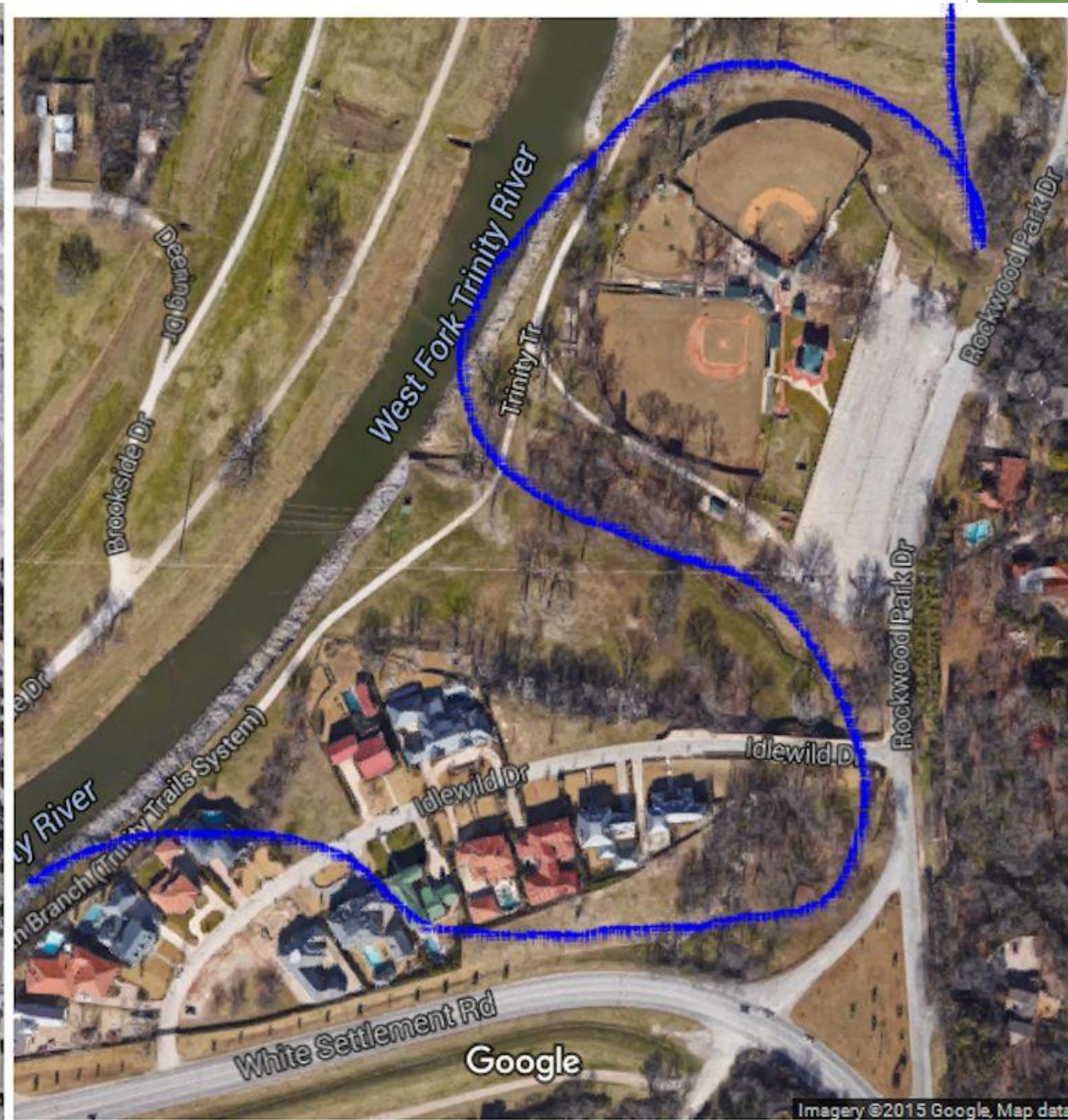


Why is Stormwater a Concern?



Why is Stormwater a Concern?





Eutrophication

► Impacts due to urbanization:

Impact to aquatic habitat:

Degradation of habitat structure, loss of pool-riffle structure, reduction in base flow, increased stream temperature, and decline in abundance and biodiversity.



Fish kill at Lake Granbury.

Green Stormwater Infrastructure

- ▶ Rain garden-bioretention areas
- ▶ Porous pavements
- ▶ Green roofs
- ▶ Rainwater harvesting



Home Rain Garden



Bioretention in Parking Lot



Bioretention in Road Median



“We Bring Engi



TAMU LID(c)



Constructed Wetlands

- ▶ Constructed wetlands are best practices to reduce effects of urbanization on stormwater
- ▶ Stormwater wetlands are designed to improve water quality, improve flood control, enhance wildlife habitat, and provide education and recreation.





Fouad H. Jaber, PhD, PE

Professor and Extension Specialist
Biological and Agricultural Engineering
Texas A&M AgriLife Extension
Dallas Research and Extension Center
f-jaber@tamu.edu
972-952-9672



<https://agrilife.org/lid/>

www.facebook.com/agrilifeecoeng/