

Nature-Based Solutions to Address Climate Change

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Guiding Ecological Concepts

- Dry soil cannot receive and hold water
- Moist soil is better able to moderate floods
- Water in the soil is essential for plant and soil microbiome health
- Plant and soil microbiome diversity determine soil health, structure and permeability, creating the **Soil Carbon Sponge**

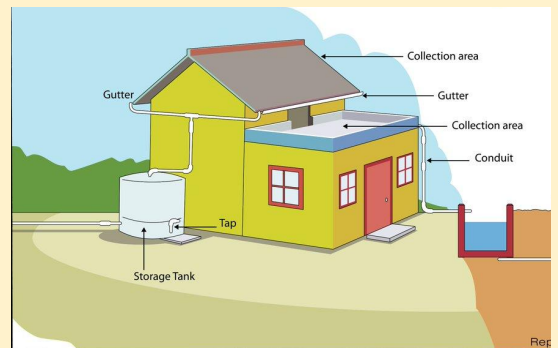
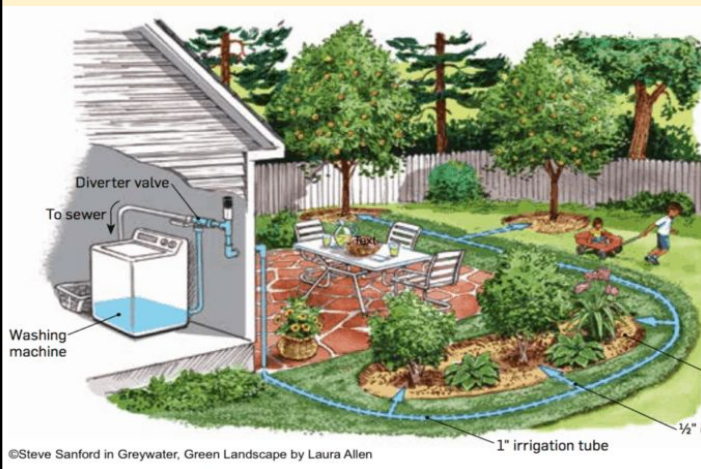


- Optimize onsite water resources
- Use small earthworks
- Plant plant communities

Home & Community Scale Nature-Based Strategies

- Optimize onsite water resources
 - Direct **greywater** (laundry/shower/bath) to landscape
 - Direct **roof rainwater** into earthworks or tanks
 - Maintain soil moisture
 - Support plant community health, especially trees

Integrate Greywater and Roof Water in the Landscape



Home & Community Scale Nature-Based Strategies

- Use small earthworks
 - Create **infiltration basins** and swales that hold rain and flood water
 - Direct floodwater with **berms, bioswales**
 - Reduce surface runoff and filter out pollutants
 - Increase deep soil water storage

Infiltration Basins and Swales

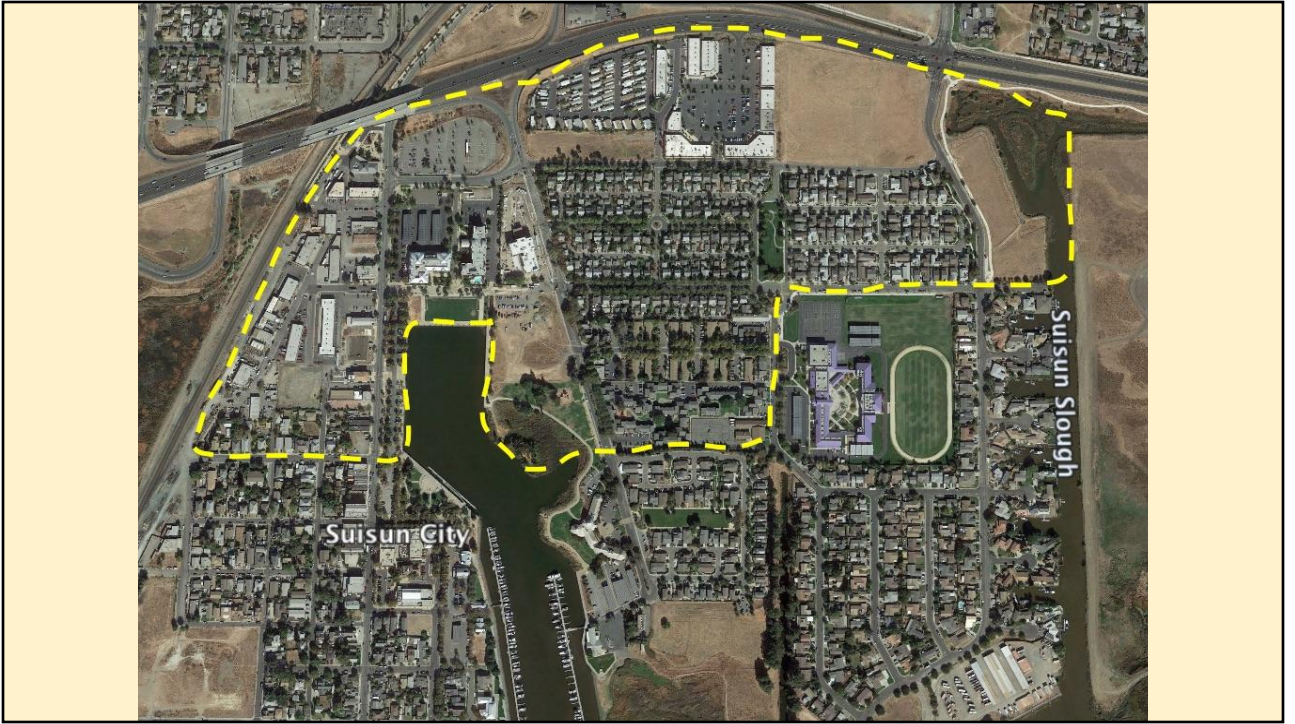


Home & Community Scale Nature-Based Strategies

- Plant plant communities
 - Feed the microbiome and create the **Soil Carbon Sponge**
 - Hold and protect soil from erosion from pounding rain, wind, flood water
 - Support native ecology; pollinators, birds, plants
 - Reduce surface temperature and evaporation

Plant Communities & the Soil Carbon Sponge





Amazing Local Resource

Recommended techniques and practices support the guiding ecological concepts and are based in regenerative and permaculture design practices.

To get a copy and get involved contact Emily Corwin at the Fairfield-Suisun Sewer District (FSSD) at

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SOLANO PERMITTEES' GREEN STORMWATER INFRASTRUCTURE



DESIGN GUIDEBOOK

Vital Cycles: Creating Personal & Planetary Resilience

Anne & Lydia are Vital Cycles. We do

- Permaculture (PDC) and Human Ecology Education
- Regenerative Landscape Design, Consultation and Installation
- Contact Us at www.vitalcyclespermaculture.com

