

Innovative Water Management for Commercial Landscaping

Landscape Professional Training
February 6, 2013





Potable Water



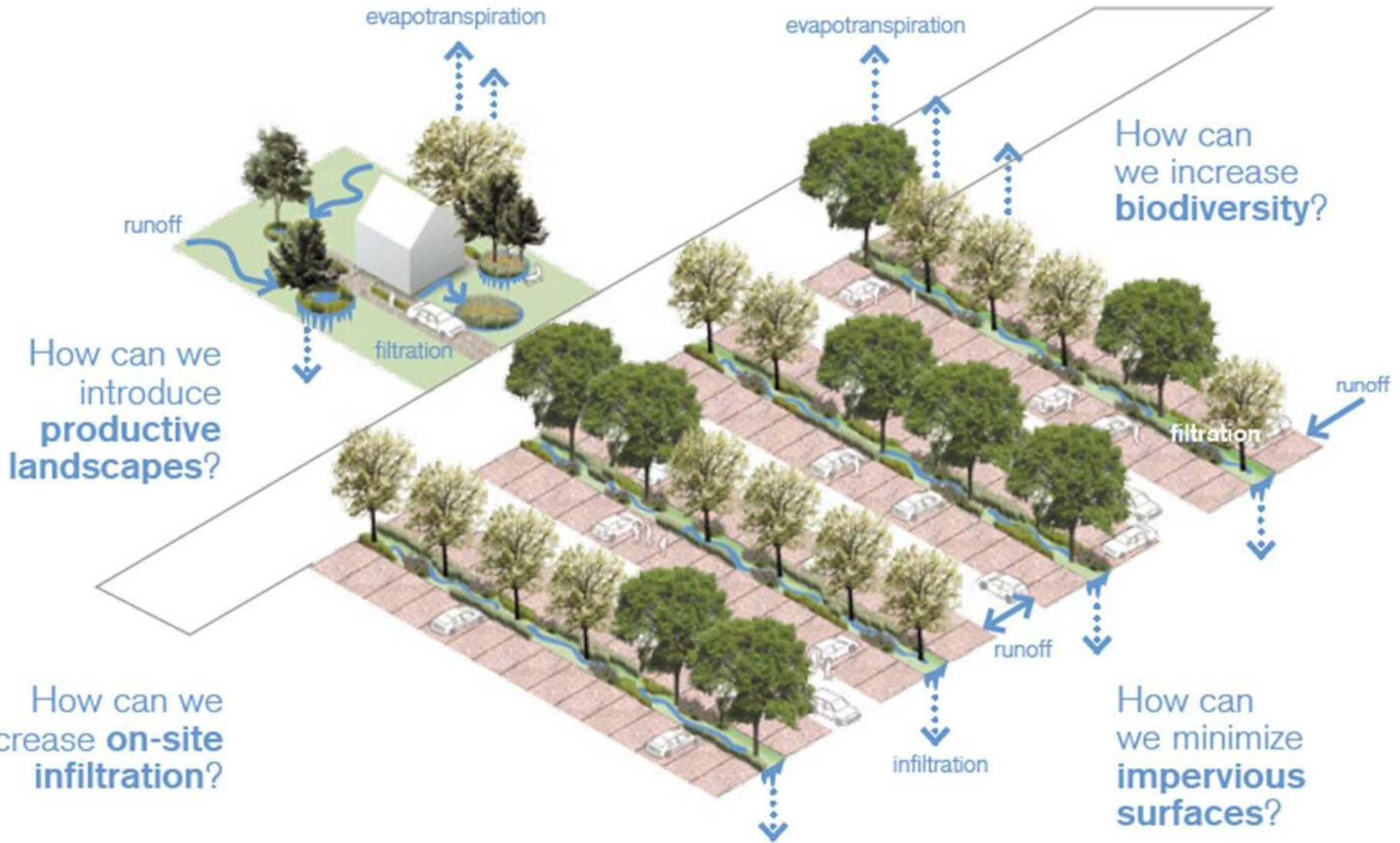
Stormwater

“...take a solution and divide it neatly into two problems.”
Wendell Berry

Conventional Approach



Low Impact Development Approach



atmospheric regulation

flow attenuation

soil formation
infiltration
erosion control

climate regulation

filtration
sediment retention
flow attenuation

Heifer International
Little Rock, Arkansas

Low Impact Development Approach

Source - Low Impact Development: a design manual for urban areas (University of Arkansas)

Innovative Water Management for Commercial Landscaping

- Adopted by Council on December 16, 2010
- Amended Chapter 25-2, Subchapter C, Article 9 of Land Development Code (*Landscaping*)

- Goals of Ordinance:

Use rainwater wisely

Conserve potable water

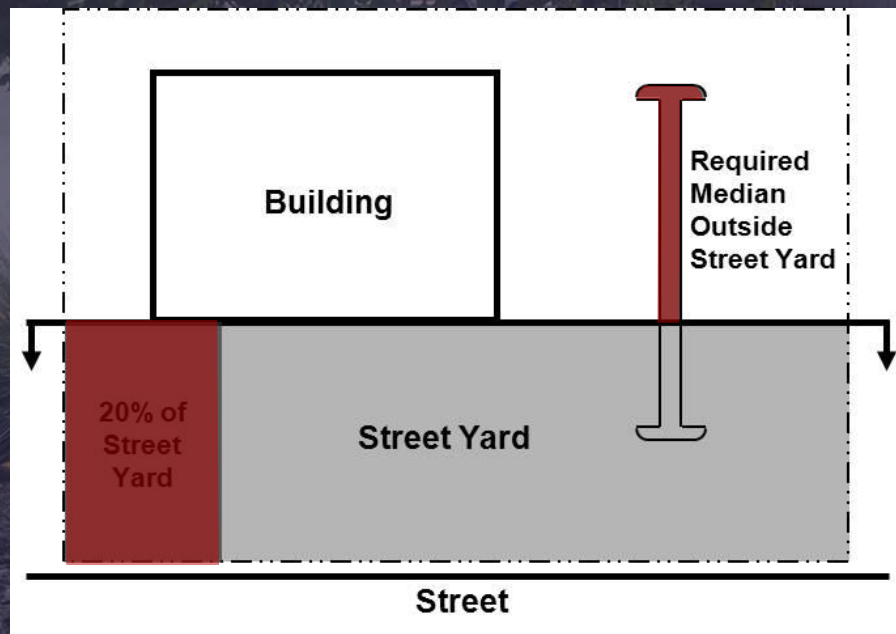
Help improve water quality

Ordinance Summary

- Commercial stormwater runoff must be directed to 50 percent of required landscaped areas
- Can use non-required landscaping as long as area is equivalent to 50 percent of required area
- Landscaped areas can be—but are not required to be—designed to achieve water quality credit
- Undisturbed natural areas and undisturbed existing trees can also be counted toward the requirement

Required Landscape Area

For the purposes of this ordinance, Required Landscaped Area equals 20 percent of the street yard plus any islands, medians, & peninsulas required outside of the street yard



50 percent of
the Required
Landscaped Area

- Street Yard
- Required Landscaped Area Calculation

Design: Conveyance



Design: Other Requirements

- Minimum drainage area shall be a ratio of 1 square foot of drainage to 2 square feet of landscaped area (1:2)
- Site plan must show as part of the landscaping plan the drainage area(s) used to irrigate landscaping with stormwater
- Stormwater from “hot spot” land uses (e.g., gas stations) and parking lots over the Recharge Zone may not be used unless landscape doubles as a water quality control

Design: Other Considerations

- May require an impermeable barrier if adjacent to buildings, roadways, and parking lots to prevent damage from infiltration (at discretion of design engineer)
- Must still be protected by curbs or equivalent barriers if adjacent to vehicular use areas
- Should be designed to avoid the extended ponding of stagnant water
- Should account for pedestrian safety (e.g., gentle side slopes, protective barriers)

Undisturbed Vegetation Credit

- Undisturbed natural areas or undisturbed existing trees can count toward the 50 percent requirement
- Stormwater does not have to be directed to these areas (although still encouraged)
- No potable water irrigation is allowed to receive credit



Supplemental Irrigation

- Irrigation systems required for all newly planted trees
- Irrigation systems are required for all other newly planted landscaping, unless certain conditions are met:
 - receiving stormwater runoff
 - drought tolerant plant palette
 - low foot-traffic areas
- Temporary irrigation required for two growing seasons if no permanent irrigation is provided

Example: LCRA Redbud Center



Example: Highland Mall



Example: St. Edwards University



Example: Burnet Road



Example: Payload Pass



Contact Information

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Questions?

Disconnected Downspout
Blarney Castle, Ireland