

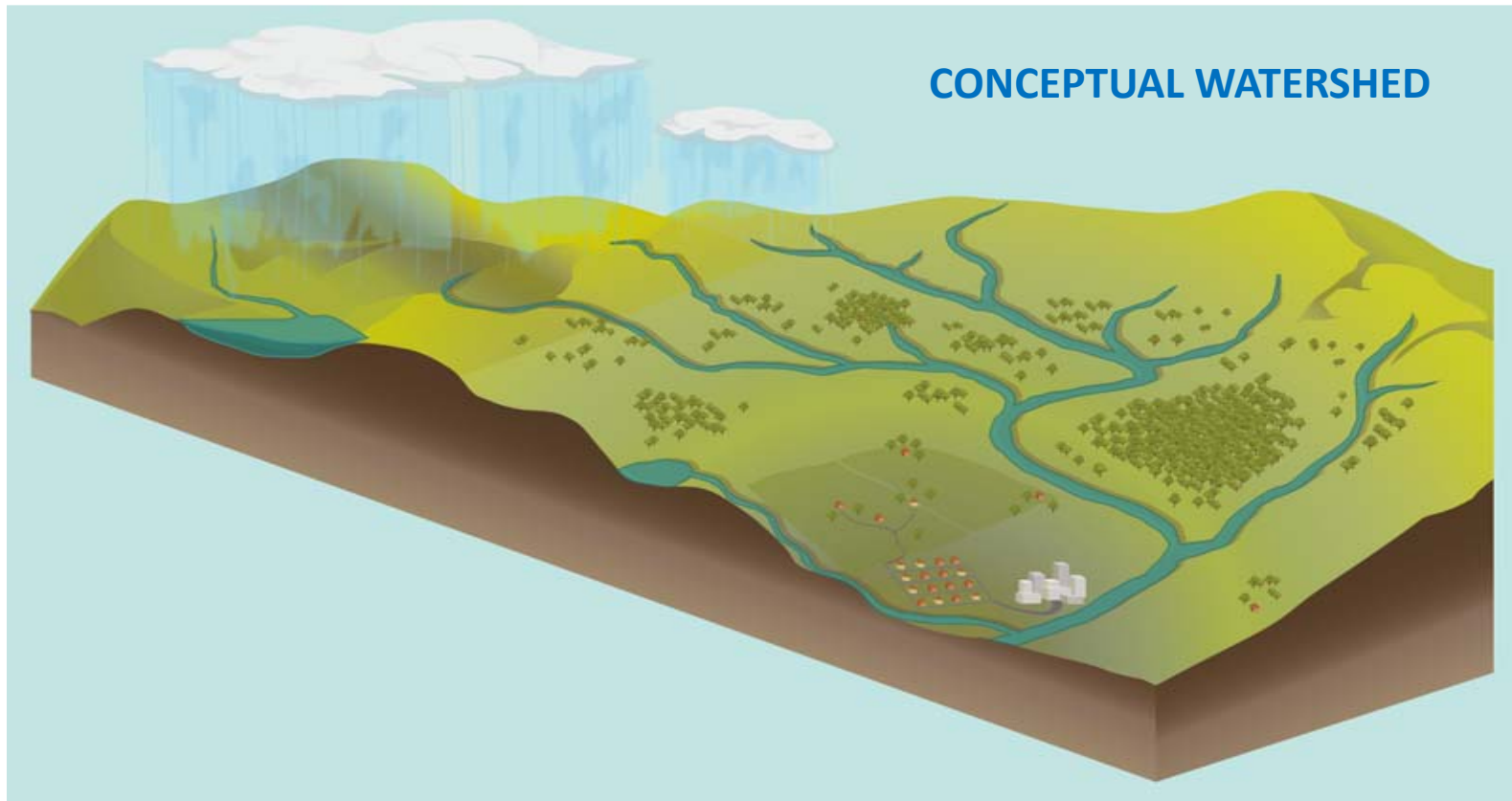
Stormwater Control Measures (SCMs)

What are they? Why do we build them? How do they affect me? What can we do with them?

Agenda

- Introduction: Why do we manage stormwater?
- SCM types
- SCM Inspection
- SCM Maintenance Requirements
- What can you do with SCMs
- Opportunities to partner in the future?
- Question and answer

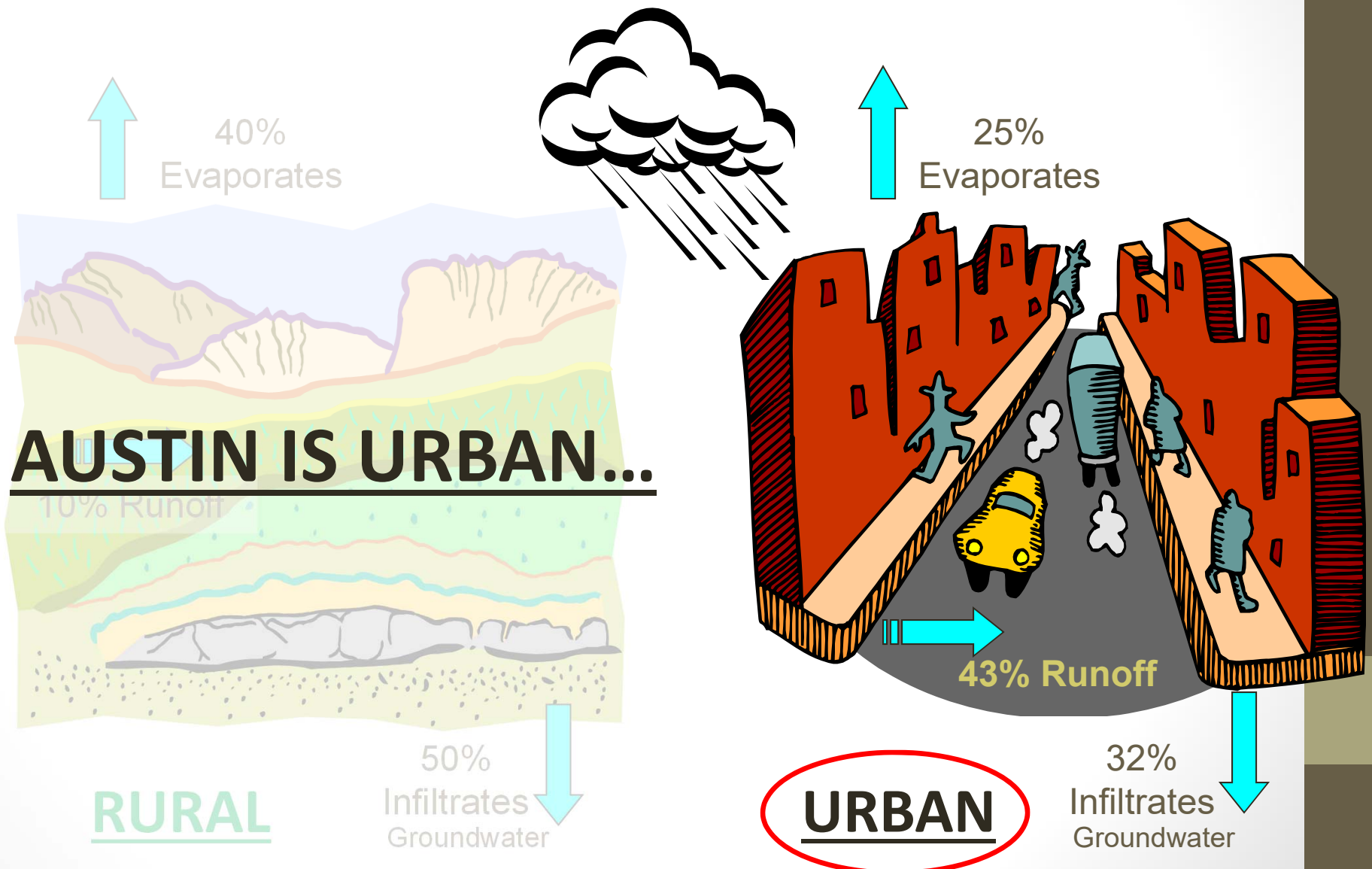
Introduction



WHAT IS URBANIZATION?

- Paving of land surfaces via construction of roadways, parking lots, buildings...
- When rain falls, less water can soak into the ground
- More water runs off to fill storm drains, creeks and rivers with **more flow, faster**

Introduction



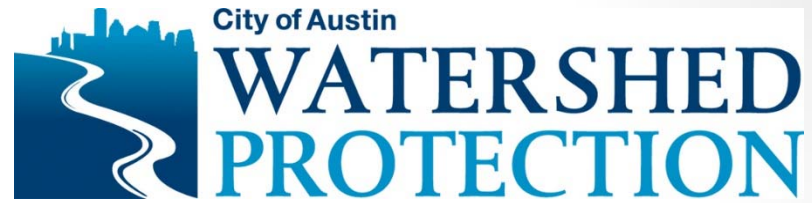
Introduction



Flooding

Example: Shoal Creek near 15th Street

Introduction

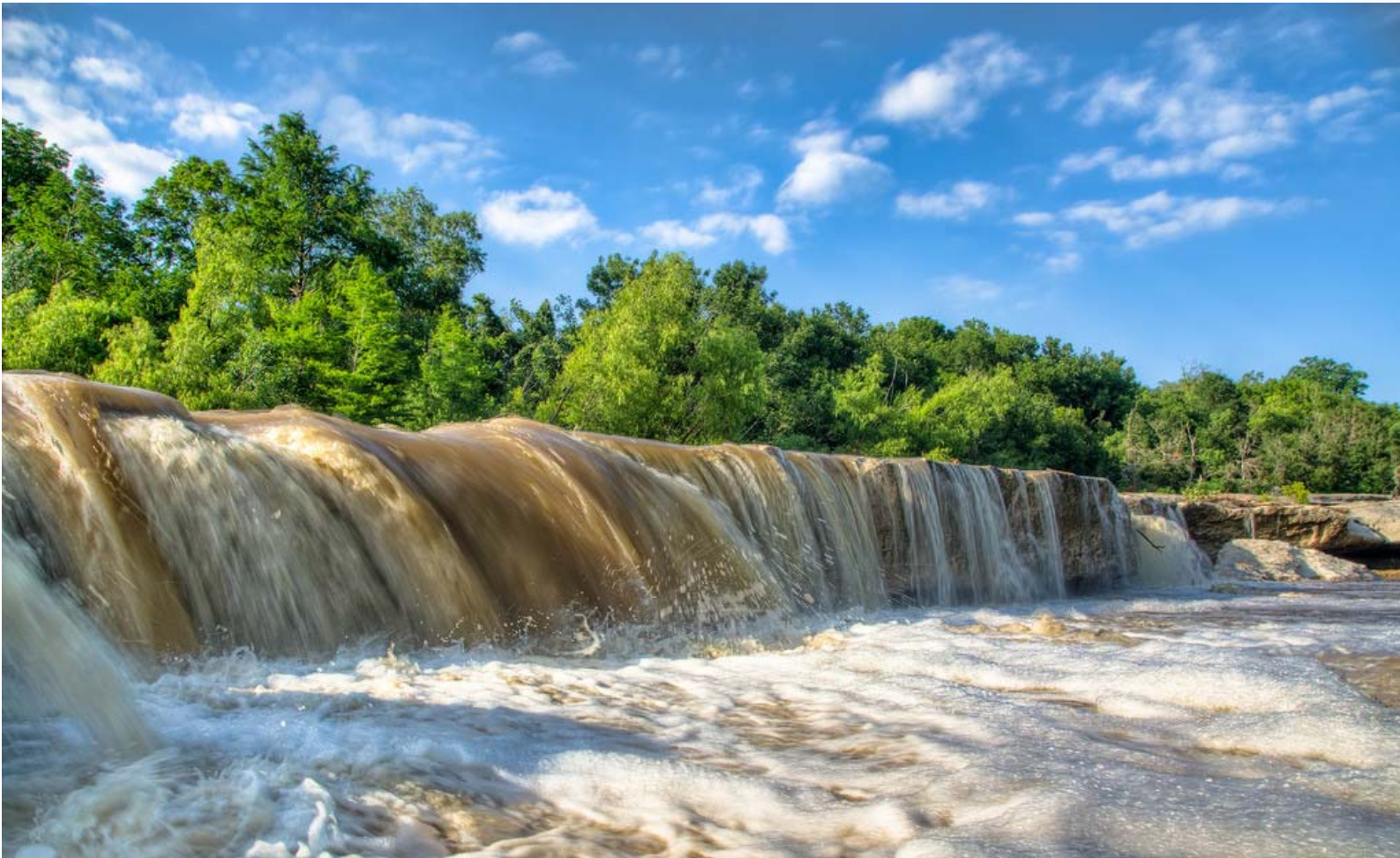
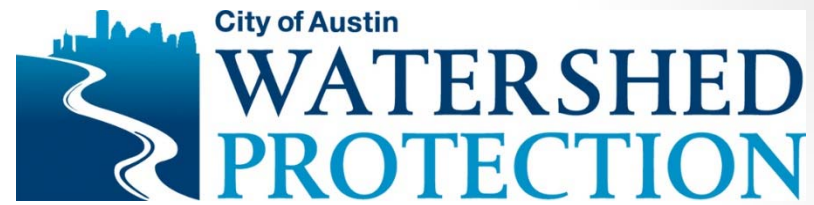


Erosion



Examples: Fort Branch Creek, Boggy Creek

Introduction



Water Quality

Example: McKinney Falls (Williamson Creek)

SCM Types

- Flood Detention
 - This type of control provides flood control. It detains stormwater for a short amount of time and then slowly releases it downstream.

Flood Detention



SCM Types

- Sedimentation Filtration
 - This type of control has a sedimentation basin that captures large sediment and debris before stormwater moves to the filtration basin for additional removal of fine sediment. Do not till sand filters. Can be sand or planted filtration media (biofilter).

Sedimentation Filtration



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Sedimentation Filtration



Sedimentation Filtration



SCM Types

- Wet Pond
 - This type of control has a permanent pool of water. It is designed to capture and hold stormwater runoff to allow settling of suspended solids and removal of pollutants through plant uptake. These controls are not meant for recreational activities such as swimming and fishing.

Wet Pond



SCM Types

- Retention Irrigation
 - This type of control captures stormwater and redistributes it through an irrigation system over natural areas adjacent to the control to simulate natural infiltration with no runoff.

Retention Irrigation



SCM Types

- Rain Gardens
 - This type of control is a depressed garden designed to catch, infiltrate, and treat stormwater runoff through plant uptake of pollutants.

Rain Garden



SCM Types

- Vegetated Filter Strips
 - This type of control is a dedicated strip of planted or indigenous vegetation maintained to remove or mitigate the effects of pollutants such as sediment, nutrients, pesticides, and suspended solids.

Vegetated Filter Strip



Inspection

- Regular inspections are extremely important!
 - Ensure that stormwater controls function properly.
 - As well as looking unattractive, trash and debris clog the controls.
 - Accumulated sediment and excessive plant growth can create pooling and prevent water flow through the control.
 - Early detection can prevent more serious problems that could be very expensive to fix.
 - In general, controls should be inspected at least monthly and after rainfall events.

General Maintenance

- Mow vegetation that exceeds 18" in height to no less than 4".
 - Care should be taken that special plantings are not disturbed and are maintained as may be appropriate.
- Remove trash and debris regularly (once a month and after rain events).
- Remove sediment build-up, especially at inlet and outlet structures.
- Provide corrective maintenance when a control does not drain properly.
- Repair any deterioration or damage to concrete elements.
- Un-vegetated areas should be reseeded or sodded immediately.
- Remove nuisance and invasive trees and other plants, especially willows and Chinese tallow.

Waste Disposal

- Owners responsible for safe disposal
 - In general, sediment removed from controls in Austin has not been found to be hazardous.
 - SCMs are designed to capture and concentrate pollutants.
- Normal disposal options include:
 - A local solid waste landfill
 - A non-hazardous waste disposal service
- Contact the landfill or waste disposal service in advance for their specific waste acceptance requirements.
- If you have a petroleum, pesticide, or other chemical spill that enters the control call: 512-974-2550

Landscaping Allowed?

The landscaping requirements of Section 2.9.1, part B. and C. only, of the ECM apply for all detention, retention and water quality facilities for single-family or duplex residential development and/or for such facilities that will be maintained by the City. Landscaping and other vegetation shall not encroach into or impede use of any access drive or access strip, based upon the nominal size of the landscaping or vegetation at maturity.

Screening

2.9.1 - General

When screening is required by any provision of the Land Development Code, the installation and maintenance thereafter of a visual screen of one (1) of the following types shall be provided:

- A. A solid wood and/or masonry fence or wall at least six (6) feet in height.
- B. A hedge-like screen of evergreen plant material capable of attaining a minimum height of six (6) feet at maturity, planted initially at a minimum of four (4) foot on center. The plants will be a minimum height of 2½ feet at time of planting.
- C. Existing vegetation may be used as screening if the following conditions are met:
 - 1. The vegetation area is at least ten (10) feet wide and a limit of construction line is clearly marked on the plans.
 - 2. The area must contain the equivalent of one (1) large tree, two (2) small trees and six (6) understory shrubs per 20 linear feet of screen. Equivalentents may be found in Appendix A.

Future Partnerships?

- Would owners be open to the idea of allowing City of Austin WPD to pay for improvements to modernize and upgrade SCMs?
- What would be a reasonable incentive for such a partnership?
- Assume the City would provide improved aesthetics and work with the owner to ensure improvements were consistent with existing/future site uses.
- No program of this currently exists – it is in the “idea” phase.

Questions or Comments?



Thank you for your attention!

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