THE CITY OF AUSTIN GROW ZONE PROGRAM: RESTORING ECOLOGICAL FUNCTION AND PRESERVING VALUABLE ASSETS IN CITY PARKS

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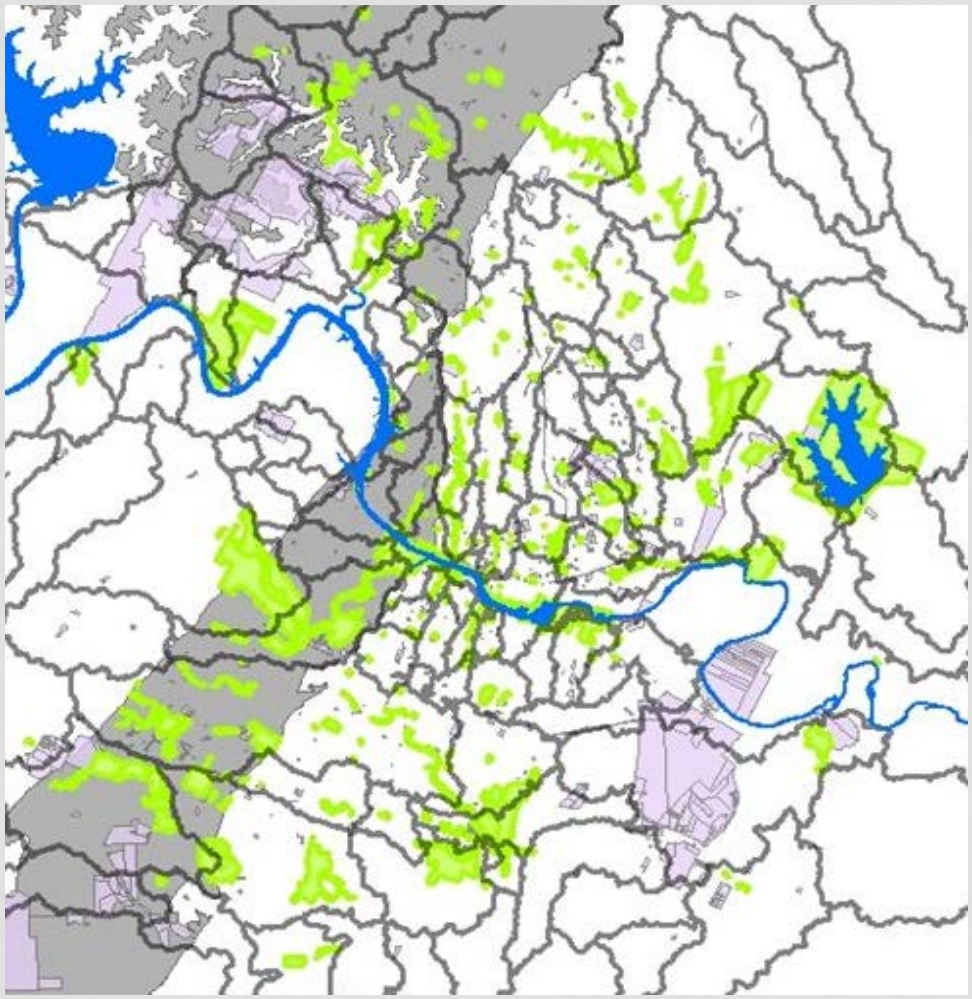
Riparian areas as assets

- Most municipal land is in City parks
- Most municipal **riparian** land is in City parks
- Austin –
  - 260 parks
  - 20,000 acres



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Land Management vs Asset Management

- Park managers and planners are important stakeholders
  - Water quality protection and ecosystem services are low priorities for these groups

- What challenges do parks systems face that can be addressed through riparian management?
  - How can we help park managers and planners protect and enhance their assets?

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Erosion issues

- Creeks
- Shoreline
- Threat to assets

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Stormwater issues

- Localized flooding
- Trail washout
- Gullies
- Poor drainage

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Non-contact Recreation

- Does it look like a healthy, natural channel?
- Odors
- Algae
- Turbidity

Contact Recreation

- Are you ok with people getting in the water?

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Mowing

- Direct costs associated with mowing
- Emissions

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Riparian Zone Issues - Urban Stream Syndrome

- Flashier hydrograph
- Elevated concentrations of nutrients and contaminants
- Altered channel morphology
- Compromised bank stability
- Nonpoint source pollution
- Disconnected floodplains

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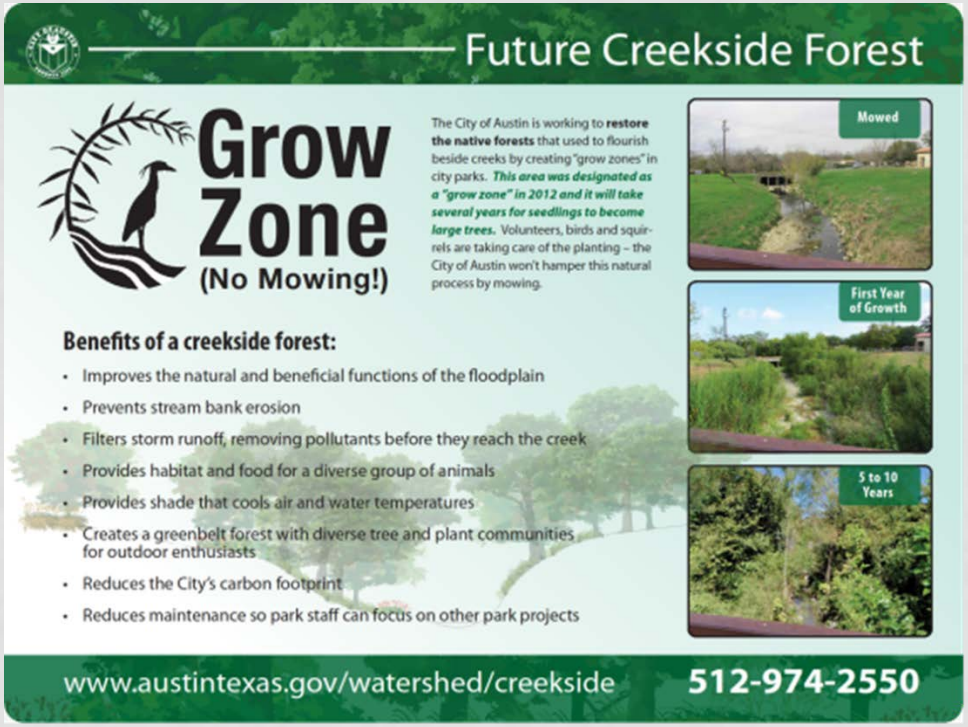
The solution – ecological restoration with <u>minimal</u> management

- Create No Mow Zones (eliminate main disturbance)
- Seed with herbaceous native plant mixes
- Selective invasive species control
- Plant native woody seedlings
- Soil erosion control as needed
- Soil amendments as needed



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How – Outreach, education and volunteer mobilization

- Organize volunteer workdays
- Develop educational materials
- Educate staff
- Talk to local stakeholders
- Perform creek walks
- Post informational signs

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Benefits beyond water quality and erosion control

- Healthy and calming natural spaces
- Shade for recreation
- Promotes diversity and stewardship
- Education
- Contributes to carbon neutrality

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Original MOU (2012) – 19 parks

Addendum (2014) – 12 more parks

Other (flood buyouts, etc) – 7 areas

- **158 acres** of recovering riparian area
- **13 miles** of streams and shoreline with GZ on one or both sides

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How the City of Austin supports volunteer efforts –

- Developing techniques appropriate for volunteers – safe, simple tools that have minimal adverse impacts
- Developing planning templates and assessment measures – so citizens can implement and evaluate their own projects
- Providing restoration materials – seeds, seedlings, erosion control fabric, mulch
- Providing expert advice

Grow Zone

WATERSHED PROTECTION

Grow Zone Restoration Plan

Site Name			
Creek Name			
Watershed Name			
Volunteer Contact	Name _____ Phone: _____ Email: _____		
Associated Volunteer Group(s)	__ Keep Austin Beautiful __ None __ Austin Parks Foundation __ Other: _____		
Moisture and Canopy	*Check which of the four conditions are present at the site:*	__ upland/open	__ floodplain/open
		__ upland/closed canopy	__ floodplain/closed canopy
	Check which invasives are present at the site:		
Invasives	__ woody	__ bamboo/cane	__ johnsongrass

List the ***dominant*** invasives on the site:

Identify other important aspects of the site:

____ There are opportunities for native seeding
____ There are opportunities for tree seedling planting
____ Vegetation is poor along banks or other erosion-prone areas
____ Ragweed is dominant on the site
____ There are other dominant invasive species on the site (such as vines)
____ There may be a need for haul-off of plant material after events
____ There are footpaths in sensitive areas
____ There are creek access points or crossings affecting the banks
____ There is significant woody debris in or near the channel
____ There are potential "tree islands" on site
____ There are opportunities for green stormwater methods (berms, swales, etc)

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Keep Austin Beautiful

- More than 50 Adopt-A-Creek groups
- Over 30 miles of stream adopted

Austin Parks Foundation

- Organizes training events and has large pool of volunteers – 98 events for 2014 It's My Park Day

TreeFolks

- Helps us plant 9,000 seedlings per year in City parks

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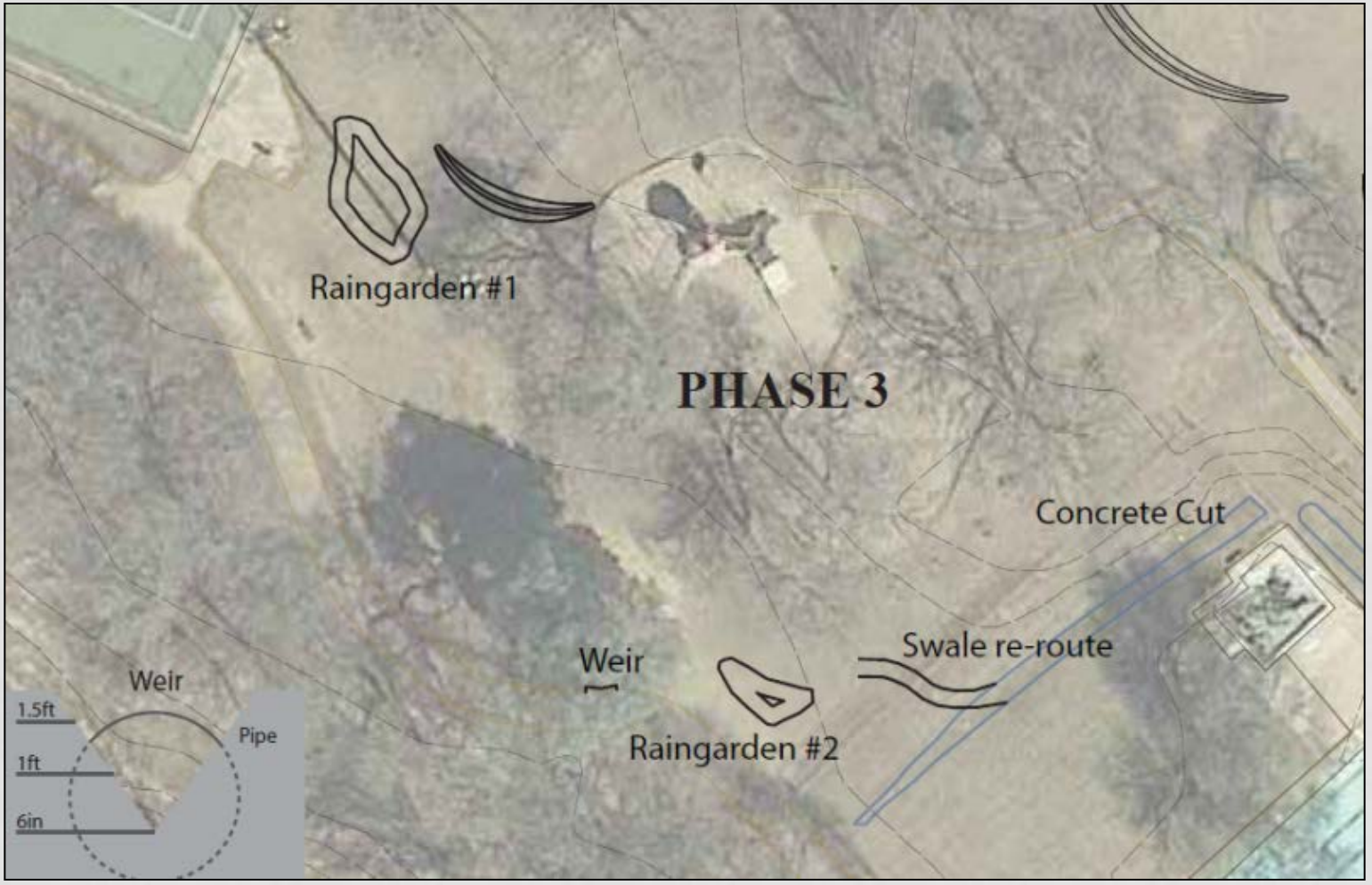
Green Infrastructure



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Green Infrastructure - Rain Gardens

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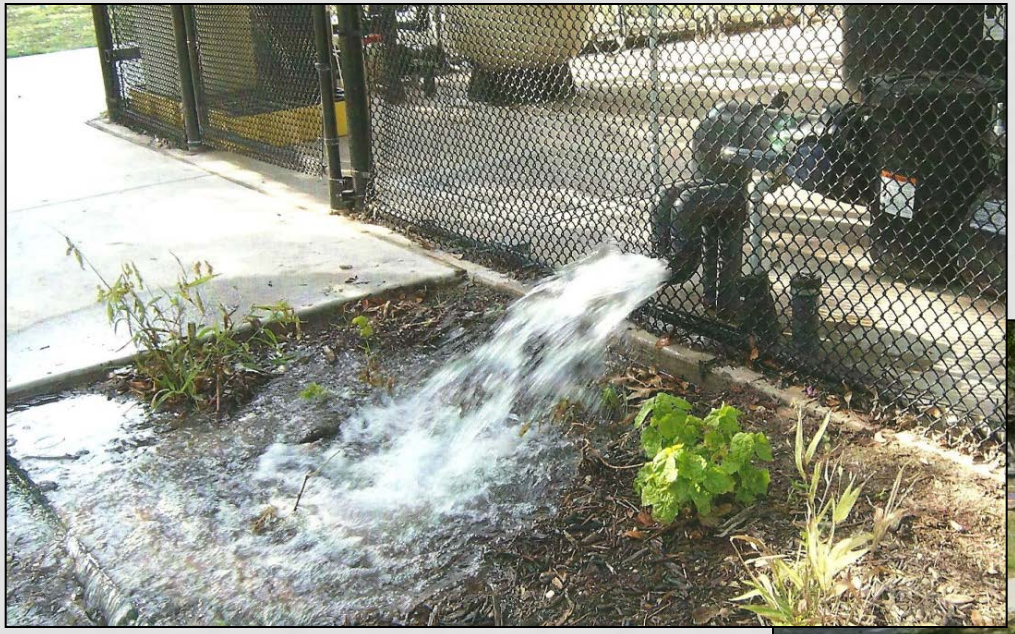
Green Infrastructure – Pump House Discharge



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Green Infrastructure – Pump House Discharge

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Green Infrastructure – Shoreline Restoration

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Green Infrastructure – Shoreline Restoration

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Green Infrastructure - Swales

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Green Infrastructure - Swales

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Additional Recommendations -

- Start small
- Start early on education and outreach
- Get to know your stakeholders – for and against
- Level of service
  - How much time and effort should go to management?
  - Framework for
    - Deciding on management actions
    - Responding to stakeholder requests
- Metrics – how do you measure success?
  - Inventory – stream length, number, acres
  - How well are they functioning?
  - Are they impacting other uses? Creating issues?