Urban Riparian Restoration: Growing a program

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City of Austin
WATERSHED PROTECTION

CITY OF AUSTIN
FOUNDED 1839

Historical Practices, Legacy problems

- Mow channels
- Mow buffers
- Remove wood
- Dredge sediments
- Keep creeks clean and simple!
- Move water away fast

Urban Water Solutions

- Regulatory:
  - Time, future, cumbersome
- Structural:
  - Expensive now, expensive later
- Non-structural:
  - Education, “Green” infrastructure…

The Riparian Solution

The RZR Model (≠ passive)

- Function over form, less is more.
- Remove mowing disturbance.
- Monitor and manage succession
  - Riparian Functional Assessment
- Add diversity, maybe
  - Seed, seedlings.
- Do NOT irrigate (some exceptions)
- Add carbon/amendment, maybe
- Intercept stormflow
- Surgical invasive plant mgmt

Grow Zone

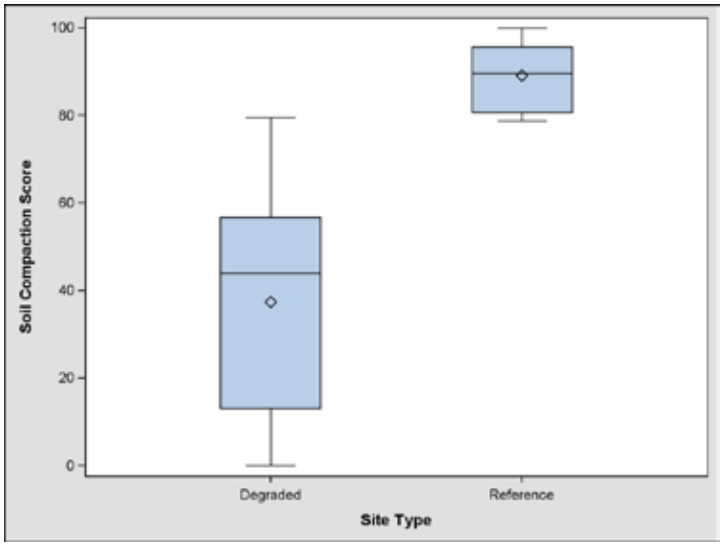
- Public, volunteer driven program
- Active involvement:
  - Plants, seeds, soil, invasives.
- Changing public perception
- Branded, identifiable, positive
- Lots of outreach angles

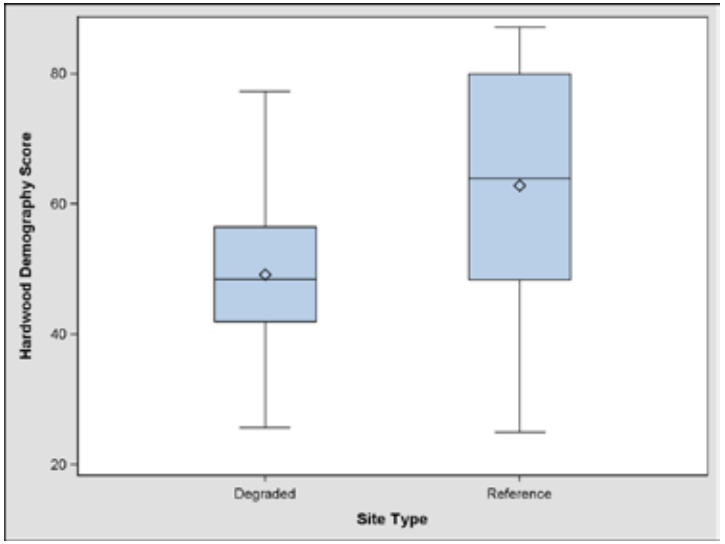
AUSTIN PARKS & RECREATION


Grow Zone

Riparian Assessment and Prioritization

- Index of Riparian Integrity (IRI) - Macro
- Riparian Functional Assessment (RFA) – Micro
  - Soil Compaction
  - Soil Carbon
  - Buffer Width
  - In-stream Canopy
  - Plant cover and Structural Diversity
  - Hardwood demography
  - Seedling recruitment





Flooding Constraints

- 8 Planting Zones
- 600 Bare Root Saplings
- 30-50 Mature Trees

General Notes

Plant all saplings in designated planting areas.
Space saplings approximately 3 ft apart.
Planting zone starts at bank of creek and runs 15-25 ft perpendicular to the stream.
Plant all saplings between the marked flags that corresponds to your assigned planting zone.

Legend

- Parking Area
- Planting Area
- Meeting Area
- Creeks
- COA Parkland

URBAN FORESTRY

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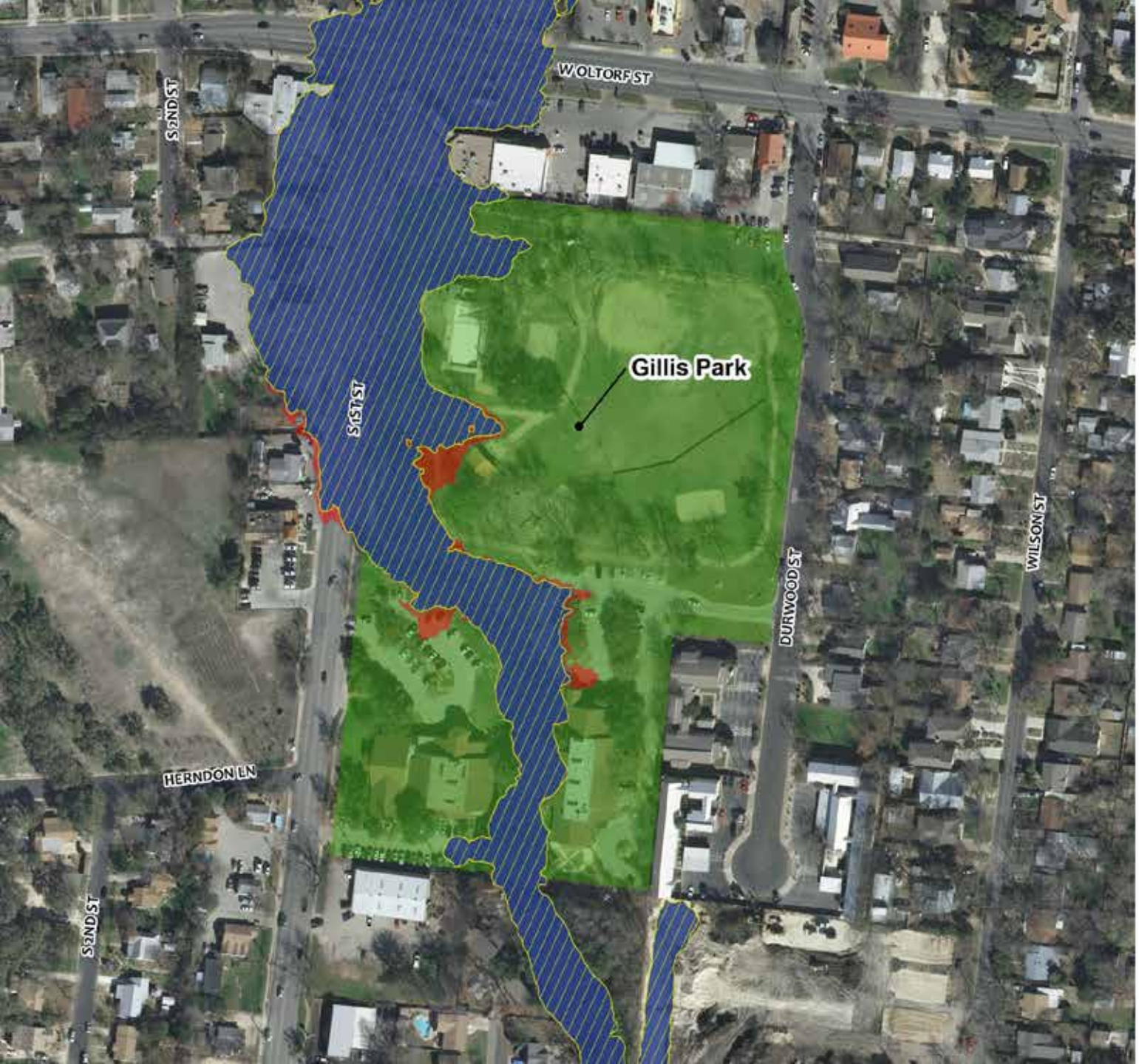
N

0 40 80 160 Feet



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Gillis Park
100 - Year Floodplains

- Existing Conditions
- Prop Grow Zone
- Revised Grow Zone
- COA Owned Parcels

N

Feet
0 100 200

Grow Zone

Rescue Nursery

Shoreline Restoration

Rain Gardens

Bioswales

Soil/Carbon Amendment

- Leave it in place.
- Large Wood
- Diversity Islands
- Carbon trenches/pits?

Restoration: invasive mgmt

- Ligustrum, arundo, hydrilla, cabomba…?
- Data collection effort this summer
- Best Practices for riparian areas, volunteers:
  - Slash
  - Girdling
  - Phased treatment
  - Soil/seeding

Fringe (?) Benefits

- Erosion and water quality value - $$??
- FEMA credit for Restoration of Natural & Beneficial Function (discounted rates…)
- Paradigm shift in land and vegetation mgmt
- Wide range of options
- Educational/local buy-in
- Big carbon offset potential
- Climate change adaptation/Resilience


Questions?