

Drainage Canal Vegetation Management Plan For The City of Jonesboro

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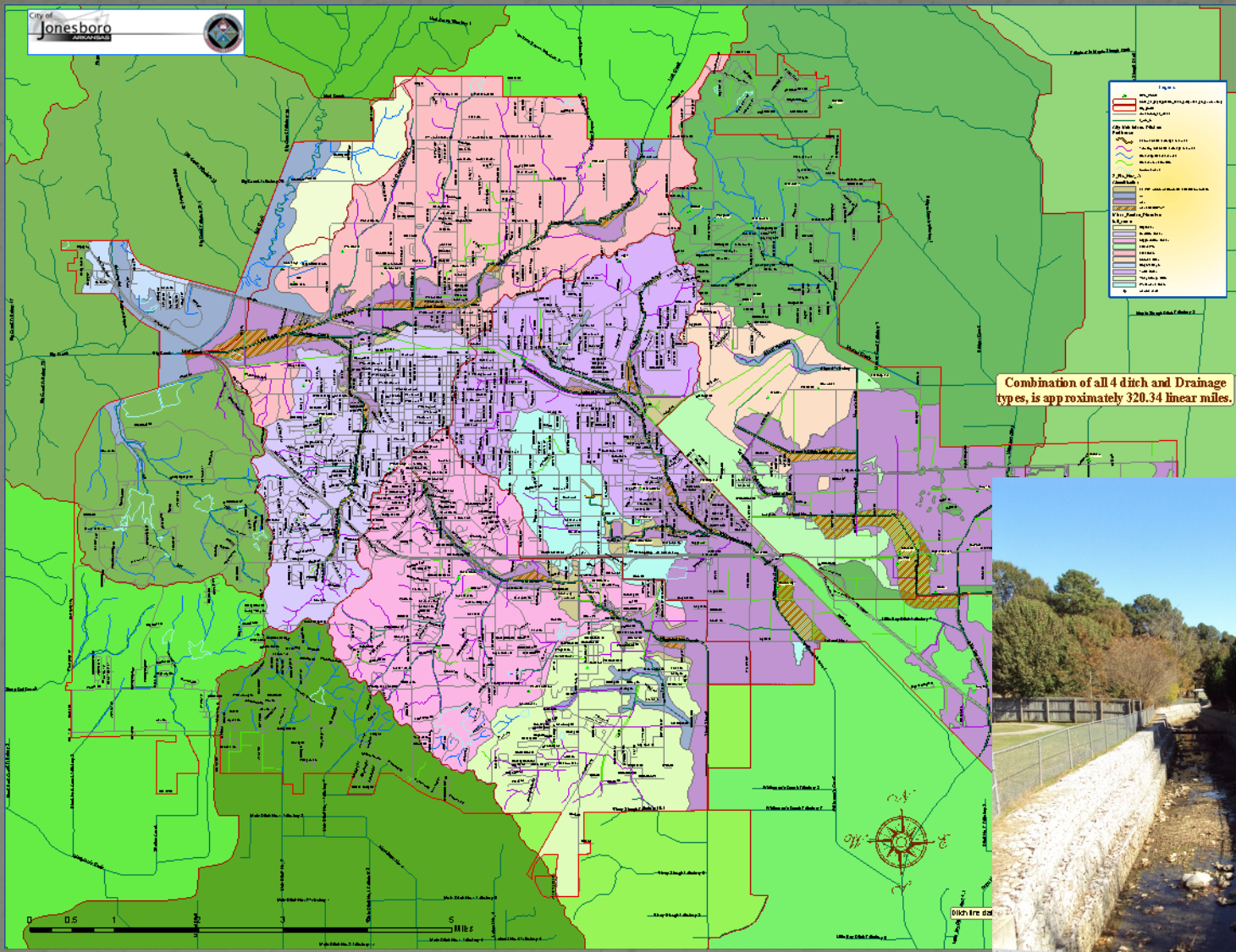
October 5, 2010

Jonesboro City Council Meeting

Project provisions

- Identify and group canal vegetation types
- Link management options with ecological criteria
- Balance vegetation removal suggestions for :
 - Improved canal structure
 - Sustainable designs
 - Drainage function
 - Reducing risk
 - Ecosystem values





Combination of all 4 ditch and Drainage types, is approximately 320.34 linear miles.



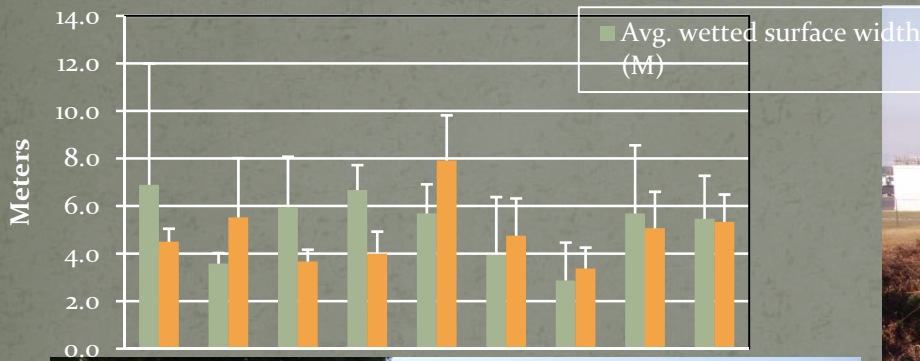
Survey relevance

- Nine City drainage systems (basins)
 - 51 drainage canal sites
 - Elevations, dominant type, % aerial cover, bank materials
 - 8 FEMA designated canals
 - 2 Unstudied FEMA canals
- Among 94 recorded species, 4 were in > 7 basins
- Variable % covers related to:
 - Maintenance history
 - Age of drainage basin

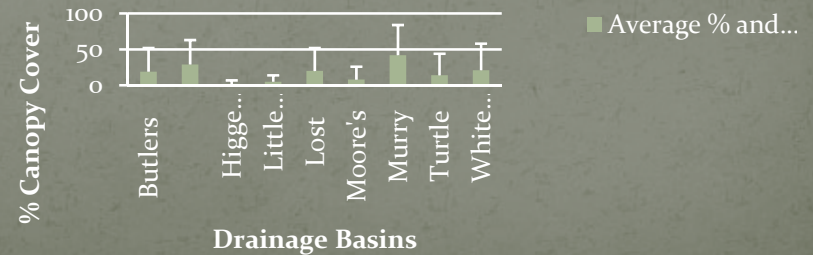
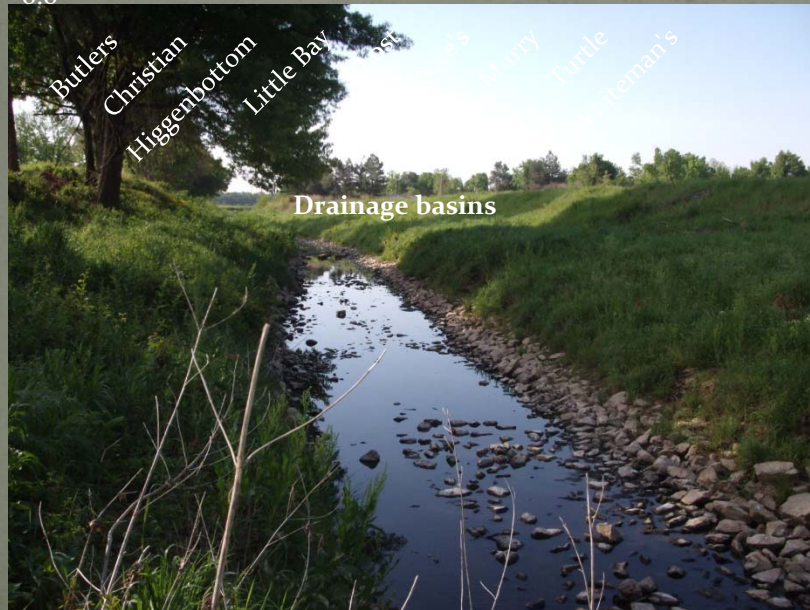


Ideal Conditions Under Management

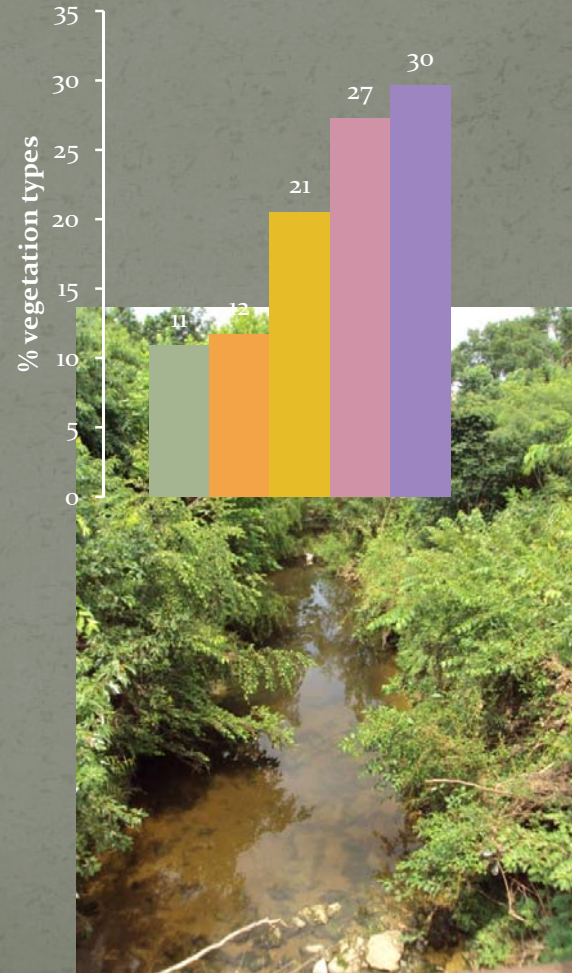
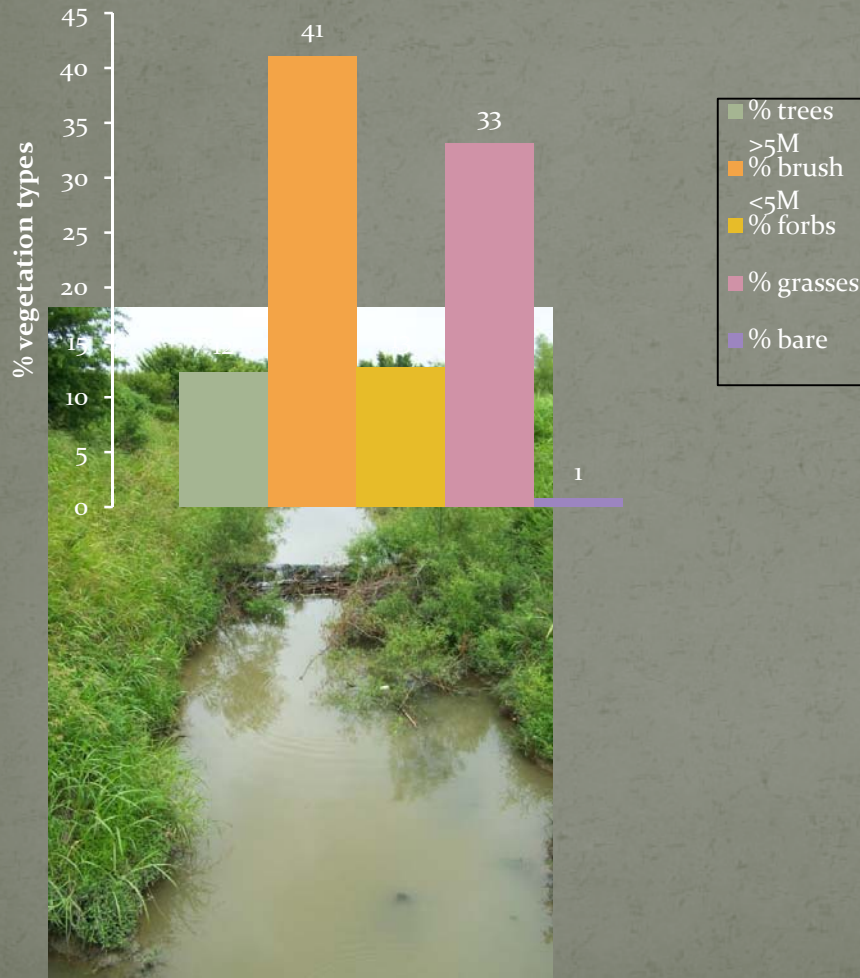
Average surface width and channel depth in Jonesboro, AR drainage basins

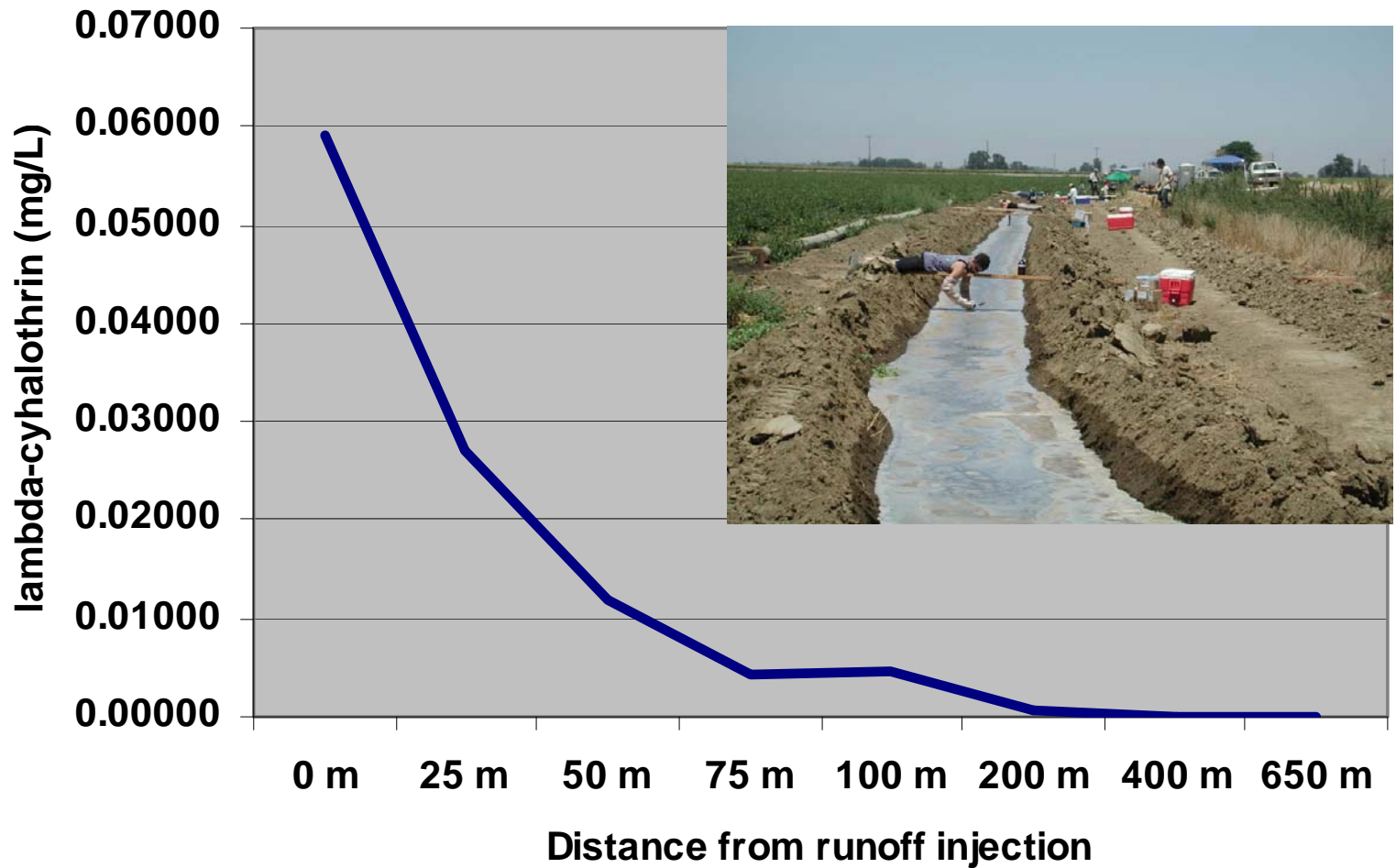


Percent canopy cover in Jonesboro, AR drainage basins



Vegetation types that prevailed





Degradation of lambda-cyhalothrin in Thighman Ditch water during the first 24 h following runoff simulation, 1999.



Integrated management

- City's culvert hyperlinks
- Rapid response needs
- Planning
- Scheduling maintenance
- Ranking systems
 - Surveillance
 - Check list
- Communication



Drivers to Vegetation Management

- Ordinance
- Stormwater plan
- TMDL
- Corps Study
- FEMA
- Others



Jonesboro's needs

- Engineering
- Public education and value
- Meeting compliance
- Assuming ownership
 - Stewardship
 - Risk reduction
 - Aesthetic and value
 - Sustainable Management



Acknowledgements

- City of Jonesboro
- Offices of Tech Transfer ASU and MSU
- City of Tupelo, MS and Helena Chemical
- USDA ARS National Sedimentation Laboratory
- Haywood, Kenward, Bare and Assoc, Inc.

