New Technologies for Operator Compliance

The more things change....
Green Infrastructure

Multifunctional Design

Adapting what would typically be a singular solution to solve multiple problems
Green Infrastructure

Green Infrastructure used to be the Norm

Conveyance
Water Quality
Flood Mitigation

Conveyance
Green Infrastructure increasingly utilized by cities, counties and states across the country

WHY?

ECONOMICS

700+ CSO cities driving development of low cost, sustainable solutions. It’s too expensive the old way
Green Infrastructure

HOW?

PREScriptive REGULATION

Regulations across the country hinder GI use and make it more expensive. Typically, because they were created without benefit of experience.
Green Infrastructure

Harris County Low Impact Development & Green Infrastructure Design Criteria for Storm Water Management

Submitted by: Arthur L. Storey, Jr., P.E., Executive Director, Public Infrastructure Department
            John Blount, P.E., Director, Architecture & Engineering Division
            Michael D. Talbott, P.E., Director, Harris County Flood Control District

Adopted by Harris County Commissioners Court

Ed Emmett
County Judge

El Franco Lee
Commissioner, Precinct 1
Jack Morman
Commissioner, Precinct 2
Steve Radack
Commissioner, Precinct 3
Jerry Eversole
Commissioner, Precinct 4

Adopted April 2011
Why Green Infrastructure?

- Increases develop-able land (lot yield)
- Improves aesthetics
- Lowers construction costs
- Improves water quality
- Reduces flash flooding
- Allows for creativity / thought / engineering
Begin with the End in Mind

- Remove sediment & clogged mulch
- Expose engineered soil
- Replace with new mulch
- Finished!
Maintenance Engineered Soil Choice

3,553 SF of Biofiltration Bed Using 5”HR Media

108 SF of Biofiltration Bed Using 100”HR Media

FILTRATION

STORAGE
Maintenance ▸ Planting Plan
Maintenance  What’s a Weed?
Maintenance  Who Do You Hire?
Maintenance » Controlling the Outcome
Performance Engineered Soil Choice

3,553 SF of Biofiltration Bed Using 5”HR Media

108 SF of Biofiltration Bed Using 100”HR Media
Keys to Success

• Verify Functionality Post-Construction
• Require Robust, High Performance Designs
• Protect Systems During Construction
• Require Lump Sum System Rather Than Line Item Bids
• Require Performance Verification
• Require Maintenance Commitments
Questions?

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Steering Committee Chair
Houston Land/Water Sustainability Forum