



# Austin Water and Graywater Working Group Joint Briefing

April 25, 2013

Drema Gross

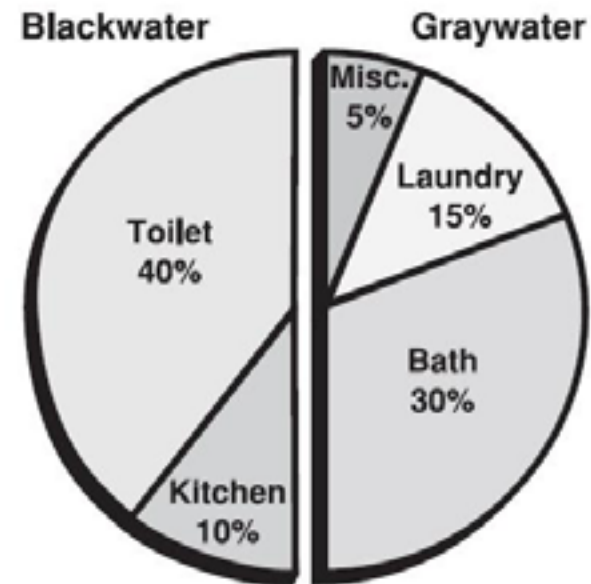
Austin Water Conservation Division Manager

Paige Hill

Graywater Working Group

# What is Graywater?

- Untreated wastewater from bathtubs, showers, lavatories and laundry
- Benefits:
  - Potential savings of 40-90 gpd
  - Sustainable onsite water reuse
  - Reduces pressure on wastewater infrastructure
  - Reliable source for irrigation during drought



# Graywater Obstacles

- Design requirements increased system costs
- Backflow protection and annual inspections required
- Unclear where to find information about City processes
- Most technical information buried in 533-page code
- Only one residential graywater system permitted within Austin

# Background

- Council Resolution #20120126-047
- Identify impediments to single-family graywater implementation and make recommendations on alleviating those impediments
  1. Code amendments
  2. Permitting process
  3. Technical guidance
  4. Staff support
- Memos to Council on July 2, 2012 and March 29, 2013

# Graywater Working Group

- 14 stakeholder meetings  
March 2012 through March  
2013
- Focus on identifying and  
understanding impediments
- Subgroups addressed  
permitting, technical design  
& outreach

## External Stakeholders

Lauren Ross (Glenrose Engineering)  
Paige Hill (Urban Patchwork)  
Gayle Borst (Design-Build-Live/Stewardship Inc.)  
Rebecca Batchelder (Glenrose Engineering)  
Kirby Fry (Southern Exposure)  
Chris Maxwell-Gaines (Innovative Water Solutions)  
Amanda Van Epps (UT PhD Candidate)  
Karen Ascot (Sierra Club)

## Internal Stakeholders

Austin Water  
Austin Energy Green Building  
Planning and Development Review  
Watershed Protection  
Health and Human Services  
Office of Sustainability  
Law Department

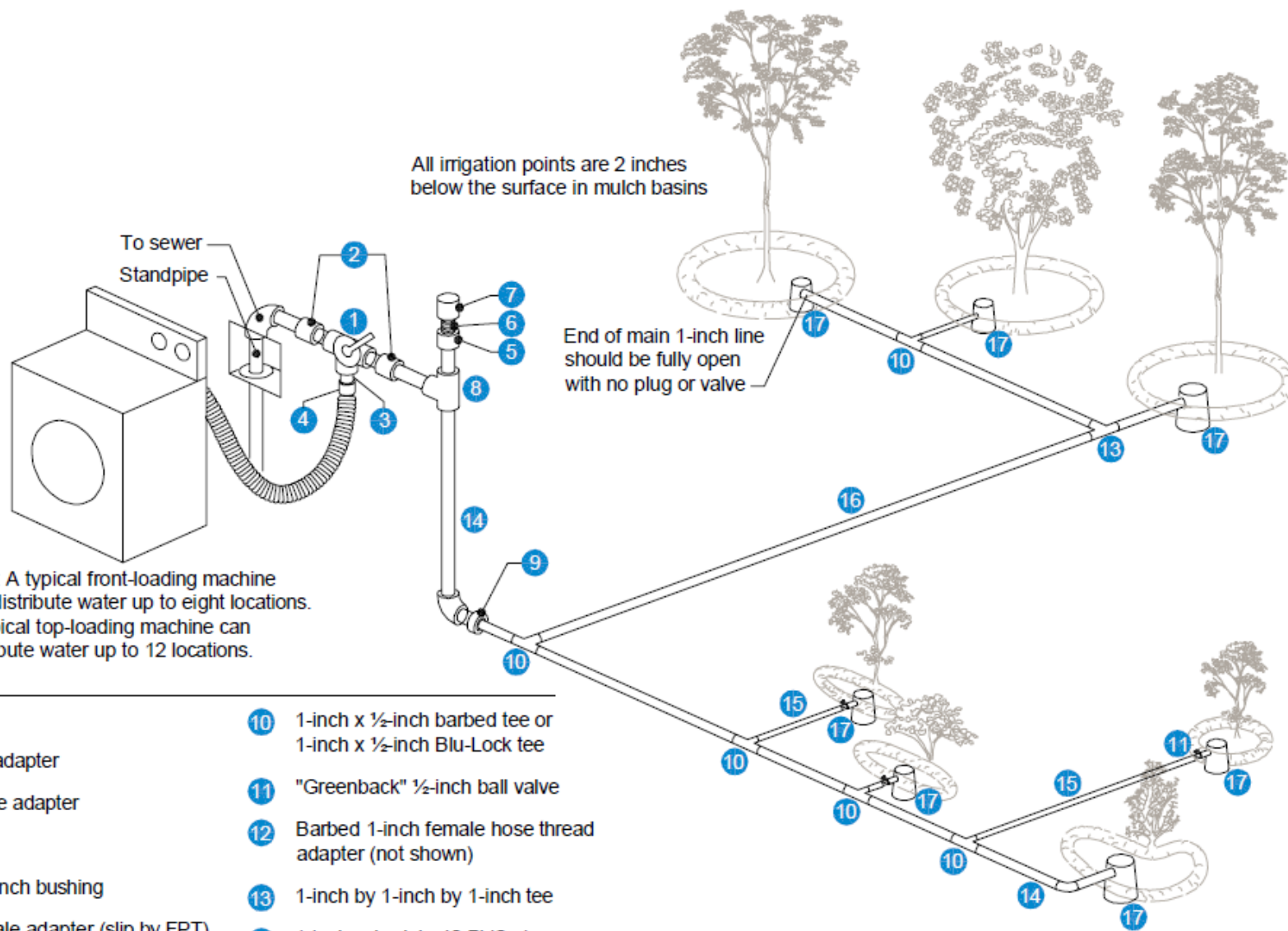
# Impediments & Permitting

- Identified 7 technical impediments to graywater use
  - Recommended addressing through adoption of 2012 Uniform Plumbing Code and Local Amendments
- Identified 6 process and information-related impediments
  - Developing one-stop permit process for auxiliary water
  - Coordinating information through Austin Water's Conservation Division
  - Planning for additional outreach and education components



# 2012 Uniform Plumbing Code

- Proposed changes address design requirements
  - Allows single-zone distribution
  - Changes materials allowed in leach field
  - Reduces required depth of piping
- Gravity based systems under 250 gpd:
  - No backflow protection required at meter
  - Reduces number of inspections
  - Allows homeowner design and permitting
- Allows Laundry to Landscape system



All irrigation points are 2 inches below the surface in mulch basins

End of main 1-inch line should be fully open with no plug or valve

Note: A typical front-loading machine can distribute water up to eight locations. A typical top-loading machine can distribute water up to 12 locations.

### Legend

- |   |   |
|---|---|
| 1 3-way valve                                 | 10 1-inch x 1/2-inch barbed tee or 1-inch x 1/2-inch Blu-Lock tee |
| 2 PVC 1-inch male adapter                     | 11 "Greenback" 1/2-inch ball valve                                |
| 3 1-inch barbed male adapter                  | 12 Barbed 1-inch female hose thread adapter (not shown)           |
| 4 Hose clamp                                  | 13 1-inch by 1-inch by 1-inch tee                                 |
| 5 PVC 1-inch x 1 1/2-inch bushing             | 14 1-inch schedule 40 PVC pipe                                    |
| 6 PVC 1 1/2-inch female adapter (slip by FPT) | 15 1/2-inch poly tubing   |
| 7 Auto vent (or air admittance valve)         | 16 1-inch HDPE tubing   |
| 8 1-inch PVC tee                              | 17 Mulch shield or valve box                                      |
| 9 1-inch barbed x slip adapter                |   |



# Auxiliary Water Permit

- “Work Type” of Plumbing Permit
  - Check-box based form identifying water type and use
  - Does not add cost to existing required plumbing permit
  - In testing phase with a tentative release date in May
- Benefits
  - One Stop Shop staff will alert all affected departments
  - Informs customer of requirements at start of process
  - Expedites permitting approval across departments

# Outreach and Education

- Managed by Austin Water Conservation Division
- By July 2013
  - Develop central webpage (“portal”)
  - Post updated “Frequently Asked Questions”
  - Add conservation contacts to 311 database
- By December 2013
  - Create technical guidance document
  - Develop curriculum for installation workshop
  - Involve stakeholders in development and review of materials

# Additional Next Steps

- Broaden focus to include all auxiliary waters & customer sectors
- Complete Auxiliary Water Study by end of FY13
  - Review national, state and local regulations
  - Analyze public health risks
  - Recommend possible ordinance changes
- Evaluate auxiliary water costs and possible incentives in light of study results



# Questions?

# Backup slides

|   | Current                                 | Proposed 2012 Language (MPSB)  |
|---|---|--|
| Laundry to Landscape Systems (L2L)  |   |  |
| Gravity-flow, ≤ 60gpd   |   |  |
| RPZ Required?   | Not separately addressed in current UPC | No   |
| Inspections Required?   |   | Initial or alteration, plus cross-connection inspection within 1 year at no charge |
| Who can design?   |   | Anyone   |
| Homestead permit allowed?   |   | Yes  |
| Release point depth   |   | 2" below grade   |
| Tank Required?  |   | No   |
| Gravity-flow graywater systems ≤ 250 gpd<br><i>(all sources, including sinks/showers)</i> |   |  |
| RPZ Required?   | No                                      | No   |
| Inspections Required?   | Annual CSI                              | Initial or alteration, plus cross-connection inspection within 1 year at no charge |
| Who can design?   | Licensed/Registered                     | Anyone   |
| Homestead permit allowed?   | No                                      | Yes  |
| Release point depth   | 18" below grade                         | 2" below grade   |
| Tank Required?  | Yes                                     | Yes  |
| Pump-assisted graywater systems, any size   |   |  |
| RPZ Required?   | Yes                                     | Yes  |
| Inspections Required?   | Annual BPAT & CSI                       | Annual BPAT & CSI  |
| Who can design?   | Licensed/Registered                     | Licensed/Registered ≥ 250 Anyone ≤ 250   |
| Homestead permit allowed?   | No                                      | No   |
| Release point depth   | 18" below grade                         | 2" below grade   |



# GPCD from 1990 to 2012

