



**FREESE  
AND  
NICHOLS**



**FARMERS  
BRANCH**

# **City of Farmers Branch Storm Water Utility Study**

**City Council Work Session**

**December 17, 2013**

# Agenda



- Motivations for action on storm water funding
- Storm water utility creation process
- Fee structure recommendations
- Next steps



# Motivations for Action on Stormwater Funding



- Regulatory obligations
  - TCEQ Phase II MS4
  - FEMA Floodplain Administration
- Storm system operations & maintenance
  - Current O&M service level
  - Future service demands
  - Plan for future development
- Capital improvement projects
  - Correct known flooding problems



# Motivations for Action on Stormwater Funding

## TCEQ Phase II MS4



Federal  
Mandate

- Water quality protection program
  - Minimize pollutants entering creeks and lakes
- Maximum extent practicable
- Best management practices (BMPs)
  - Educational programs
  - Street sweeping
  - Culvert and inlet cleanouts
  - Creek maintenance
  - Plan reviews
  - Inspections and reporting
  - Municipal facilities improvements
  - Modified storm water policies and development practices
- Staffing



# Motivations for Action on Stormwater Funding City Strategic Plan

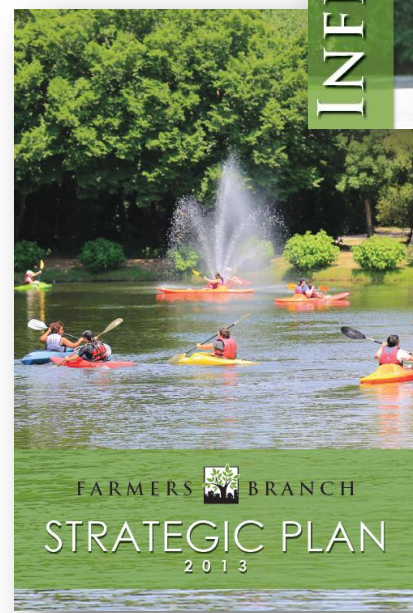
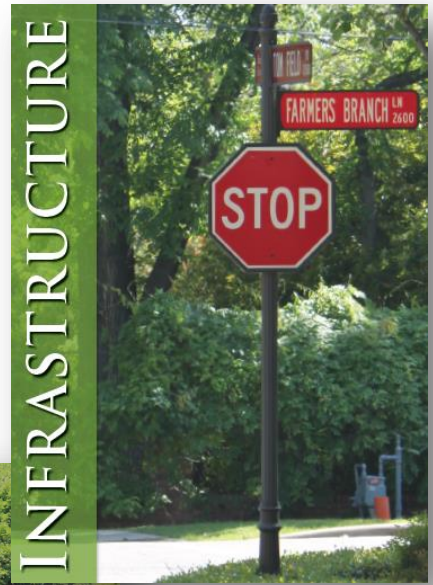


- Council's Initiatives

**Provide functional, sustainable and well-maintained infrastructure, facilities and equipment.**

**PUBLIC WORKS:**

45. Continue process for expansion of the landfill
46. Update and implement comprehensive infrastructure improvement plans for streets, sewer and water infrastructure and develop a long term funding program
47. Install additional ornamental street signs according to the annual plan
48. Construct extension of trail system according to the Trail Master Plan as funds are available
49. Seek grant funds to extend trail system according to the Master Trail Plan and extend trail as funds are available
50. Hire a consultant to develop and implement a storm water program and fee
51. Issue 22 million dollars in certificates of obligation for the purpose of upgrading city streets



# Motivations for Action on Stormwater Funding City Strategic Plan



- Council's Initiatives

**Provide efficient and fiscally sound government through conservative budgeting, spending and resource management.**

**FINANCE:**

60. Continue to adhere to all fiscal policies outlined in the City's Financial Management Policy

61. Develop strategies to adequately fund street maintenance, fixed assets and employee performance incentives in future budgets

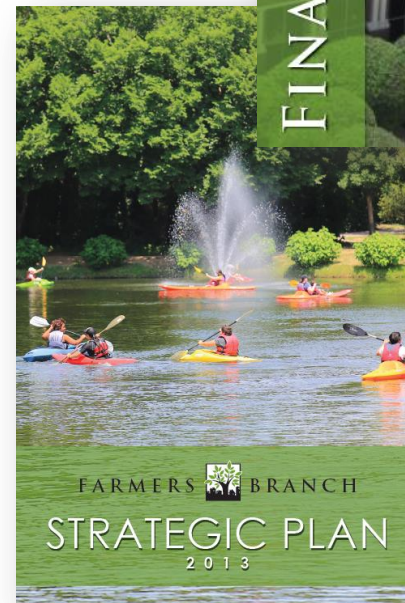
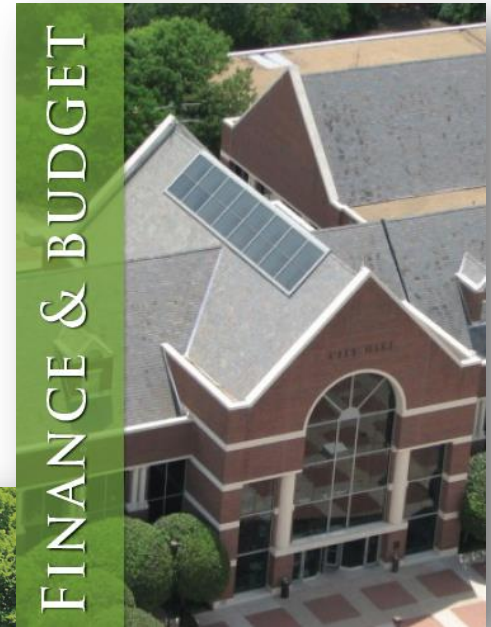
**ALL DEPARTMENTS:**

62. Apply for and utilize grant funding to enhance citizen services and to further the mission, values and goals of the City

**CITY MANAGER'S OFFICE:**

63. Introduce/support legislative efforts to maintain municipal authority regarding local government revenue sources and expenditures

- Recent & anticipated regulatory requirements
- Community requests for enhanced drainage support/services



# Motivations for Action on Stormwater Funding

## Local Needs



- Creek dredging
  - Five locations identified
  - Dredging needed every 5 years



*Mallon Park*

<b>Pond Dredging Project</b>	<b>Cost</b>
Mallon Park/Farmers Branch Creek Dredging	\$300,000
Winn Park/Farmers Branch Creek Dredging	\$300,000
Library/Rawhide Creek Dredging	\$300,000
Oakbrook/Ken Rymer Park/Rawhide Creek Dredging	\$300,000
Gussie Field Watterworth Park/Rawhide Creek Dredging	\$300,000
<b>Cost of Dredging every 5 years</b>	<b>\$1,500,000</b>

# Motivations for Action on Stormwater Funding

## Local Needs



- Capital improvement projects

Mustang Trails Erosion Control – Ph. II	\$ 1,500,000
Drainage Improvements: Chapel Hill, Johnston Park, Valley View Estates Additions	\$ 3,000,000
Cooks Creek Channel Reconstruction – Bee Street to Valwood Parkway	\$ 2,000,000
Concrete-Lined Channel Rehabilitation	\$ 500,000
Mallon Park/Farmers Branch Creek Dredging	\$ 300,000
Winn Park/Farmers Branch Creek Dredging	\$ 300,000
Library/Rawhide Creek Dredging	\$ 300,000
Oakbrook/Ken Rymer Park/Rawhide Creek Dredging	\$ 300,000
Gussie Field Watterworth Park/Rawhide Creek Dredging	\$ 300,000
Farmers Branch Floodplain Study	\$ 450,000
<b>Total Drainage Improvements Projects</b>	<b>\$ 8,950,000</b>
Sundown - Josey to Longmeade*	\$ 1,500,000
Wicker Ave. - Bee to Dennis*	\$ 1,500,000
Squire Pl. - Bee to Dennis*	\$ 1,400,000
Birchlawn - Jose to Longmeade*	\$ 900,000
<b>Total Street Improvements Projects</b>	<b>\$ 5,300,000</b>
<b>Total Identified Capital Improvements Projects related to drainage</b>	<b>\$ 14,250,000</b>

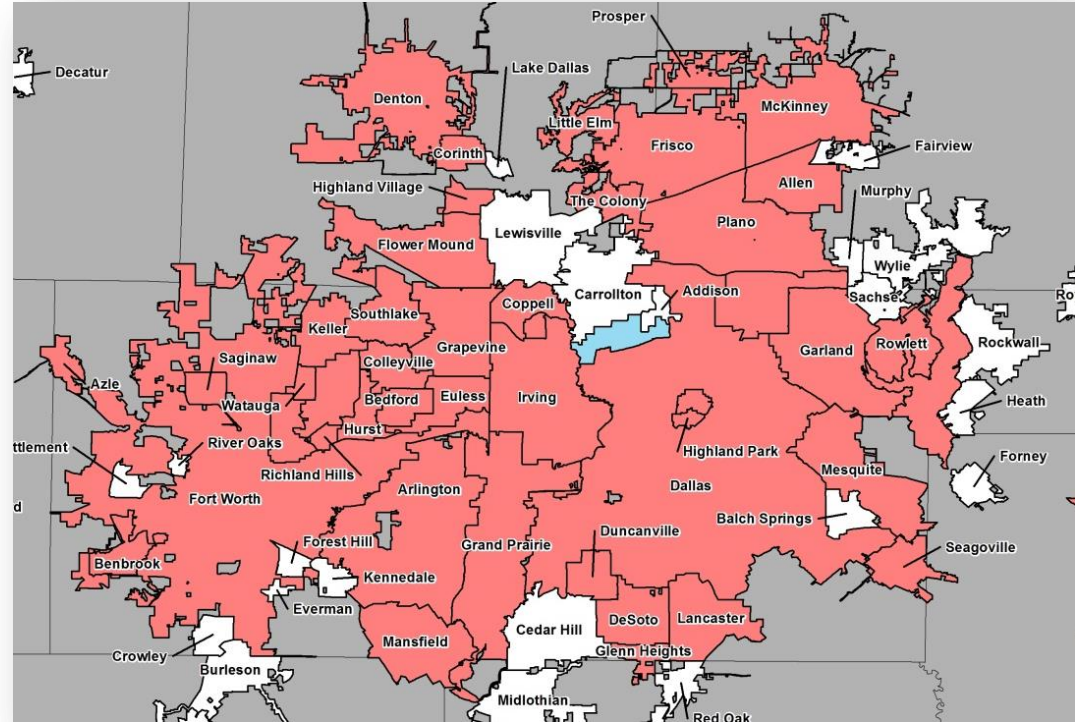
\*a portion of these street projects are drainage-related



# What is a Stormwater Utility?



- Funding option
  - Common, equitable storm water funding approach
- Service-based fee
  - Drainage-related costs only
  - Monthly fee on utility bill
- Stable, reliable source
  - Predictable fees based on users' impact to system
- Authorized by State Law (LGC 552, Subchapter C)
  - Allows cities to establish drainage user fee
  - **Reasonable, equitable, non-discriminatory**



# Storm Water Utility Creation Process



**Stormwater Program  
Cost Evaluation**

**Revenue  
Assessment**



**Stormwater  
Utility**



**Implementation  
Strategy**

**Public  
Outreach**





### Operations

- Street sweeping
- Daily administration
- Plan reviews
- Inspections & Compliance
- Household Hazardous Waste collection
- Inlet/conveyance debris removal
- Channel repair
- Vegetation management
- Hazardous spill management
- Public Awareness

### Capital Projects

- Flood control
- Creek sediment removal
- Erosion protection
- Channel rehabilitation
- Channel reconstruction
- Repair/reconstruction of roadway at flood prone areas
- Water quality management
- Aeration & aquatic vegetation management
- Bridge & culvert construction

# Storm water services included in proposed fee



Stormwater Program  
Cost Evaluation

- Storm water staff
  - Drainage crew (5 positions)
  - City engineer (20% of salary)
  - GIS analyst (80% of salary)
  - Street sweeper
- Equipment
  - Street sweeper
  - Dump truck
  - Crew cab truck
  - Mule
  - Pickup
  - Vacuum truck
- CIP / maintenance / studies
- Administrative reimbursement
- Operating reserve





- Street Sweeper Operator
- Crew Leader
- Foreman
- Light Equipment Operator
- Heavy Equipment Operator
- Maintenance Worker
- City Engineer\*
- GIS Analyst\*\*

**Total Annual Staff Cost - \$399,349**

\*City Engineer compensation to be funded 20% SWU, 80% general fund

\*\*GIS Analysis compensation to be funded 80% SWU, 20% general fund

# Cost of Service - Equipment



Equipment	Total Capital Value (Present \$)	Expected Service Life (years)	Annual Maintenance	Total Annualized Cost
Crew cab truck	\$26,000	5	\$8,250	\$13,450
Pickup truck	\$20,000	5	\$8,250	\$12,250
Dump truck	\$53,500	7	\$10,884	\$18,527
Street Sweeper	\$250,000	5	\$15,240	\$65,240
ATV Mule	\$7,000	5	\$860	\$2,260
Vacuum Truck	\$300,000	7	\$10,440	\$53,297
<b>Total Annual Equipment Cost</b>				<b>\$ 139,380</b>

# Cost of Service Capital Improvement Projects



Stormwater Program  
Cost Evaluation

- Drainage improvements

Project	Projected Cost
Mustang Trails Erosion Control – Ph. II	\$1,500,000
Drainage Improvements: Chapel Hill, Johnston Park, Valley View Estates Additions	\$3,000,000
Cooks Creek Channel Reconstruction – Bee Street to Valwood Parkway	\$2,000,000
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Gussie Field Watterworth Park/Rawhide Creek Dredging	\$300,000
Farmers Branch Floodplain Study	\$450,000
<b>Total Drainage Improvements Projects</b>	<b>\$8,950,000</b>

# Cost of Service Capital Improvement Projects



## Stormwater Program Cost Evaluation

- Streets projects with a drainage component

Project	Projected Cost
Sundown - Josey to Longmeade	\$1,500,000
Wicker Ave. - Bee to Dennis	\$1,500,000
Squire Pl. - Bee to Dennis	\$1,400,000
Birchlawn - Jose to Longmeade	\$900,000
<b>Total Street Improvements Projects</b>	<b>\$5,300,000</b>

- A portion of these street projects related to drainage could be funded with stormwater utility revenues



# Cost of Service Summary



## Stormwater Program Cost Evaluation

	<b>Service Level 1</b>	<b>Service Level 2</b>	<b>Service Level 3</b>
<b>Expense</b>	<b>O&amp;M Compliance</b>	<b>O&amp;M Compliance Minor CIP</b>	<b>O&amp;M Compliance Moderate CIP</b>
Staffing	\$399,349	\$399,349	\$399,349
Equipment	\$165,024	\$165,024	\$165,024
Administration Reimbursement	\$33,862	\$79,762	\$119,542
Operating Reserve Contribution	\$74,594	\$143,548	\$217,110
Capital / PAYGO	\$0	\$765,000	\$1,428,000
<b>Total Annual Expenses</b>	<b>\$672,830</b>	<b>\$1,552,684</b>	<b>\$2,329,026</b>

# Storm Water Utility Fee Basis



- User fee similar to water and wastewater fees



- Based on Impervious Area (IA)
  - Flat residential rate
  - Non-residential rate based on amount of impervious area
- ERU = equivalent residential unit



Building:	13,000 sf
<u>Parking Lot:</u>	<u>23,870 sf</u>
<b>Impervious Area:</b>	<b>36,870 sf</b>

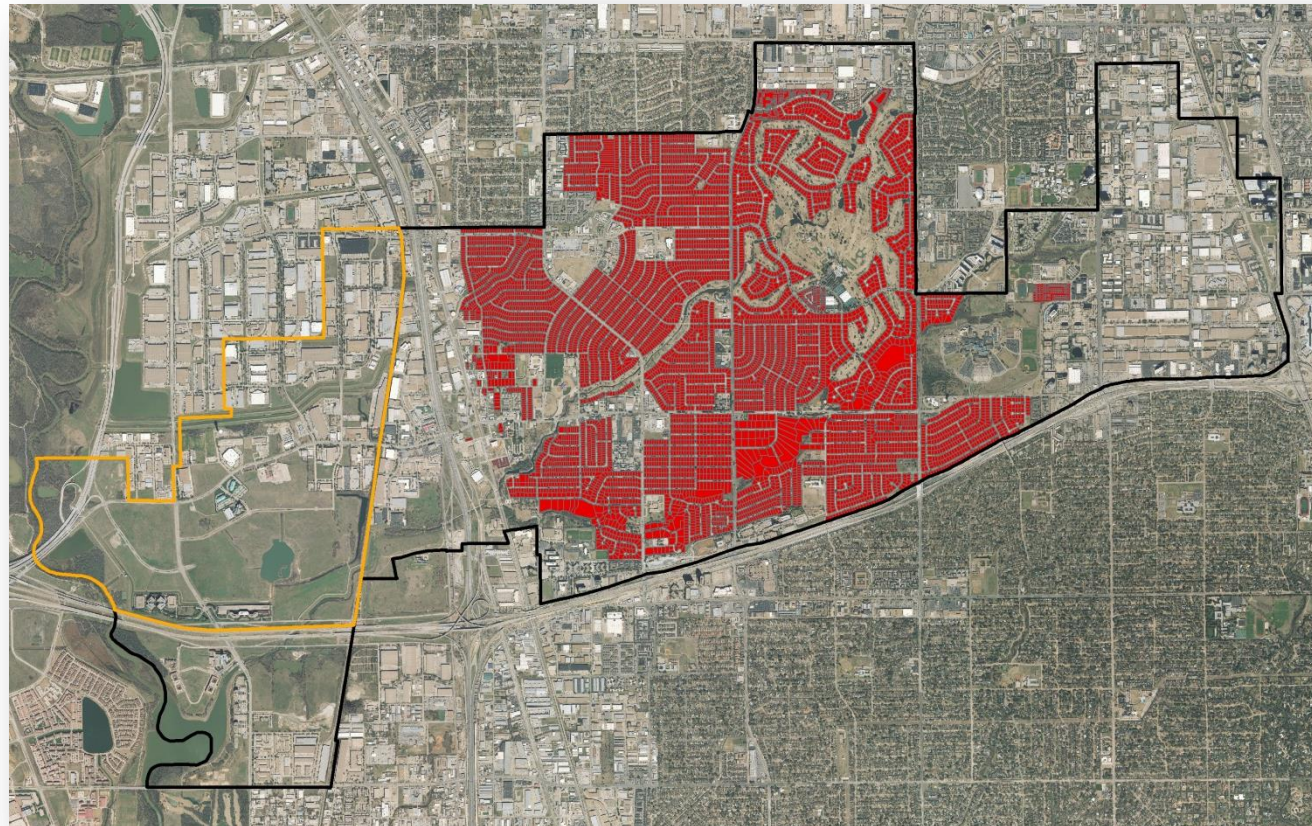
# Equivalent Residential Unit (ERU)



Revenue  
Assessment

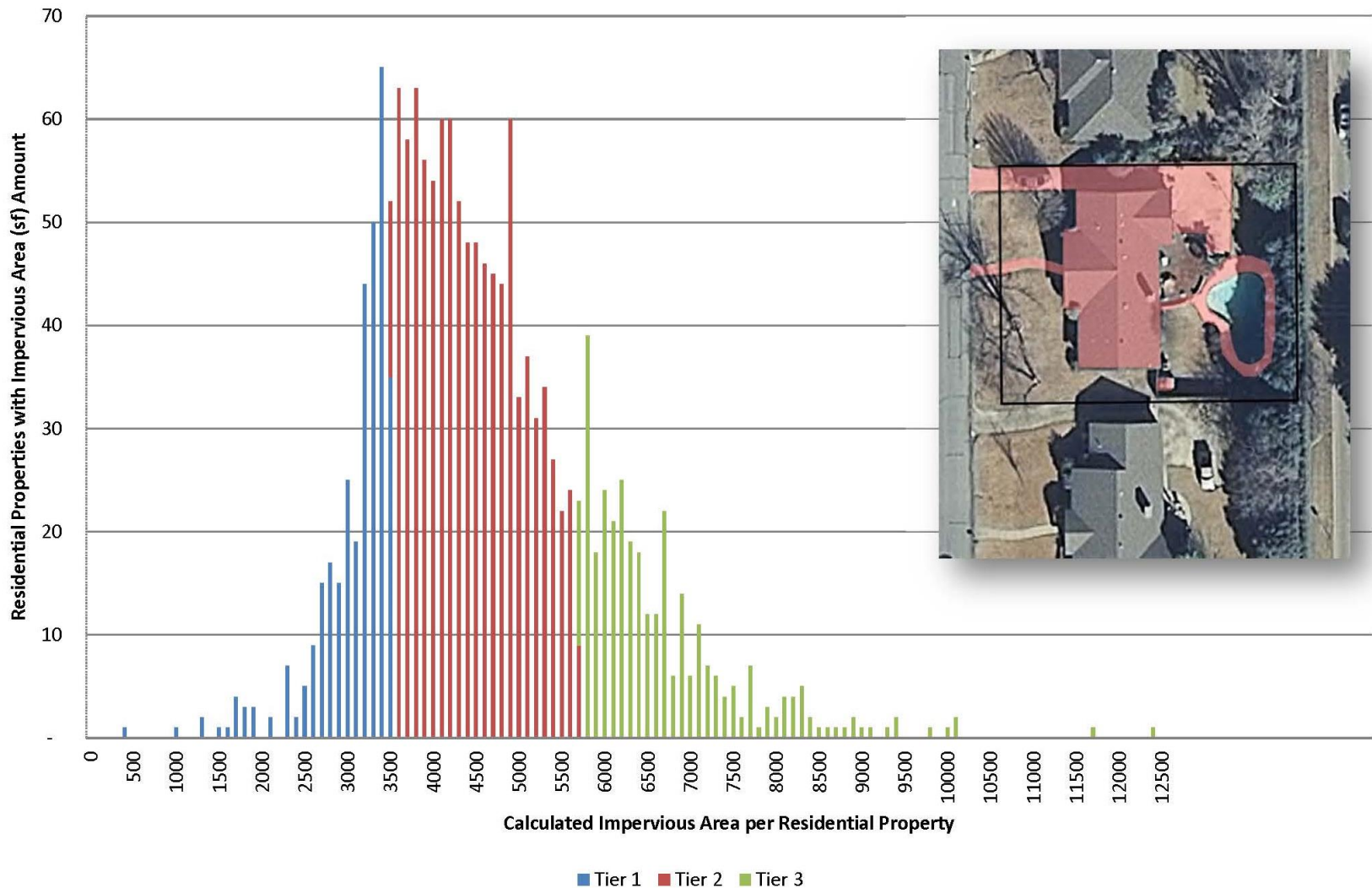
- 7,595 residential properties
- Sampled 100 residential properties
- Average residential impervious area: 4,000 sf

**ERU = 4,000 sf**





### Residential Distribution Frequency Fee Structure - 3 Tiers (20% - 60% - 20%)



# Residential Parcels

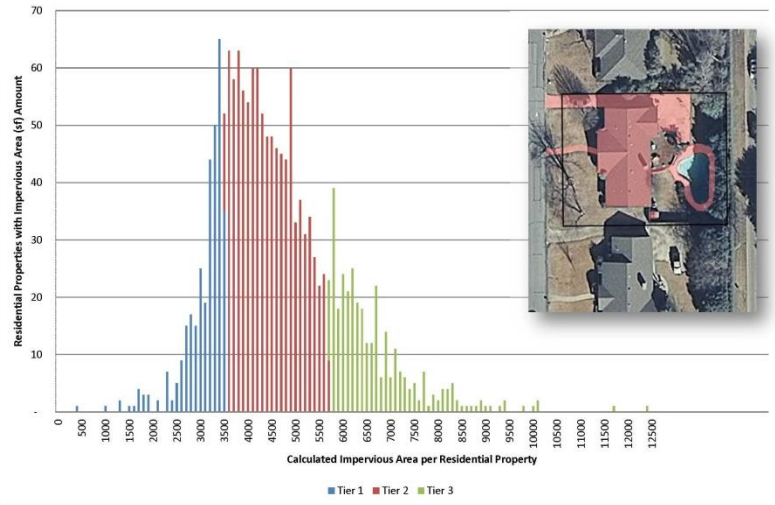


## Revenue Assessment

Tier	% in Tier	# Parcels
1	20%	1,444
2	60%	4,382
3	20%	1,460
	<b>100%</b>	<b>7,286</b>



Residential Distribution Frequency  
Fee Structure - 3 Tiers (20% - 60% - 20%)



# Residential Property Summary



Revenue  
Assessment

Residential Tier	%	# Parcels	Average Impervious Area (sf)	ERU/parcel	ERUs
1	20	1,444	2,650	0.67	968
2	60	4,382	4,000	1	4,382
3	20	1,460	6,340	1.60	2,321
	<b>100%</b>	<b>7,286</b>	--	--	<b>7,671</b>

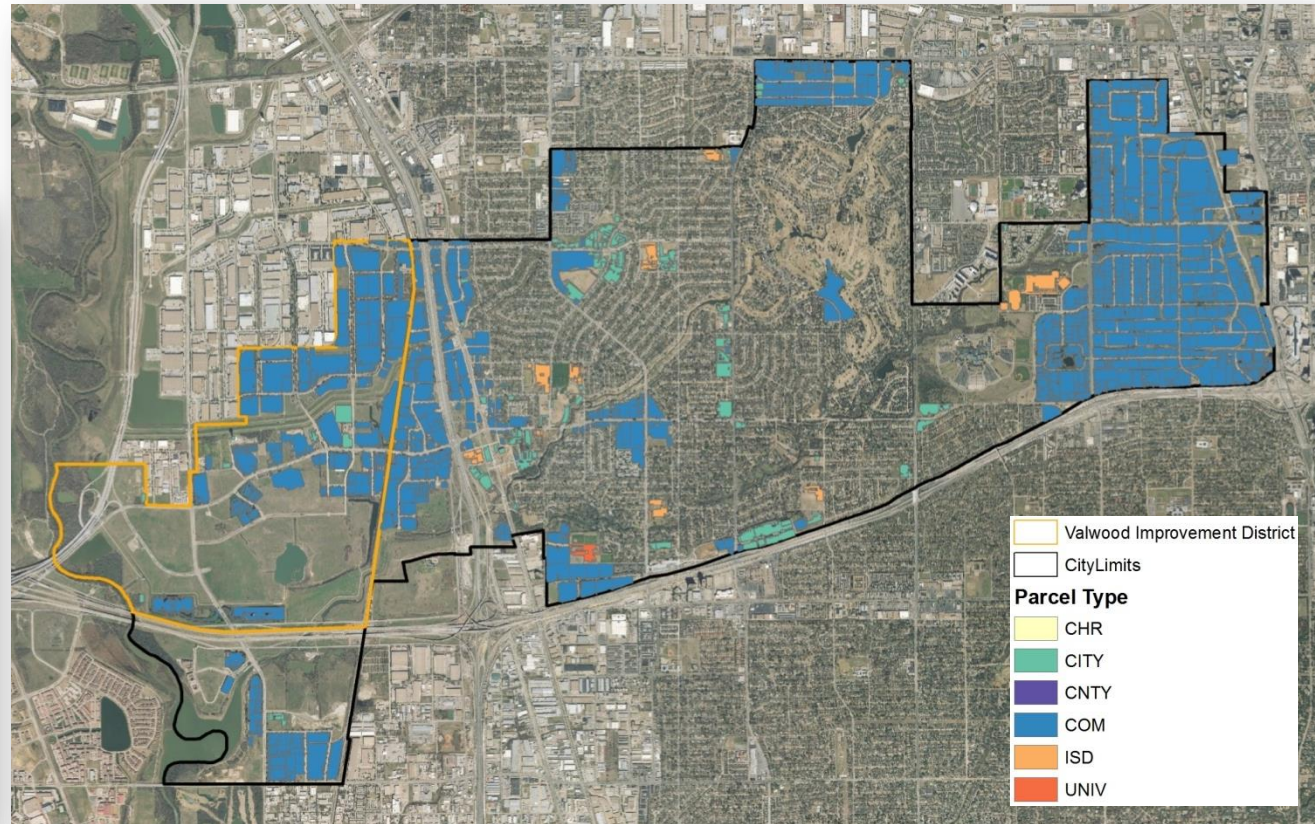
- 1 ERU = 4000 sf impervious area = Tier 2

# Non-single family residential property



Revenue  
Assessment

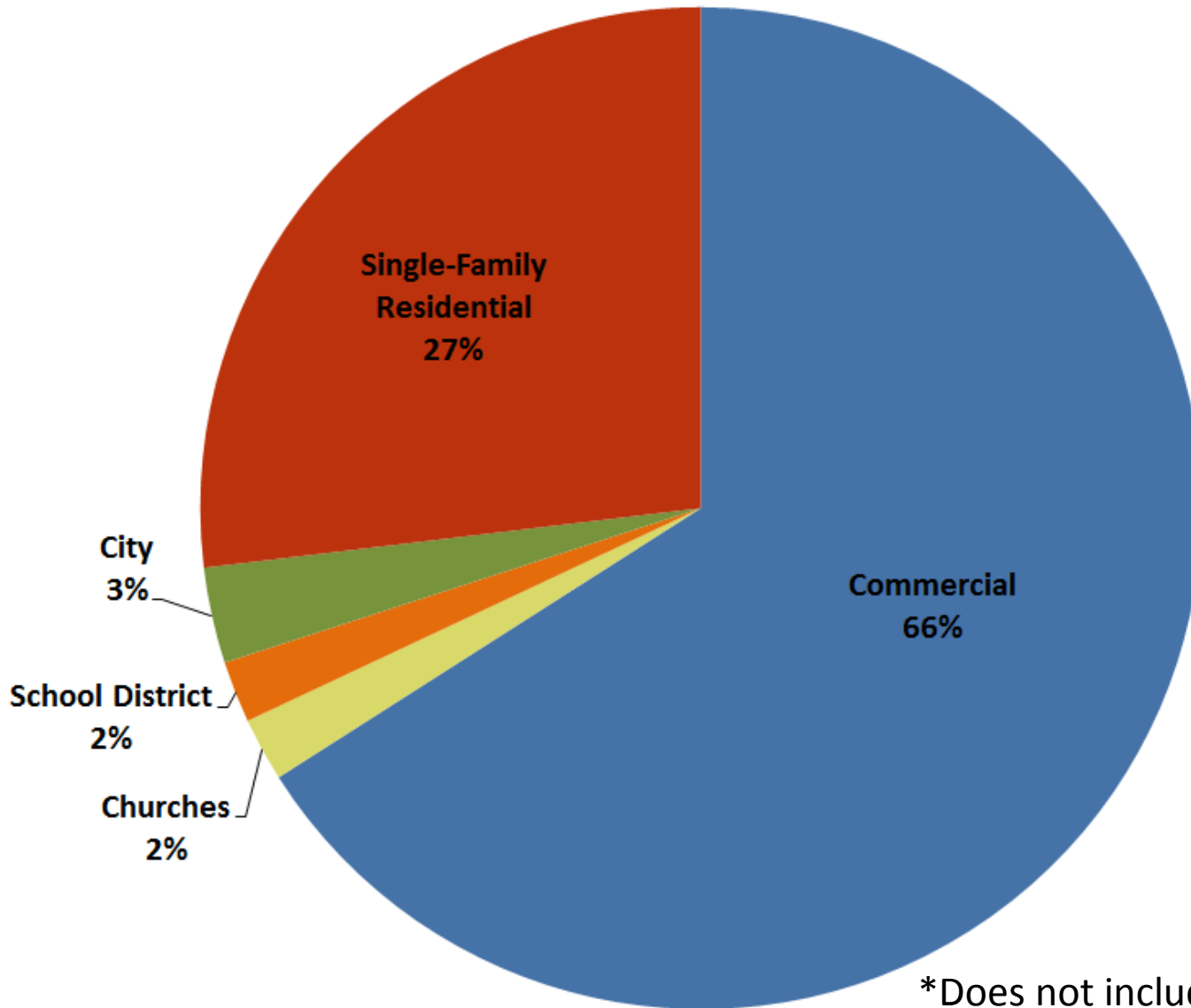
- Assessed property by property
- Approximately 21,000 ERUs in 700 non-single family properties



# Storm system use breakdown\*



Revenue  
Assessment

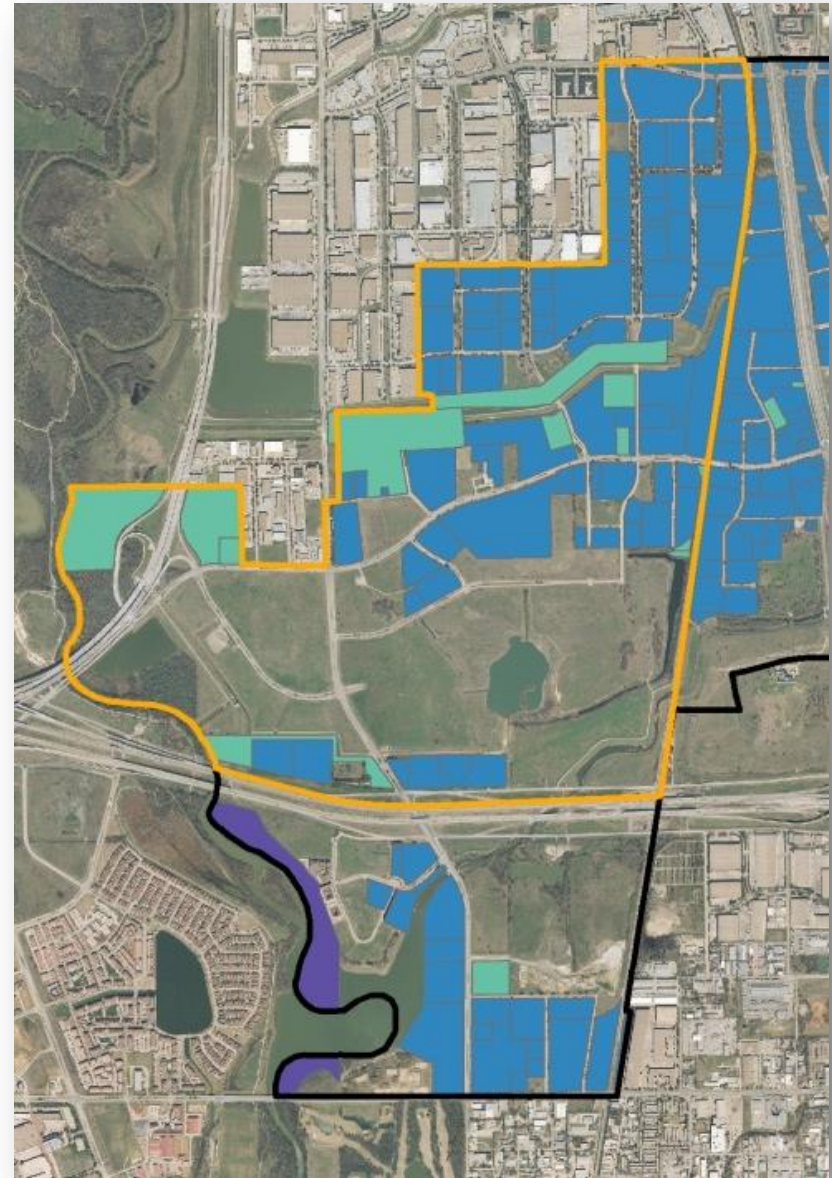
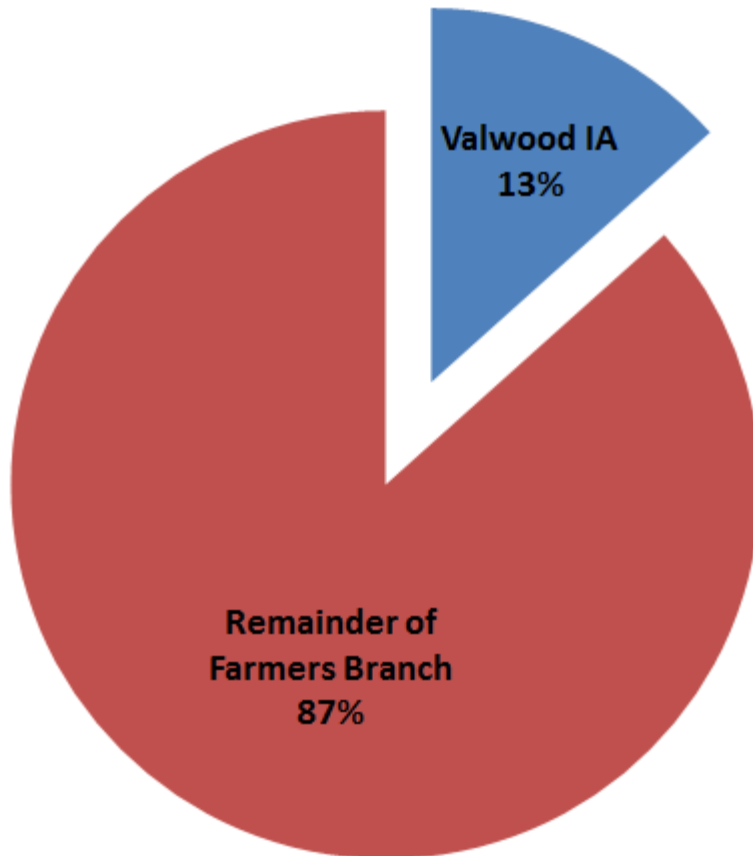


\*Does not include exempt properties (e.g. Brookhaven Community College)

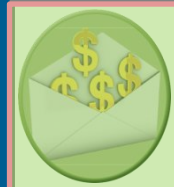




- Properties in VIA will not be charged in duplicate for services provided by VIA



# Exemptions



## Implementation Strategy

City Required to Exempt	City Allowed to Exempt	No Legal Basis for City to Exempt
<ul style="list-style-type: none"> <li>•Undeveloped property</li> </ul>	<ul style="list-style-type: none"> <li>•City property</li> </ul>	<ul style="list-style-type: none"> <li>•Federal property</li> </ul>
<ul style="list-style-type: none"> <li>•Property with no impact to City's storm system</li> </ul>	<ul style="list-style-type: none"> <li>•County property</li> </ul>	<ul style="list-style-type: none"> <li>•Businesses</li> <li>•(i.e., recruitment incentives)</li> </ul>
<ul style="list-style-type: none"> <li>•Institutions of higher education</li> </ul>	<ul style="list-style-type: none"> <li>•School district property</li> </ul>	<ul style="list-style-type: none"> <li>•Properties with no</li> <li>•water/sewer/trash service</li> </ul>
<ul style="list-style-type: none"> <li>•Subdivided lot under construction</li> </ul>	<ul style="list-style-type: none"> <li>•Tax-exempt religious institution property</li> </ul>	<ul style="list-style-type: none"> <li>•Disabled</li> </ul>
<ul style="list-style-type: none"> <li>•State property</li> </ul>		<ul style="list-style-type: none"> <li>•Veterans</li> </ul>
		<ul style="list-style-type: none"> <li>•Senior citizens</li> </ul>
		<ul style="list-style-type: none"> <li>•Low/fixed income</li> </ul>
		<ul style="list-style-type: none"> <li>•Other property types not specified in LGC 552 C</li> </ul>

\*per Texas Local Government Code (LGC) 552, Subchapter C

# Proposed Stormwater Utility Rates (\$/month)



**Implementation Strategy**

	<b>Service Level 1</b>	<b>Service Level 2</b>	<b>Service Level 3</b>
<b>Stormwater Services</b>	<b>O&amp;M Compliance</b>	<b>O&amp;M Compliance Minor CIP</b>	<b>O&amp;M Compliance Moderate CIP</b>
<b>Residential Rates</b>			
Tier 1 (Smallest 20%)	\$1.35	\$3.05	\$4.55
Tier 2 (Middle 60%)	\$1.95	\$4.50	\$6.75
Tier 3 (Largest 20%)	\$3.15	\$7.20	\$10.75
<b>Non-Single Family Residential</b>			
Monthly Rate per ERU	\$1.90/ERU	\$4.40/ERU	\$6.65/ERU
Example (McDonalds - 6 ERUs)	\$11.70	\$27.00	\$40.50
Example (Collision Masters - 41 ERUs)	\$79.95	\$184.50	\$276.75
<b>Total Annual Revenue</b>	<b>\$665,000</b>	<b>\$1,560,000</b>	<b>\$2,330,000</b>

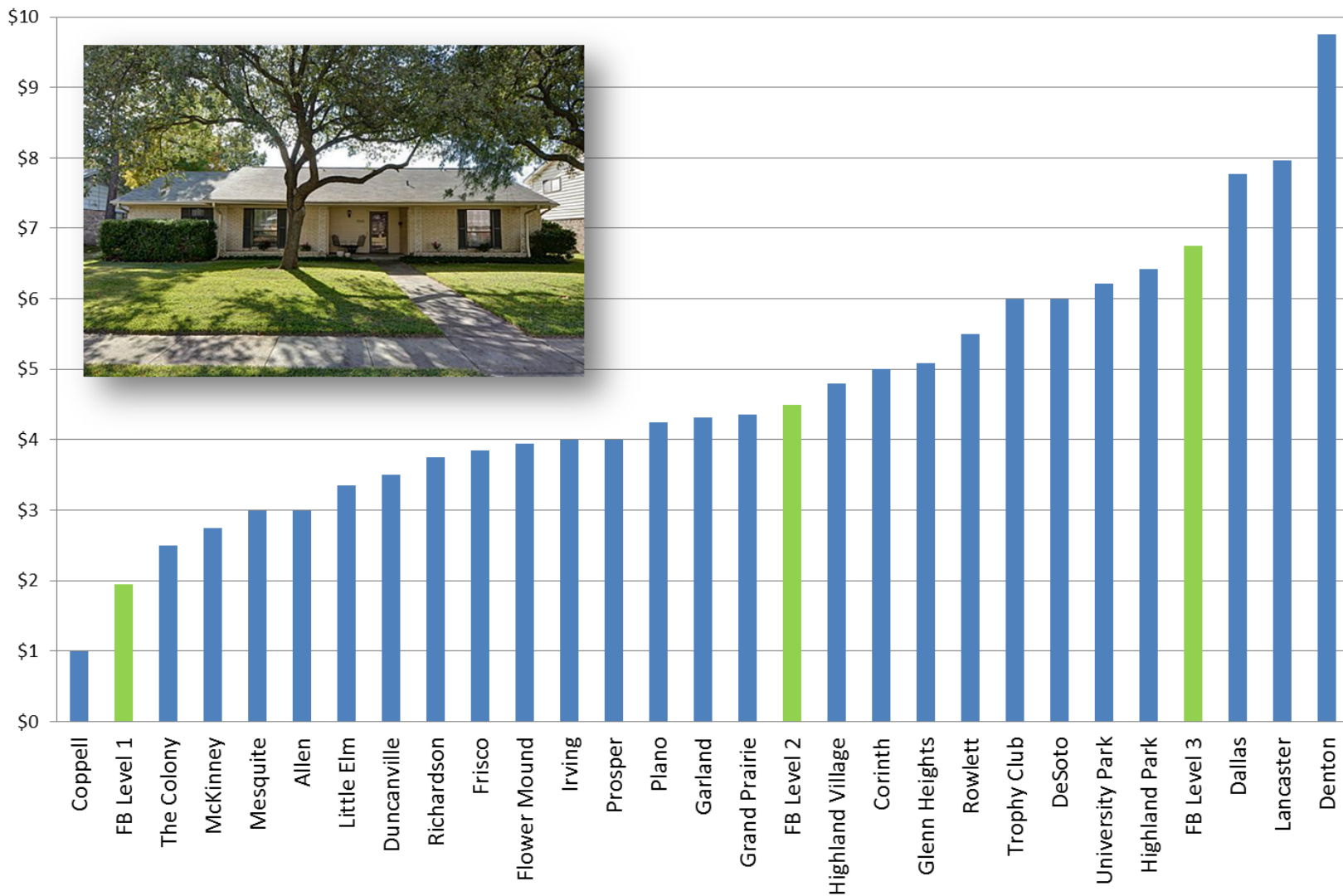
# Proposed Stormwater Utility Rates (\$/month)



Implementation Strategy

## Residential Monthly Stormwater Utility Charge for Selected Cities

(10,000 sq ft lot / 4,000 sq ft impervious area)



# Budgetary Integration of a New Storm Water Utility



## Implementation Strategy

- A new drainage utility fund would be established in City budget at rate adoption – beginning FY 2014-15 implementation
- All rate revenue would be deposited and tracked from this new fund
- Storm water/drainage expenses would be allocated as follows:
  - Identified expenses that are “fractional” will remain in General Fund and a prescribed interfund G&A transfer will be initiated to assign the cost burden to the Drainage Utility Fund
  - Key contractual expenses and the capital PayGo programs will be directly expenses from this new Drainage Utility Fund

# Next steps to implement storm water utility



Public  
Outreach

- **Today:** Receive City Council comments
- **January 2014:** Public information meeting
- **January 2014:** Publish public notices
  - 3 times before public hearing
  - begin at least 30 days before hearing
- **February 18, 2014:** Hold public hearing, consider ordinance adoption & rate resolution
- **May-June 2014:** City budget preparation
- **October 2014:** Assess fee as line item on monthly utility bill
- **FY 2014-2015:** Initiate service plan & capital program