

Storm Water/Drainage Utility: Public Hearing Background



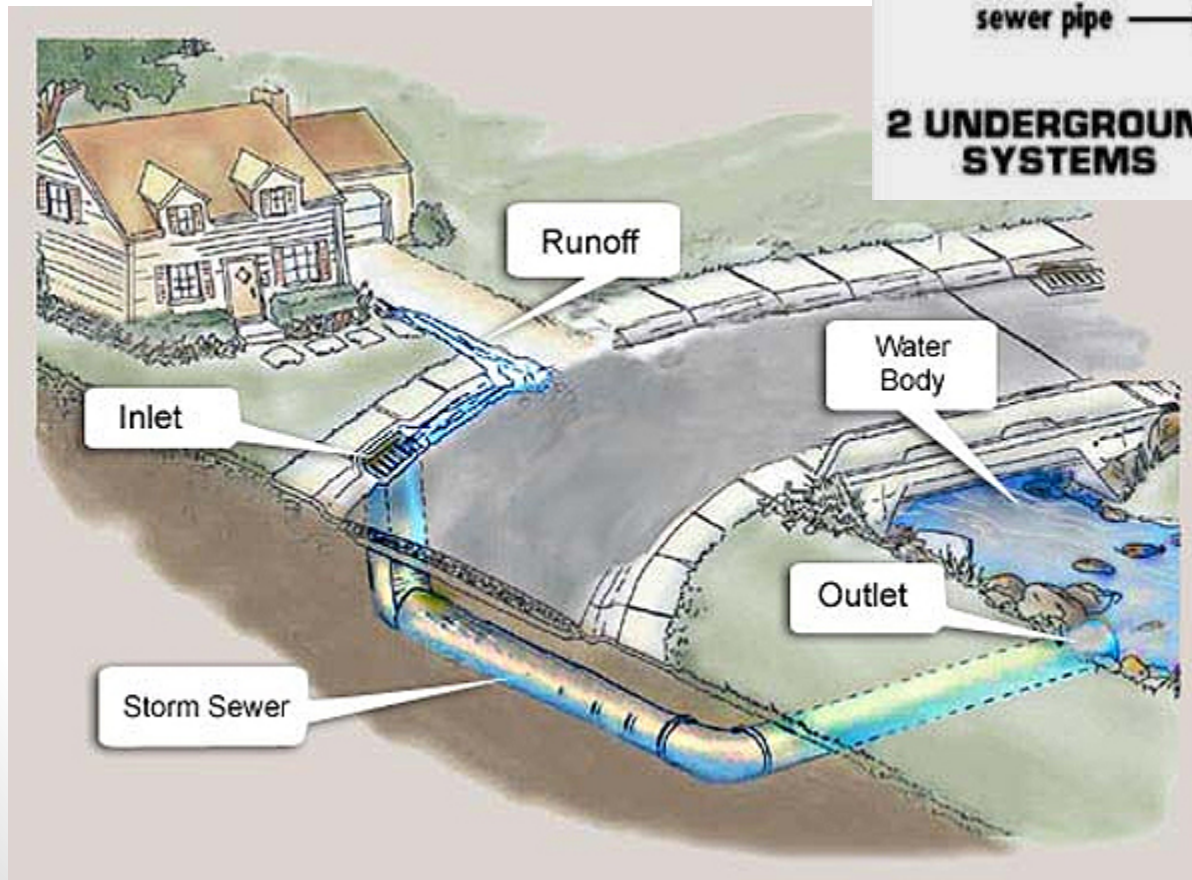
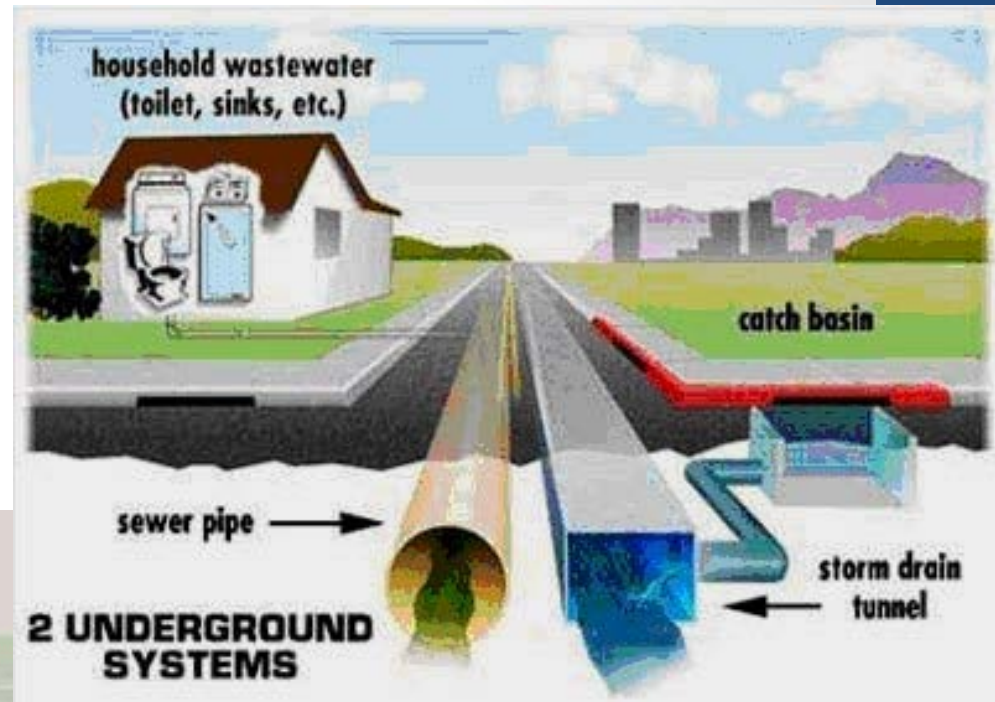
City of Richardson, Texas
City Council Work Session
November 28, 2011



Introduction

- Tonight has been posted for a **public hearing** as the City Council considers the adoption of a Storm Water Drainage Utility and related Rate structure for properties in Richardson.
- This hearing follows considerable review since 2008 on the development of a drainage utility for Richardson, involving periodic work sessions, news articles, web information, and notices.
- This utility system approach responds to ongoing maintenance and improvement obligations of the City's 12 drainage basins and imposed requirements of the U.S.-E.P.A. on cities
- Preparation of this Drainage Utility has been developed with direction from Texas Local Government Code 552 – Texas Municipal Drainage Utility System Act.
- Supplemental engineering services has been provided by Freese & Nichols Engineers – a recognized consulting service in this field.

Storm Water/Drainage System



- A mixed open and closed system of collection ways to transmit storm water to creeks / rivers / lakes / gulf/ocean.
- Not the wastewater sewer system.

Terms and Features



Inlet

Outfall Structure

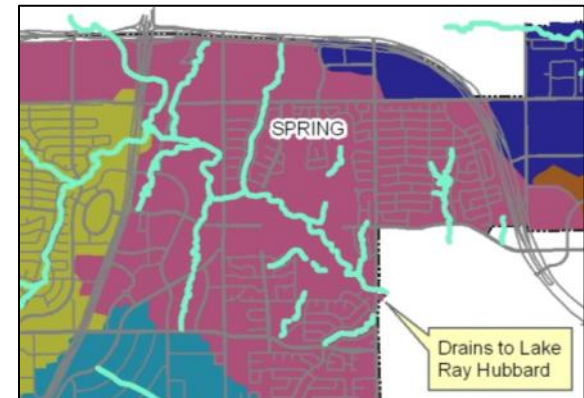


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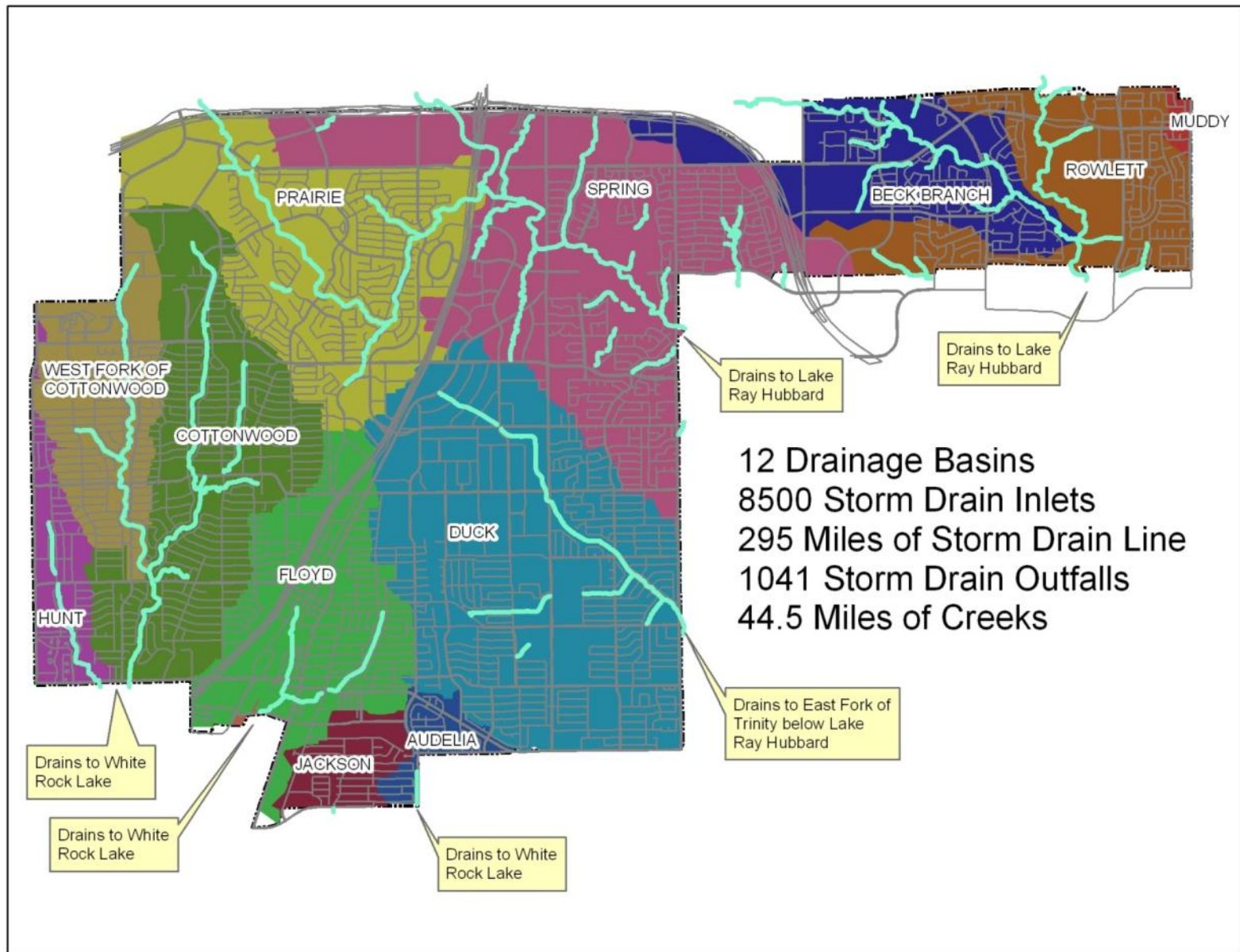


Box Culvert

Watershed/Basin

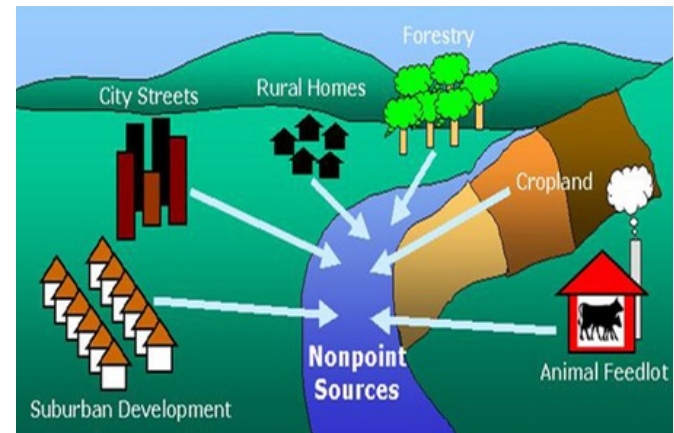


Richardson's Drainage Infrastructure

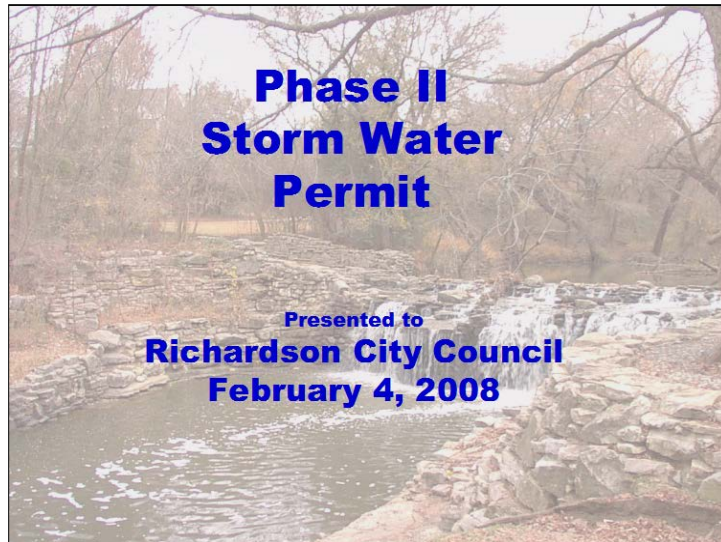


Background

- Storm water management practices have evolved since the early 1970's and continuously challenge local governments throughout the United States to **minimize pollution and other impacts to our lakes and streams.**
- For many years, the mandates focused on **“point”** sources (ie. key locations of private or public discharges.) Sewer treatment plants were a DFW-area focus.
- More recent attention has now moved to the wider **“non-point”** sources, focusing on general urban runoff into drainage systems.



Recap: *Regulatory Obligations*



- In Feb. 2008, the City Council was briefed on the City of Richardson's (a Phase II city) requirements & deadlines under the Texas Pollution Discharge Elimination System (TPDES) regulations.
- Key obligations included: pollution prevention, erosion management, public information, construction site mgt. etc.

Texas Pollution Discharge Elimination System (TPDES)



- State of Texas (TCEQ) component of National EPA Mandate
- Phased Permitting by Population Size (>100,000)
- **Initial Richardson Compliance Period: 2007-2008**
 - 5 Year Phased Program (Aug. 13, 2007)
 - Permitted Until 2012-2013
- ***Future Re-permitting/Renewal Period in 2012-2013***
 - *Renewal by Aug.13, 2012*
 - *Draft Requirements Now being Issued*
 - *Stronger/Added Requirements*
 - *Several Municipal “Housekeeping” Requirements Proposed*



TEXAS COMMISSION
ON ENVIRONMENTAL QUALITY

Storm Water Management

- The **Storm Water Management Plan** has impacted the City's operating budgets over the last several years as monitoring, maintenance and enforcement practices were put in place:
 - Expansion of existing services and best management practices
 - Additional development and redevelopment storm water design and review requirements
 - Increased construction storm water runoff permitting, inspection and record keeping procedures
 - Sustain maintenance levels for street sweeping & culverts and drainage way maintenance
 - Inspection, maintenance and or enforcement of storm water control structures

Richardson's Prior Attention to Drainage Support

- Important 1996 innovative **financial support policy** posture for City/Owner cost-sharing in support of Creek Erosion capital improvements to creek-side parcels (Res. #96-05).
- \$13 million of capital improvements were allocated through the 1997, 2006, and 2010 General Obligation element for **drainage/erosion improvement**, as well as \$1 million of the 2001 C.O. program for expedited **flood management** improvements.
- Urban Lakes & Creekway property **drainage system evaluation assessments**
- Staff monitoring and community advisory for private property **flood insurance** mapping updates by FEMA – Dallas County/Richardson & Collin County/Richardson efforts.

Motivations for Action

- Four key elements have shaped the timing and features of this Storm Water Utility Review by the City of Richardson:
 - ***Council's Initiatives/Goals Guidance***
 - ***Recent & Anticipated Texas Pollution Discharge Elimination System (TPDES) regulatory requirements***
 - ***Community Requests for Enhanced Drainage Support/Services***
 - ***The City's strengthened attention to environmental management and positive ecological practices and facilities***

Utility Creation Process

Guidance from Local Govt. Code (LGC 552)

- Evaluate need for Storm Water Utility
- Develop rate basis for fee schedule
 - Assess drainage runoff features by key property types
 - Evaluation of impervious surface/lot size areas of City
- Determine storm water service and infrastructure costs and revenue requirements
- Develop Storm Water Utility policies, billing processes and proposed ordinances
- Provide posting of draft ordinance & resolution in newspaper
- Hold public hearing regarding the creation of a storm water utility and the proposed fee schedule
- Adopt ordinances establishing the Storm Water Utility and associated fee schedule
- Initiate billing and enhanced workplan/services

Rate Making Summary

- Storm Water Utility Rates are typically based on runoff contributed by an average residential home. Lot size is typical proxy for residential criteria.
 - Expressed as **rate per residential lot**
- Non-residential rates are based on an equivalent residential rate through the use of a scaling factor based on the amount of impervious area for each property.
 - Expressed as **rate per 100 sf of impervious surface** as calculated



Storm Water Utility Objectives

- Establish a **formal utility structure** with fiscal and operating features to continue to sustain our **environmental and regulatory obligations** for storm water management practices
- **Enhance our annual storm water management work plan** and meet the community's capital improvement and maintenance expectations
- Allocate the related costs of storm water management services through **equitable rates** using the statutorily-provided guidance
- Acknowledge **remaining role of periodic G.O. Bond Program** for larger CIP drainage projects



Key Service & Project Elements

Operations

- Daily service administration
- Plan reviews
- Inspections & Compliance
- Inlet & conveyance debris removal/clean out
- Vegetation management
- Hazardous spill management
- Road surface debris removal
- Public Awareness and Outreach
- Engineering assessments and modeling
- Storm Preparation & Post-Event Response
- Pipe & Channel Repair

Capital Projects

- Flood control
- Erosion protection
- Storage and conveyance structures
- Velocity mitigation
- Storm water treatment structures
- Aeration & aquatic vegetation management
- Silt management & safe removal and disposal
- Bridge and Culvert Construction
- Spillways/Dam Structures

Rate Making Expense Elements

- City of Richardson Expense Elements:
 - Key Departments:
 - Public Services Department
 - Engineering Department
 - Health Department
 - Parks Department
 - Fire Department Hazmat
 - Communications Department
 - Services/Contracts:
 - Street Sweeping Operations
 - Street Sweeping Contract
 - Creek Mowing
 - Periodic Drainage Studies
 - Capital Projects Program:
 - Non-Bond PayGo Program
 - CIP Database: ~\$60 million - A & B Lists







Regional Rate Adoption Context

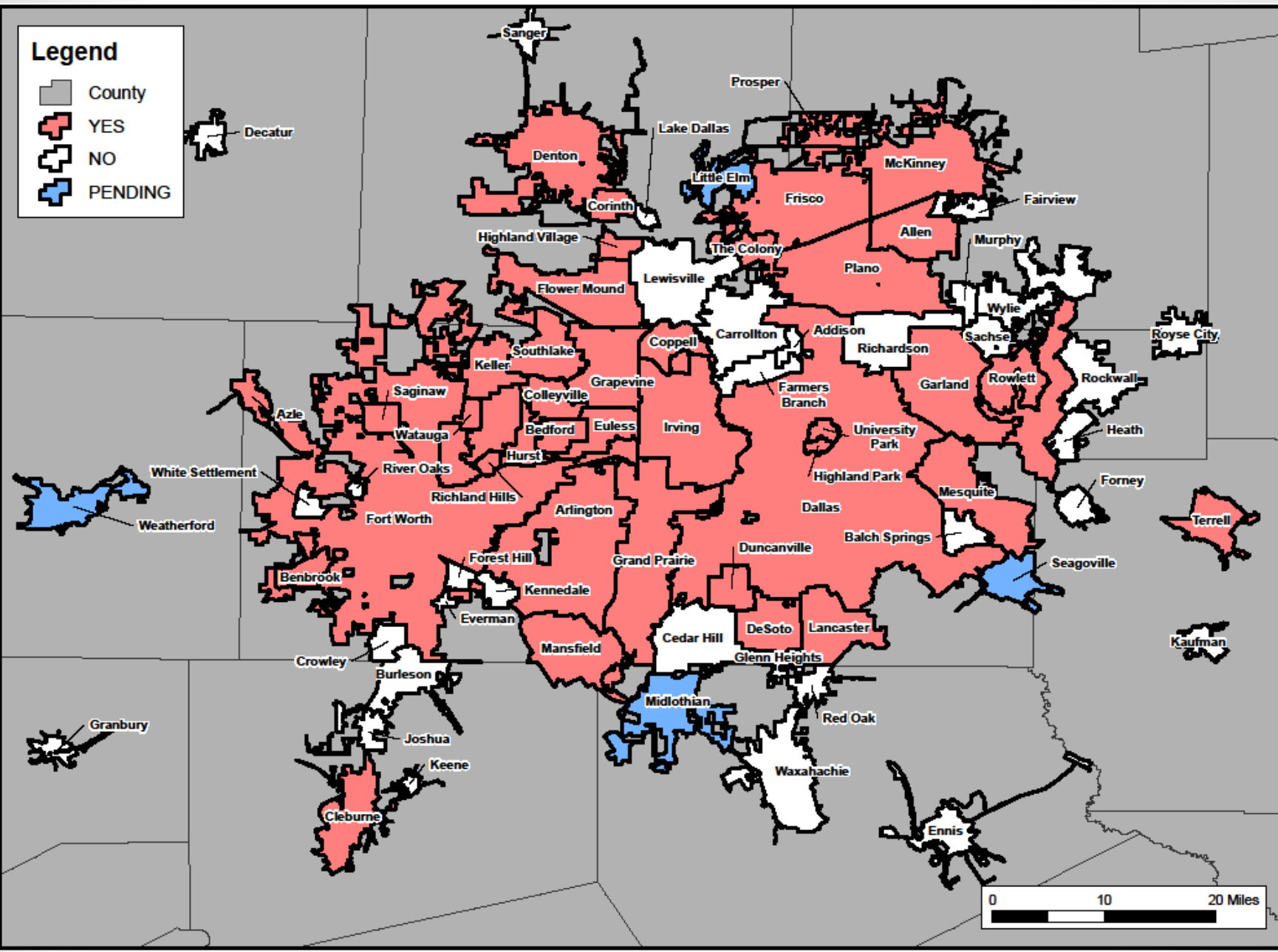
- Eleven of the Twelve Comparison Cities have activated a Drainage Utility Fee, including: Dallas, Ft. Worth, Arlington, Plano, Irving, Frisco, Garland, Grand Prairie, McKinney, Mesquite, & Allen.
 - These fees have been in place for several years.
- Majority of cities have established Storm Water Utility Systems with residential rates varying from \$2.00 to \$19.00 per month
- Most cities use storm water fee revenues for operations and maintenance and some capital expenditures.

12-City Review

City	Drainage Utility?	Avg. Res.
Allen	Yes	\$3.00
Arlington	Yes	\$4.25
Carrollton	-	-
Dallas	Yes	\$7.77
Ft. Worth	Yes	\$4.75
Frisco	Yes	\$2.00
Garland	Yes	\$2.88
Grand Prairie	Yes	\$4.30
Irving	Yes	\$4.00
McKinney	Yes	\$2.75
Mesquite	Yes	\$3.00
Plano	Yes	\$3.30
<i>Richardson</i>	TBD	TBD
		Survey Avg: \$3.82

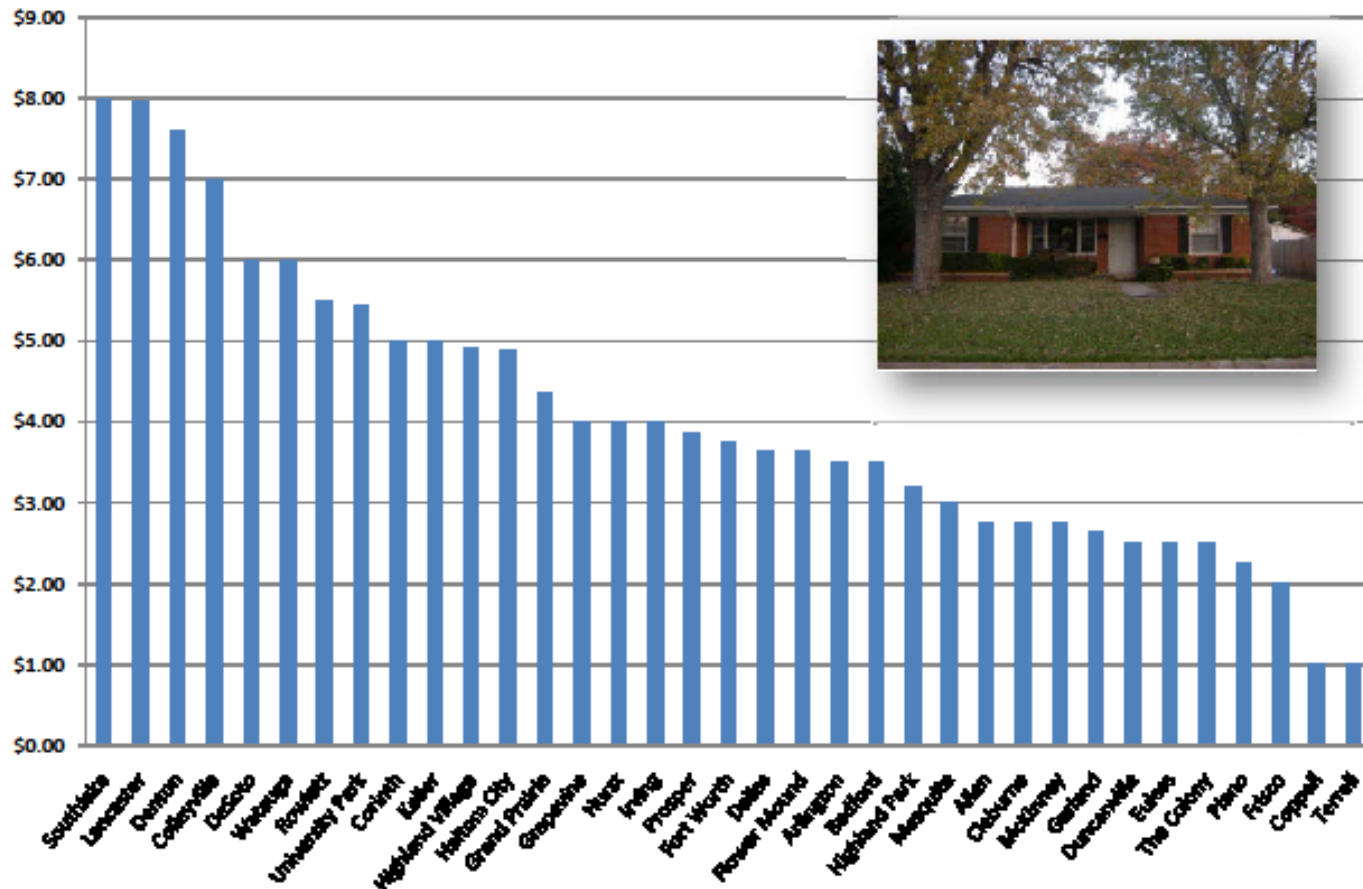
Legend

-  County
-  YES
-  NO
-  PENDING



Residential Monthly Stormwater Utility Charge for Selected Cities

(10,000 sq. ft. lot size/3,450 sq. ft. impervious area)



Land Parcel Review

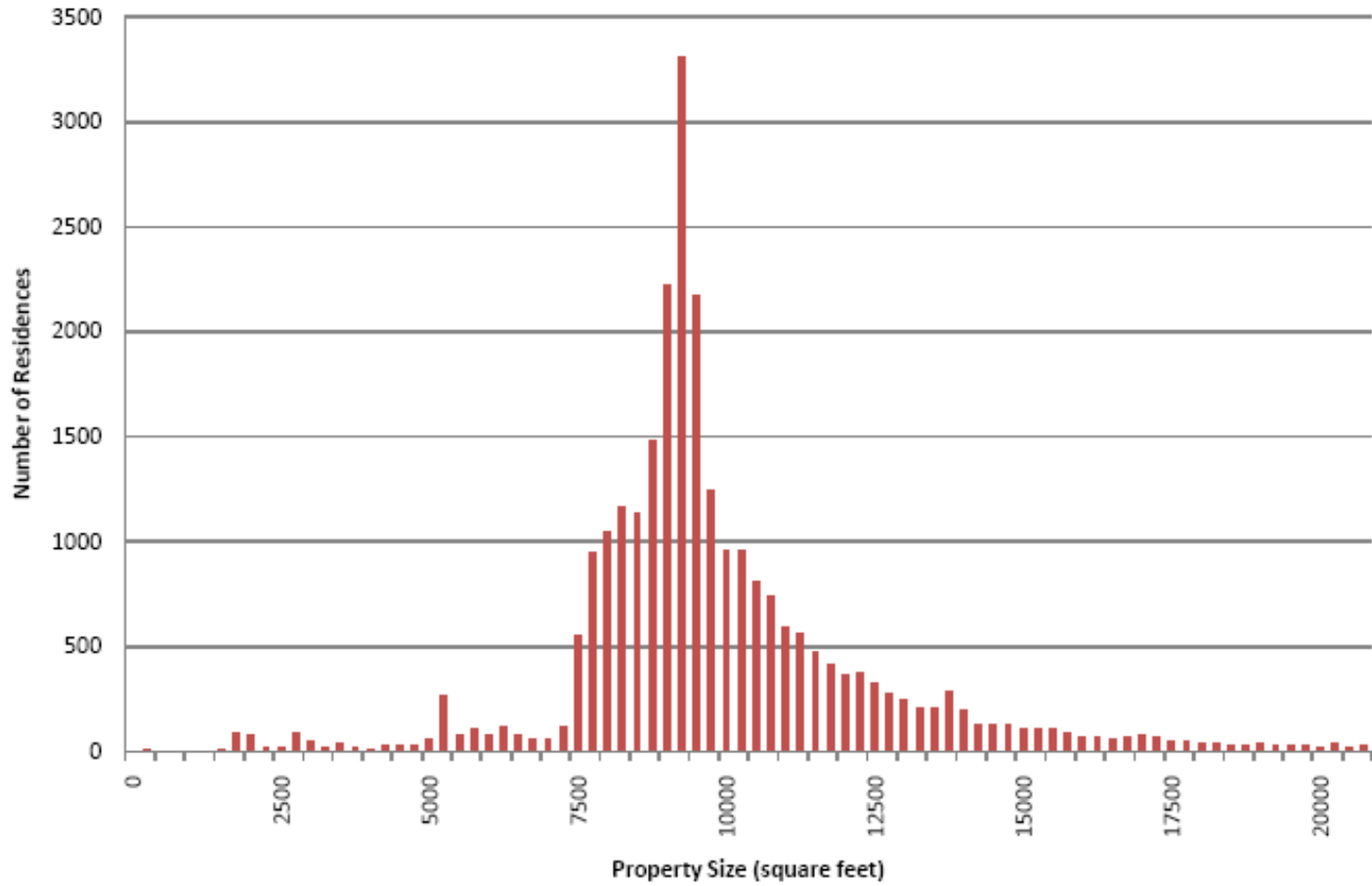
- Over this study period, staff and Freese & Nichols Engineering consultants reviewed Richardson's land parcel configurations:
 - Assessment of all property types
 - Sorting/grouping to determine “break-points” for possible rate grouping structure
 - Confirm from parcel data sampling that impervious surface follows lot size
 - Determine multiplier factor for commercial properties expressed as “residential equivalent” in rate per 100 sf of impervious surface
- Objective is to establish an equitable and reasonable allocation of fees for drainage program.

Key Assessments

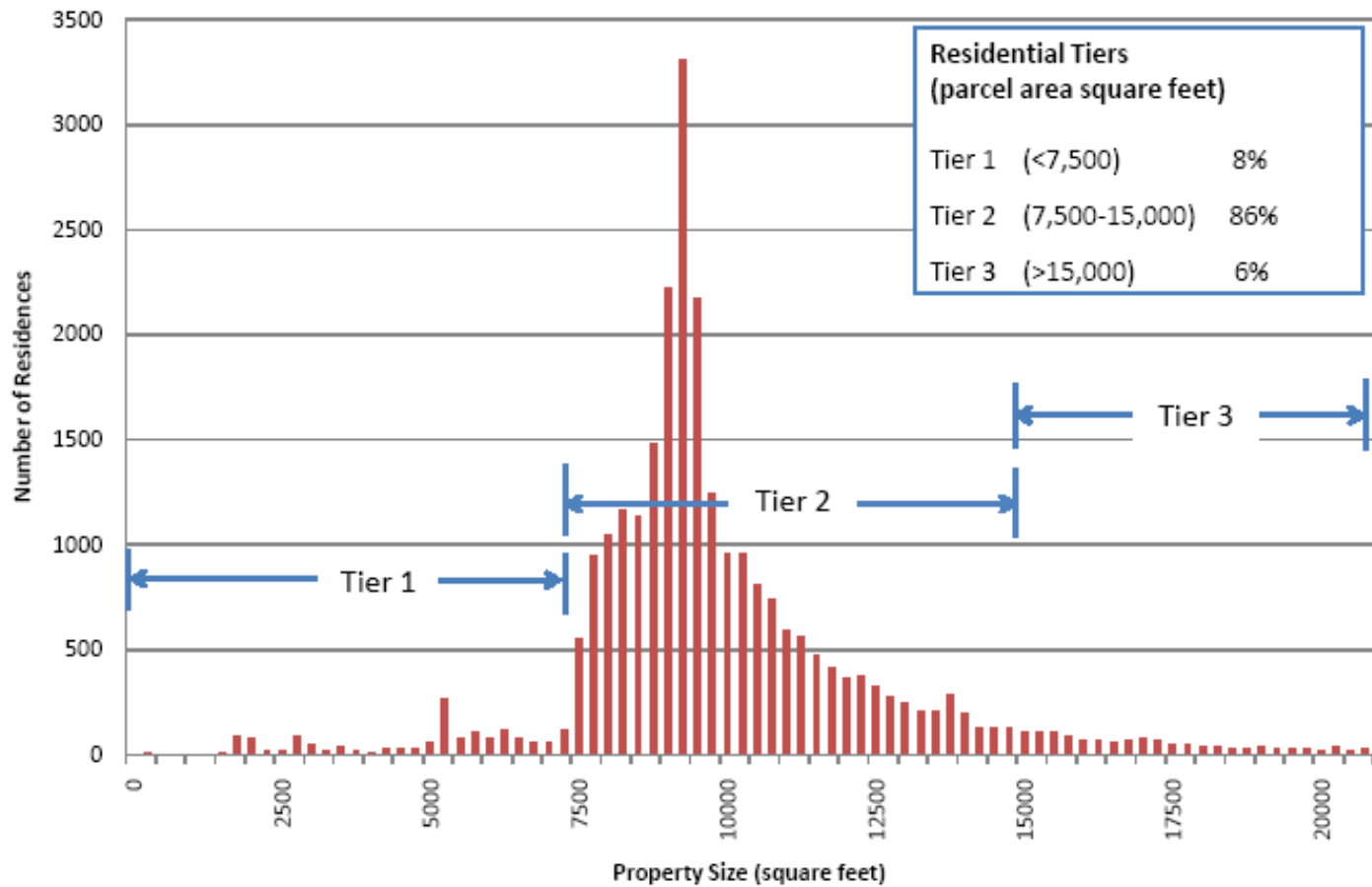
- 50% of impervious area is residential / 50% are non-residential
- Residential lots follow a “bell-shaped” curve
- Lots fall into three groupings:
 - Smaller than 7,500 sf...about 8%
 - A larger group around 7,500 to 15,000...about 86%
 - A remaining larger lot group above 15,000...about 6%
- Impervious portion of lots are about 2,600 sf to 3,500 sf for most lots...larger lots have larger impervious areas (4,475 sf).



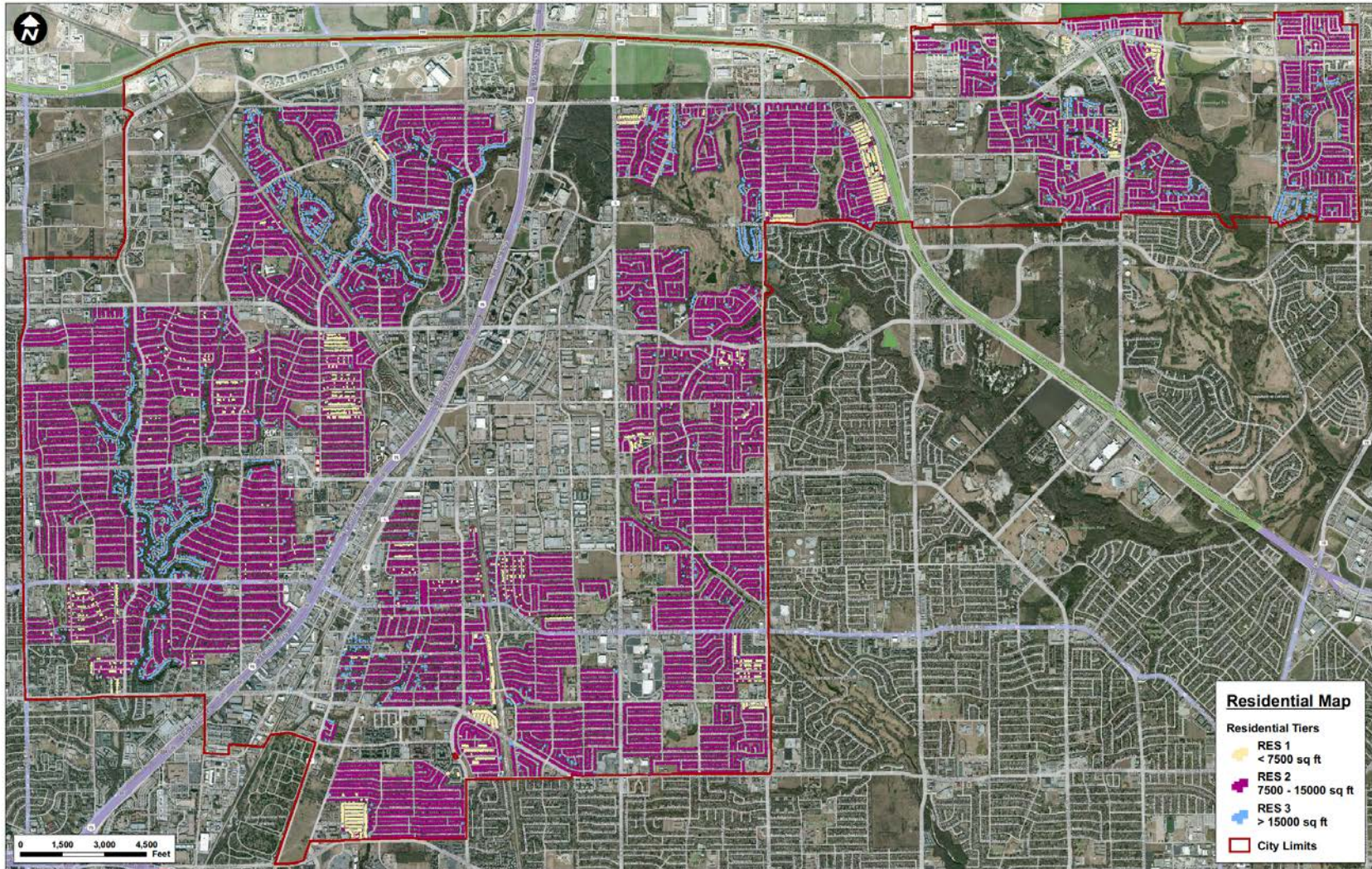
City of Richardson Residential Property Size Distribution



City of Richardson Residential Property Size Distribution



Residential Lot Types



Residential Features

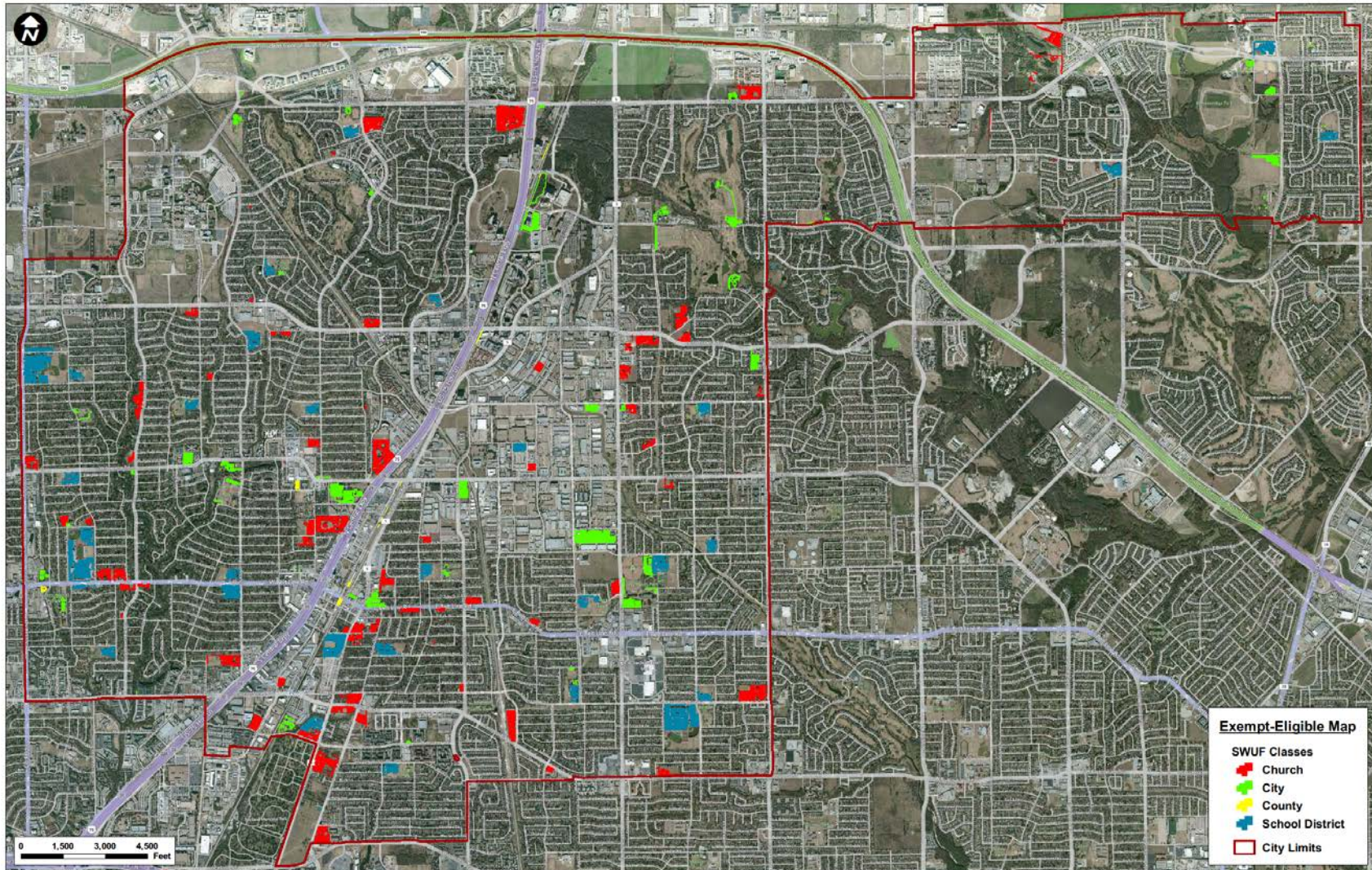
Residential Category	Parcel Category Limits	% of Residences	Impervious Area per Res. (sf)
R1	<7,500	8%	2,600
R2	7,500-14,999	86%	3,573
R3	15,000+	6%	4,475

Allowed/Recommended Exemptions

- School District properties are proposed for exemption: RISD & PISD
- Church Property is proposed for exemption
- UTDallas property is already exempt under state statute



Exemption Recommendations



Proposed Rates

- **Residential:** A three-tier structure is supported by data analysis. Tiers and relative rate factor provide equity in rate allocation.
 - **R1 - Rate of \$2.75/month**
 - **R2 - Rate of \$3.75/month**
 - **R3 - Rate of \$4.75/month**
- **Commercial:** A rate of **\$0.105/100 sf of impervious surface** as assigned by measurement.
 - Equivalent to avg. residential lot (middle tier). Individual commercial lot measurements will be performed.

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- **Billing:** Monthly charge will be placed on water/sewer account's monthly bill. Identified with separate line description/itemization on bill. Similar collection/payment features to current "water bill".

Annual Billing Impact

Example	Billing Unit	Annual Impact
Average Single Family Residential Parcel	\$3.75/month	\$45
Largest Apartment	\$0.105/100sf	\$11,805
Largest Comm. /Retail (only 8 over \$10,000 annually)	\$0.105/100sf	\$21,839

Budgetary Integration of a New Storm Water Utility

- A new **Drainage Utility Fund** will be established in City Budget at rate adoption – mid-2011-2012 implementation
- All rate revenue is deposited and tracked from this new fund.
- Storm water/drainage expenses will 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 expensed from this new Drainage Utility Fund
- A new Drainage Utility Fund Summary will become part of periodic budget reporting, annual budget preparation, and included in the annual audit/CAFR.
- With the mid-year initiation in 2011-2012 for this program and partial year receipt of revenues, a modified capital program will occur for this start-up year, but a full year program begins with next fiscal year: 2012-2013.

Key Richardson Work Plan Elements

Element	Amount/Yr.	
Annual Rate Revenue	\$2,500,000	<i>a</i>
Department Expenses	\$845,000	<i>b</i>
City Sweeping Operations	\$65,000	<i>b</i>
Street Sweeping Contract	\$290,000	<i>c</i>
<i>Sub-total</i>	\$1,200,000	
PayGo Capital Program/Year	\$1,300,000	<i>d</i>
Total Annual Program	\$2,500,000	

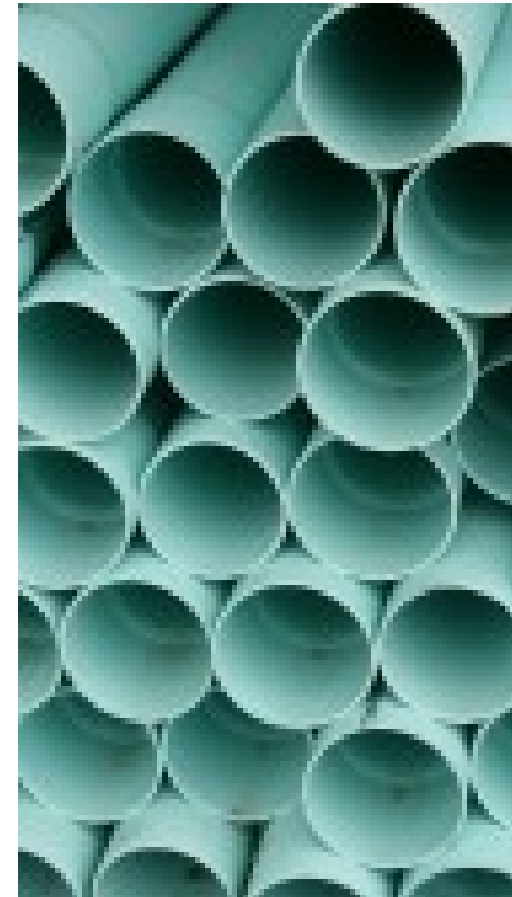
Notes

- *a. Annual collection estimate -net of recommended exemptions*
- *b. G&A elements in General Fund related to drainage services:

 - *Public Works, Parks, Engineering, Health, Communications, Fire**
- *c. Current contract to be moved to new Drainage Fund*
- *d. Annual PayGo allocation for annual programming*

Additional Contract Services – 5 Yr. Est.	
Watershed, Flood Prevention and Lake Studies	\$250,000
Water Quality (Debris Removal in Creeks/Public Info.)	\$250,000
System Maintenance (Vegetative Clearing/Inspection/Cleaning/Repair)	\$500,000
Sub Total	\$1,000,000
Capital Projects	
Vegetative Clearing - West Fork South of Campbell	\$100,000
Dumont Dr. at Hunt Branch Culvert Replacement	\$300,000
Aeration for Lakes	\$200,000
Hunt Branch Culvert - Belt Line to Cottonwood	\$880,000
Cottonwood Culvert at Wisteria	\$150,000
Cottonwood Culvert at Brentwood	\$600,000
Cottonwood Culvert at Melrose	\$1,100,000
West Fork Culvert at Melrose	\$400,000
1112 N. Floyd Erosion Repair	\$175,000
Sharps Farm Lake Rehabilitation	\$400,000
3109 & 3113 Springbranch Erosion Repair	\$70,000
Lawnmeadow Flood Prevention	\$900,000
Beck Branch Erosion Repair	\$70,000
Lamp Post Flood Prevention	\$165,000
Chippewa Flood Prevention	\$950,000
N. Waterview at West Fork Bridge Improvement	\$200,000
2305 Custer Parkway Erosion Repair	\$325,000
333 - 335 Ridgebriar Erosion Repair	\$135,000
Summit Dr. Flood Prevention	\$1,075,000
Waterview Dr. North of Cullum Erosion Repair	\$95,000
3329 Haylee Ct. Erosion Repair	\$100,000
Kirby Lake Rehabilitation	\$400,000
Silt removal from Park Lakes	\$355,000
Sub Total	\$21,445,000
Total Capital Program	\$22,445,000

Drainage PAYGO Capital Project Considerations



New Level of Drainage Service & Projects



Important Public Awareness Focus



Next time you are taking care of your yard, remember: it's important for all of us to make it a point to keep our storm drains clean and clear. You see, they're meant to carry rain water away and to help water flow easily away from your home during a heavy rain fall. The water that runs into and through the storm drain system is not treated. It goes straight to our waterways, and ultimately to Galveston Bay.

Don't blow it—bag or compost your leaves or grass clippings. And please, don't put anything—garbage, motor oil, paint, doggie doo or what-have-you—down the storm drain. Because it could wind up as "ewww" on you.

For more information call Harris County at (713) 290-3000 or log on to www.CleanWaterClearChoice.org



Clean waterways start here.



Notice and Preparation

- Prior TPDES & Drainage Utility Work Session briefings since February 2008
- Recent Work Session briefing on October 17, 2011
- *Richardson Today*
- *Mayor's Week in Review* item
- Web Page information
- *Dallas Morning News* publication
 - Draft Ordinance # 3843 – Drainage System
 - Draft Resolution # 11-33 – Rates
 - Published entire documents three times, as required:
 - Oct. 28, Nov. 4, Nov. 11.

Future Steps After Adoption



- Complete preparation steps for February 1, 2012 billing start with billing cycles
- Sustain drainage utility operations & public awareness programs
- Establish 2011-2012 mid-year start-up budget
- Evaluate partial year and new 2012-2013 Drainage Capital Improvement projects
- Prepare TPDES Renewal Permit materials – due by August 2012

