

Stormwater Utility Rate Study

Council Presentation February 13, 2012



Dunwoody's Stormwater Utility

- Dedicated funding source for storm water management
- Funded through assessment on property tax bill
- Current rate: \$48 per year per 3,000 s.f. of impervious surface. Flat rate for single family residential based on a median impervious area of 3,000 s.f.

Purpose of Stormwater Utility

**Maintain storm water
infrastructure**



**Satisfy Federal Clean Water
Requirements**



Infrastructure Maintenance



Pipes



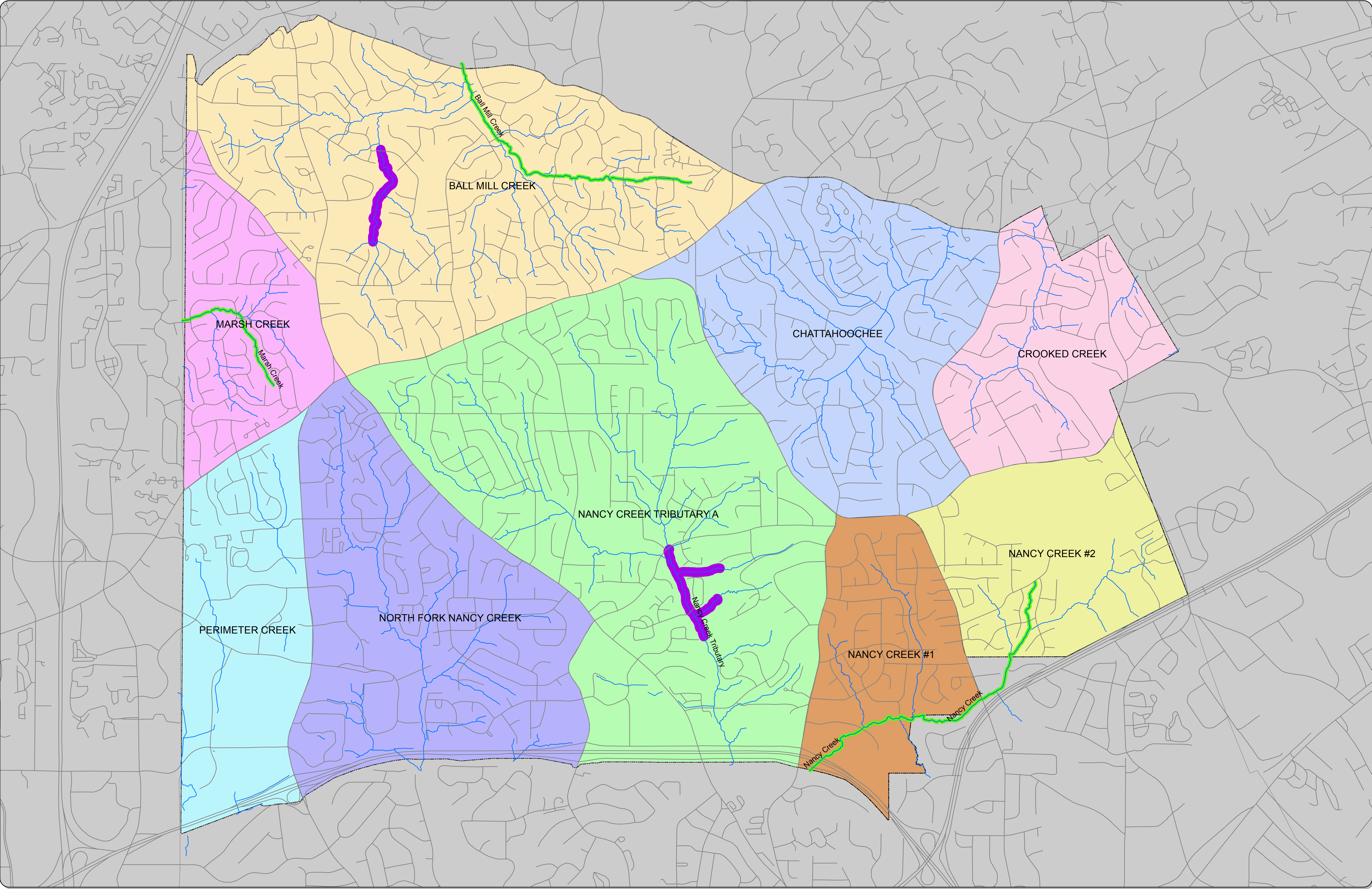
Curb,
Gutter
and
Drop
Inlet



Catch Basins

Federal Regulatory Requirements

- Clean Water Act of 1972 – federal legislation
 - Law called for zero discharge of pollutants with the goal of making the nation's water fishable and swimmable
 - Introduced National Pollutant Discharge Elimination System (NPDES), a permit system to regulate water pollutant discharge
- Water Quality Act of 1987
 - Required municipal storm water systems to obtain NPDES permits for storm water system discharge



Dunwoody
*Smart people – Smart city
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Dunwoody, Georgia 30346-1902
678-382-6850 ~ www.dunwoodyga.gov

Hydrology Map

**City of Dunwoody
Storm System**

11/30/2011

Legend

Streets

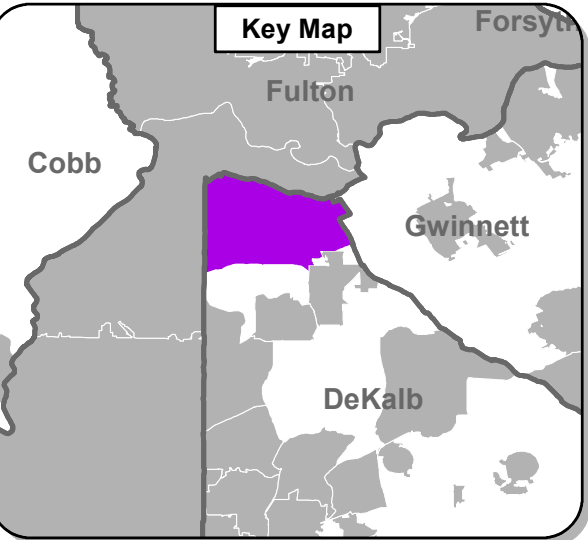
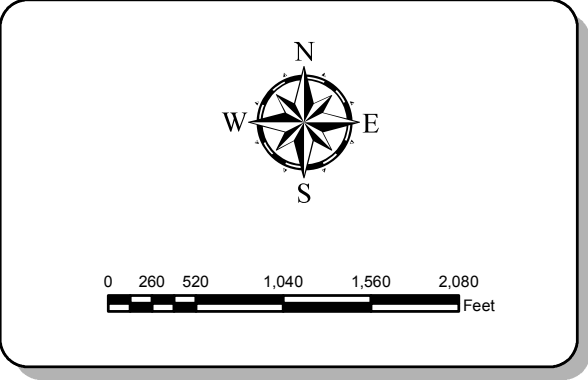
Streams

- Streams
- Impaired
- Stream Cleanup

Drainage Basins

- BALL MILL CREEK
- CHATTAHOOCHEE
- CROOKED CREEK
- MARSH CREEK
- NANCY CREEK #1
- NANCY CREEK #2
- NANCY CREEK TRIBUTARY A
- NORTH FORK NANCY CREEK
- PERIMETER CREEK

Dunwoody City Limits



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Production Notes:

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2. The compilation methods employed during the production of this map include, but are not limited to, the following cadastral mapping processes: plat and/or deed research, coordinate geometry, traditional area GPS field surveys and orthophoto rectification.

Aerial Imagery Notes:

1. Orthophoto imagery was created using aerial photography taken February 2010. The unprocessed imagery contains some degree of error in geometry (geometric distortion) and in the measured brightness of the pixels (radiometric distortion). Image rectification and restoration algorithms are applied during image processing to reduce the distortions and degradations that result from the original image acquisition. However, not all of the potential distortions and/or degradations will be corrected during this process. Therefore, exact interpretation of the map image features will require field verification by the map user.

Map Reference System Notes:

1. Horizontal coordinates are referenced to the Georgia West Zone State Plane Coordinate System relative to the North American Datum of 1983 (NAD83).

2. Vertical coordinates are referenced to the North American Vertical Datum of 1988 (NAVD88).

Revisions:

1. This map will be revised periodically by the City of Dunwoody. Should the user find conditions other than as shown, the City would appreciate your input. Simply copy the area in question, add your proposed revision and/or correction, and send the information to the City.

2. Updated sheet border with new City logo/tagline. (December 2010)

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Map Edition:

Map Publication Date:

Map Sheet:

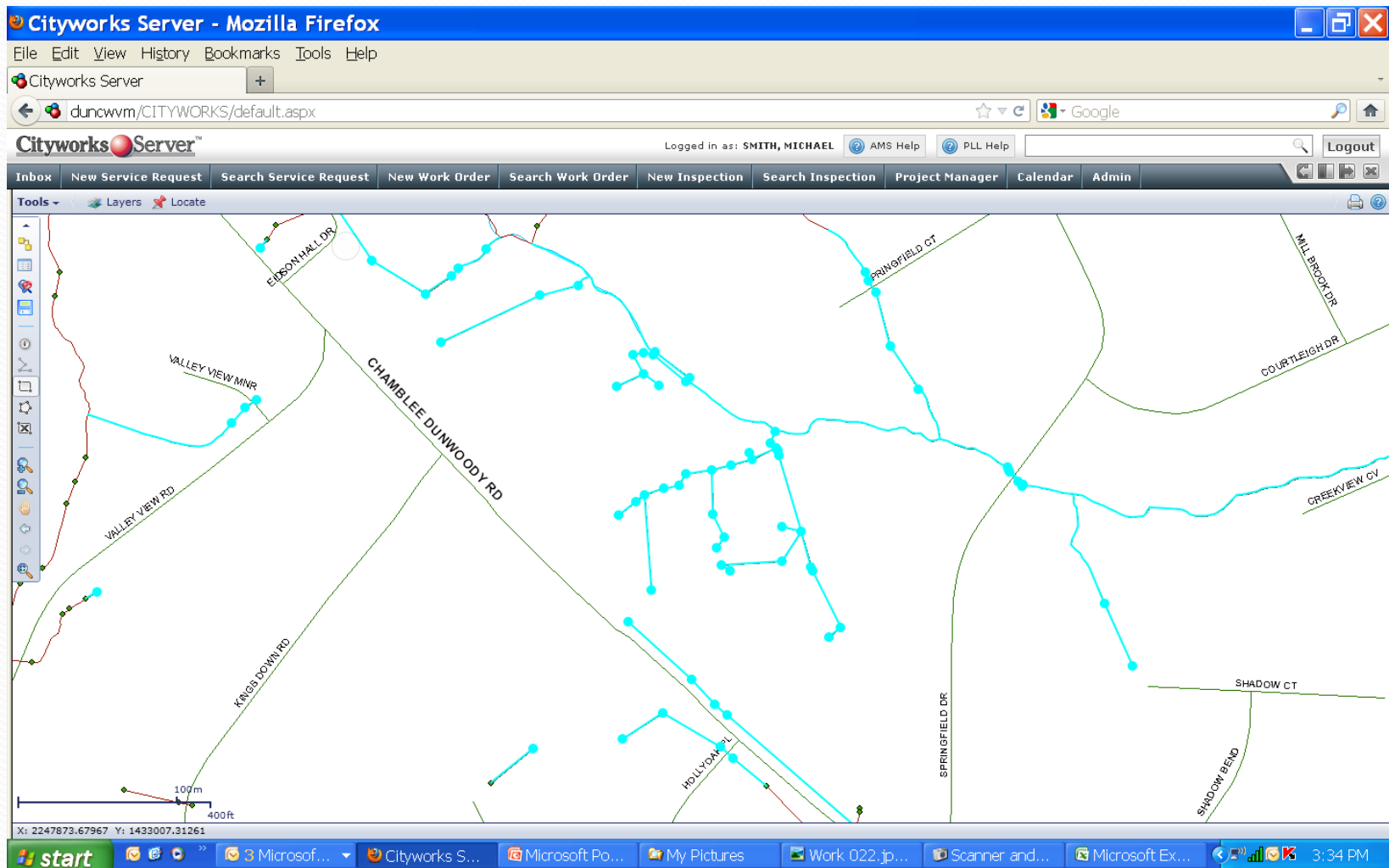
STRM

Dunwoody NPDES Permit Requirements

- Public Outreach and Education
- Public Involvement and Participation
- Illicit Discharge Inspection and Detection
- Construction Site Runoff Control
- Storm water management
- Pollution Prevention



Stormwater System Inventory



Stormwater System Inventory

SWConveyances_2011_06_08.xlsx - Microsoft Excel

	OBJECTID	ConveyShap	ConveyHgt	ConveyWide	ConveyLnth	Material	Owner	InstalDate	CondiAssess
74	8014	ROUND PIPE	24	24	180	RCP	DUNWOODY		GOOD
79	8019	UNKNOWN			39	OTHER	DUNWOODY		UNKNOWN
81	8021	ROUND PIPE	24	24	142	CMP (GALVANIZED)	DUNWOODY	5/13/1966	GOOD
82	8022	ROUND PIPE	24	24	35	CMP (GALVANIZED)	DUNWOODY	5/13/1966	GOOD
83	8023	ROUND PIPE	24	24	103	CMP (GALVANIZED)	DUNWOODY	2/25/1969	GOOD
84	8024	TRAPEZOIDAL CHANN			236	POURED CONCRETE	DUNWOODY	2/25/1969	GOOD
85	8025	ROUND PIPE	15	15	44	CMP (GALVANIZED)	DUNWOODY	2/25/1969	GOOD
86	8026	ROUND PIPE	36	36	268	CMP (GALVANIZED)	DUNWOODY	2/25/1969	GOOD
87	8027	ROUND PIPE	30	30	32	CMP (GALVANIZED)	DUNWOODY	2/25/1969	GOOD
88	8028	ROUND PIPE	30	30	22	CMP (GALVANIZED)	DUNWOODY	2/25/1969	GOOD
89	8029	ROUND PIPE	30	30	98	CMP (GALVANIZED)	DUNWOODY	2/25/1969	GOOD
90	8030	ROUND PIPE	42	42	25	CMP (GALVANIZED)	DUNWOODY	2/25/1969	GOOD
91	8031	ROUND PIPE	18	18	53	CMP (ALUMINIZED)	DUNWOODY		GOOD
92	8032	ROUND PIPE	24	24	88	CMP (GALVANIZED)	DUNWOODY	5/13/1966	GOOD
93	8033	ROUND PIPE	15	15	35	CMP (GALVANIZED)	DUNWOODY		GOOD
94	1	ROUND PIPE	60	60	16	CMP (GALVANIZED)	DUNWOODY		GOOD
95	2	ROUND PIPE	60	60	35	CMP (GALVANIZED)	DUNWOODY		GOOD
96	3	ROUND PIPE	60	60	17	CMP (GALVANIZED)	DUNWOODY		GOOD
97	4	ROUND PIPE	60	60	25	CMP (GALVANIZED)	DUNWOODY		GOOD
98	5	ROUND PIPE	60	60	29	CMP (GALVANIZED)	DUNWOODY		GOOD
99	6	ROUND PIPE	60	60	23	CMP (GALVANIZED)	DUNWOODY		GOOD
100	7	TRAPEZOIDAL CHANN 2		36	87	BRICK	DUNWOODY		GOOD
101	8	NATURAL CHANNEL			31	OTHER	DUNWOODY		UNKNOWN
102	9	NATURAL CHANNEL			9	OTHER	DUNWOODY		UNKNOWN
103	10	ROUND PIPE	30	30	22	CMP (GALVANIZED)	DUNWOODY		GOOD
105	12	TRAPEZOIDAL CHANN 4		36	7	BRICK	DUNWOODY		GOOD

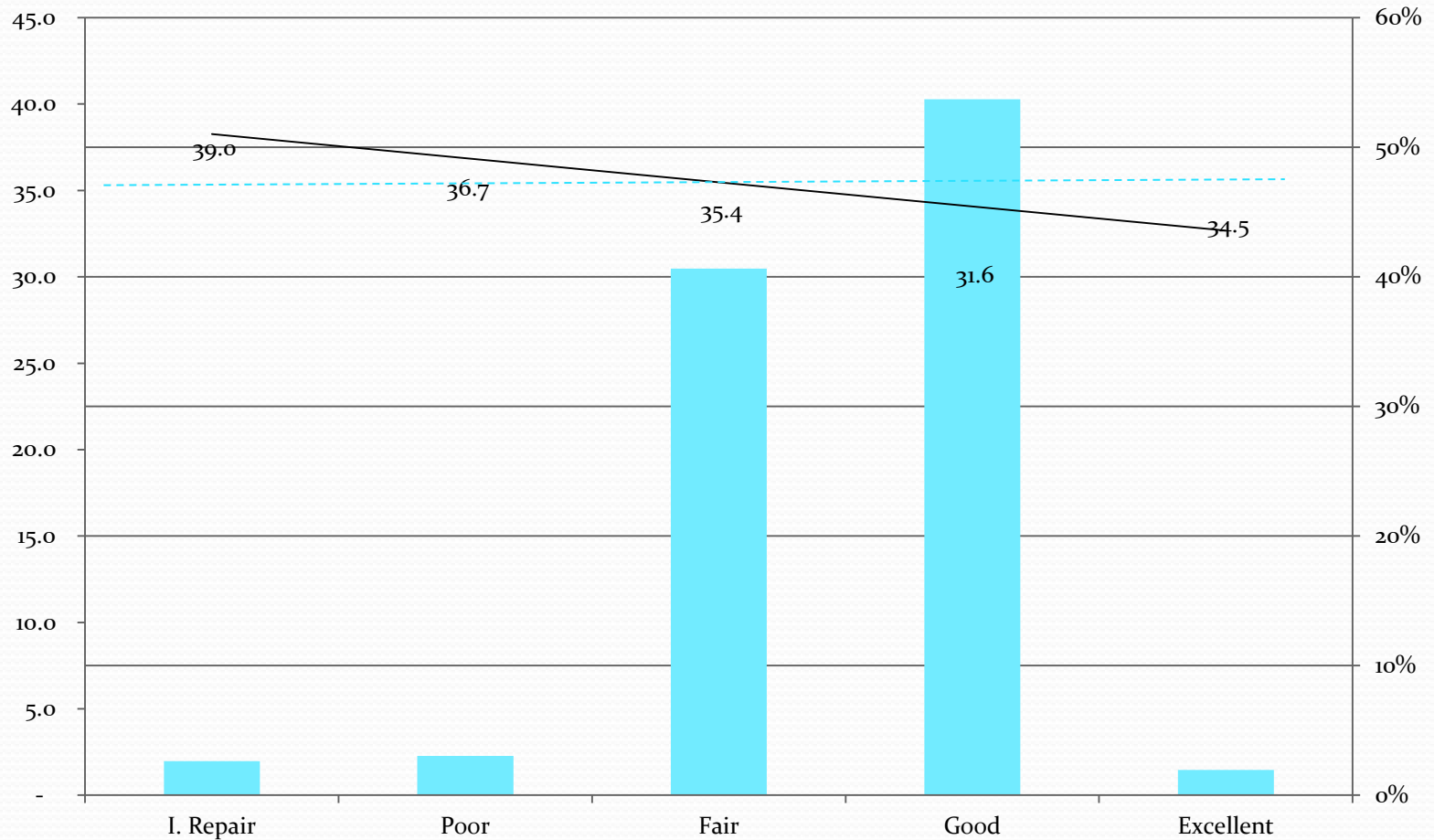
Dunwoody Storm Water System

Type	Number
Public and private structures and pipes	18,700
City-maintained structures	5,700
City-maintained pipes	4,500 (69 miles)
City Corrugated Metal Pipe (CMP)	3,184 (50 miles) 70% of system



CMP

Condition of System



Legend

- DWYStreetCenterlines_2011_07_28
- DCStrahlerStreams
- City of Dunwoody

City Owned Structures

Condition Assessment

- IMMEDIATE REPAIR
- POOR

City Owned Conveyances

Condition Assessment

- IMMEDIATE REPAIR
- POOR

0 1,000 2,000 4,000 6,000 Feet

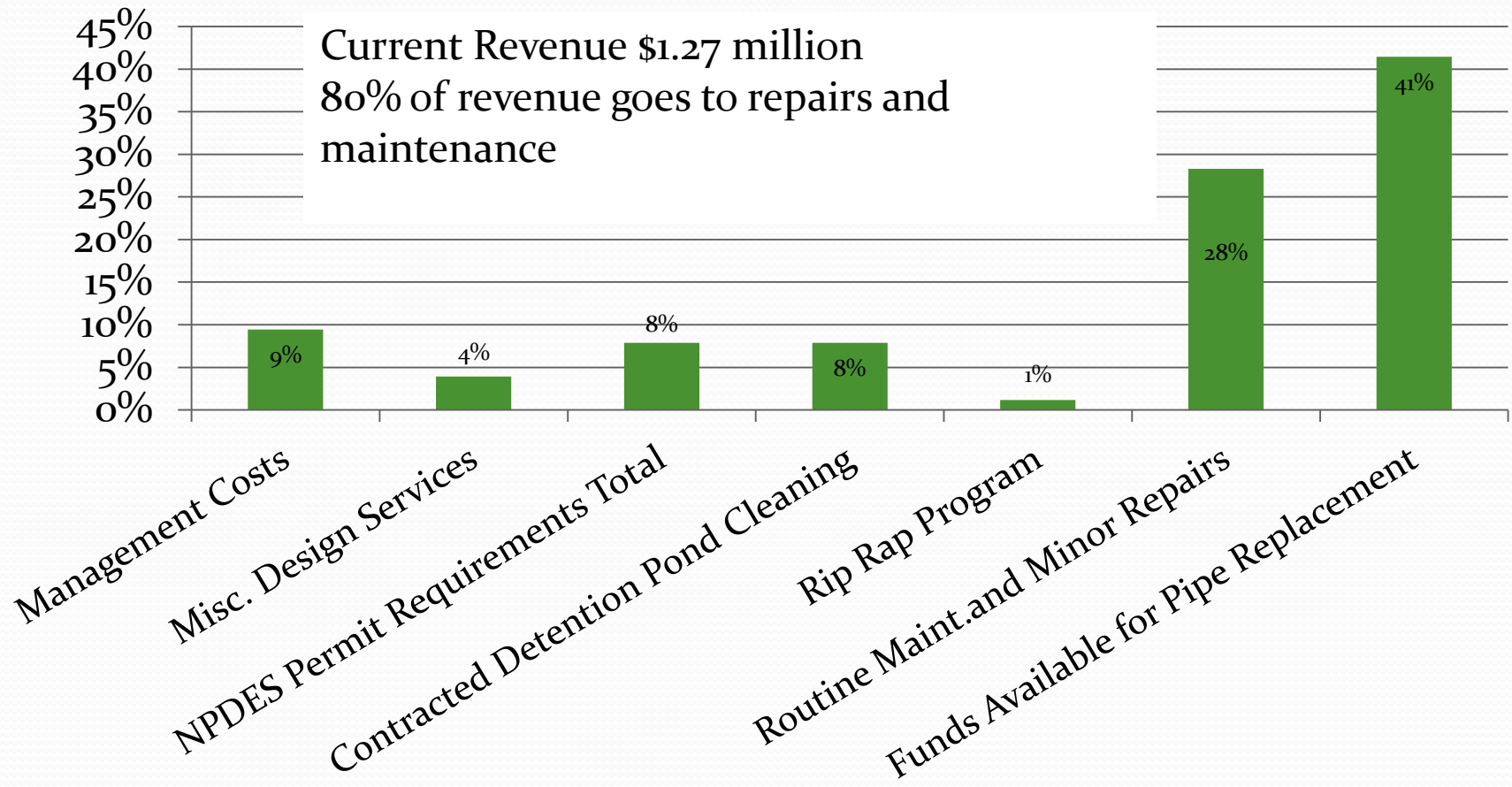
COBB FULTON GWINNETT DEKALB

CITY OF DUNWOODY

Low Engineers, LLC
December 15, 2011



Current Financials





Stormwater System Annual Replacement Cost

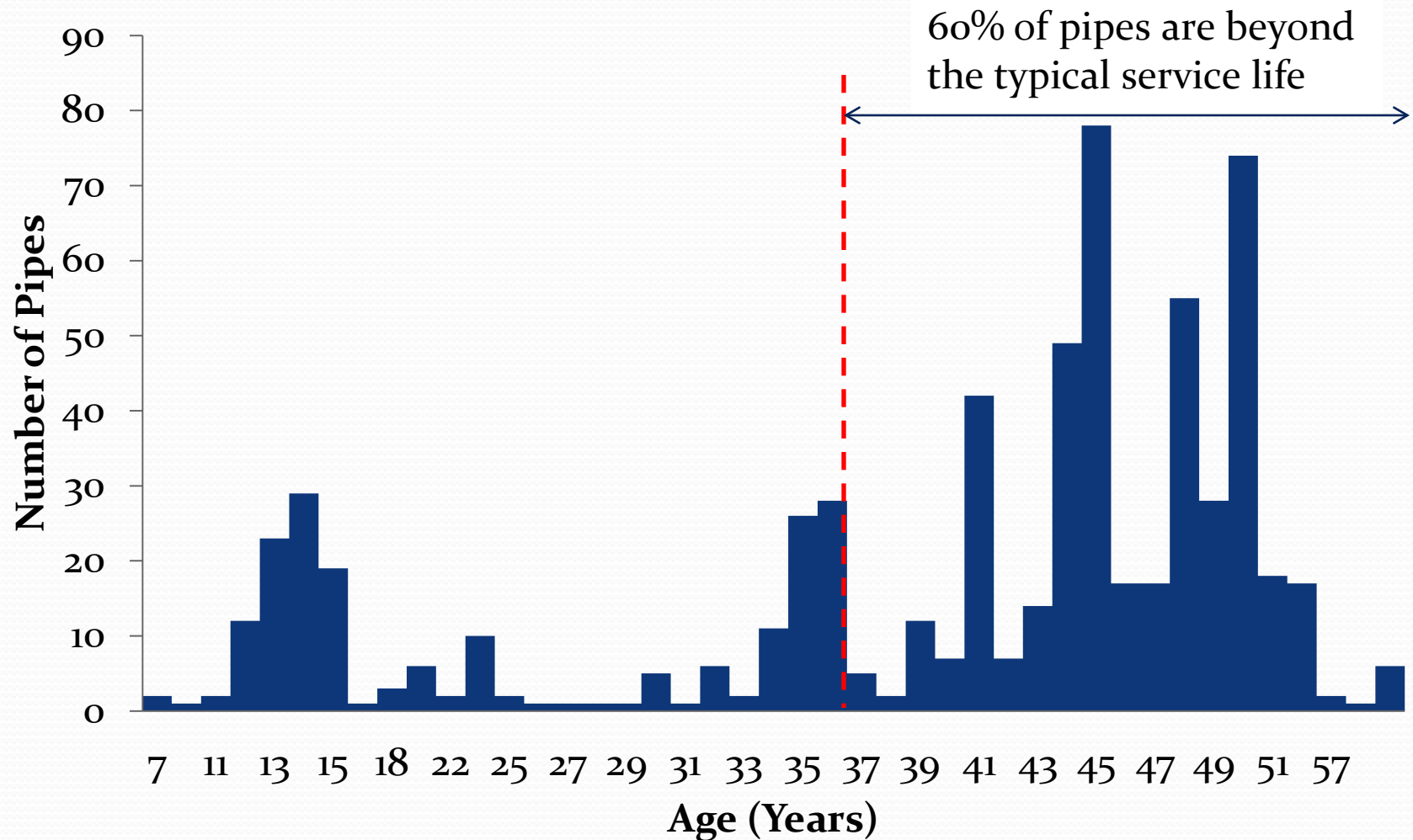
Total Estimated Replacement Cost	\$87,000,000
Annual replacement project funding need on 35 year service life	\$1,500,000
Current funding for replacement	\$525,000



Current Replacement Project Backlog

Cost for Current Project Backlog	\$1,800,000
Years to Complete at Current Funding	3
Replacement of assets currently in Poor condition	Additional \$1,500,000
Total Backlog	6 years

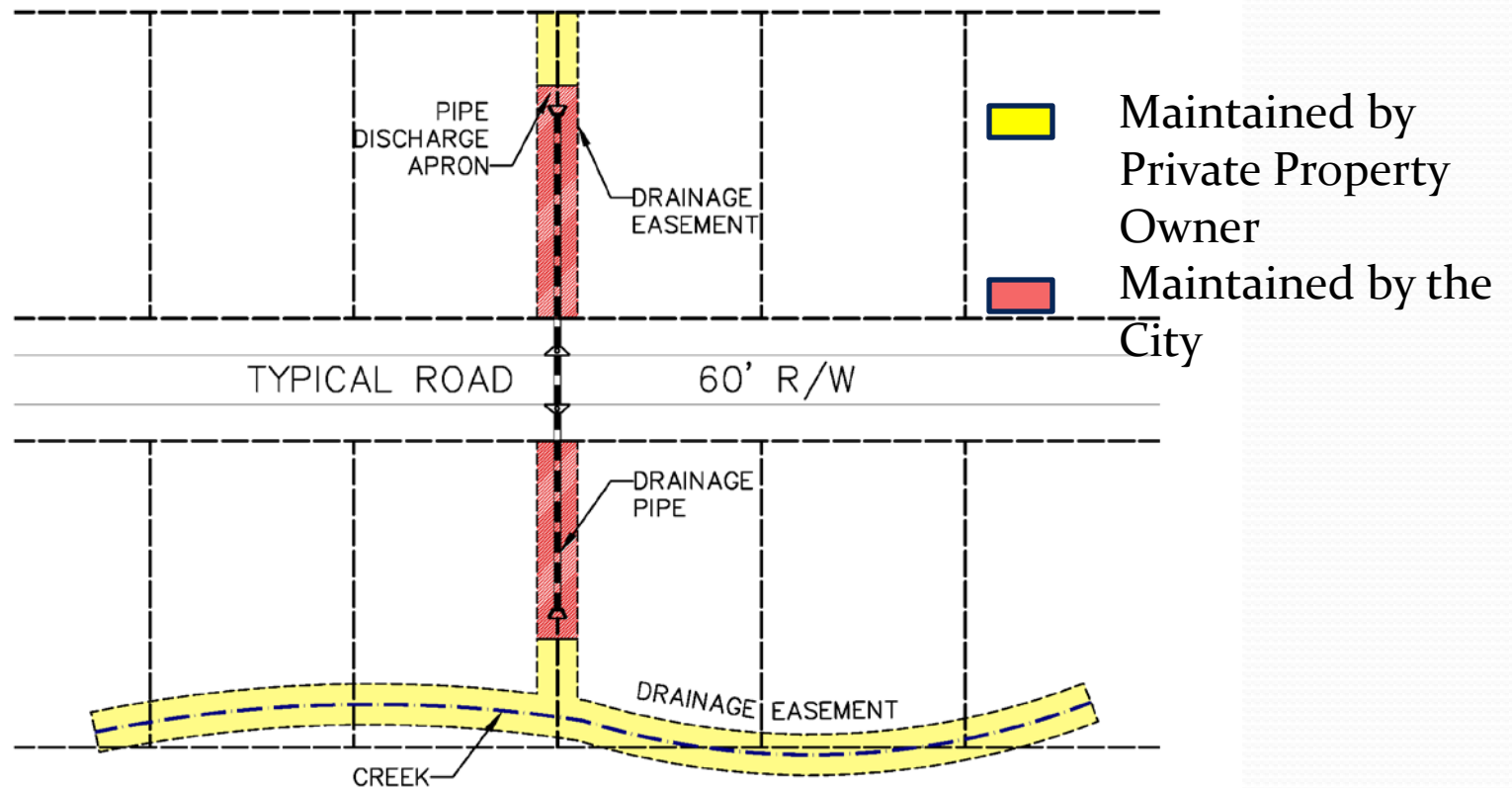
Age Distribution of CMP



Projected 5-year Replacement Cost

	Recommended	Current
Estimated Annual Pipe Replacement Costs to Maintain System in Fair or Better Condition	\$900,000 to \$1,000,000	\$525,000
Base Utility Rate per 3,000 square feet	\$5.75/month	\$4/month
Current Project Backlog (Identified Projects, Immediate Repairs and Poor Condition Assets)	\$3,300,000	

Extent of Service



Summary

- About 75% of the City's system consists of Corrugated Metal Pipe (CMP)
- Typical service life of CMP is about 35 years
- City currently has over 225 metal pipes (60%) older than 35 years
- Many components identified for replacement via citizen reports or classified in poor condition/in need of immediate repair
 - Cost of backlog estimated at \$3,300,000 and would take about 6 years to complete at current funding levels
 - Estimated annual replacement costs to sustain infrastructure long term: \$800,000 to \$1,800,000 while current funding for replacement is \$460,000
- Recommend setting new rate at \$5.75 per month to prevent further build up of deferred maintenance