

Columbia City Council Pre-Council Minutes
Monday, May 16, 2011 – 6:00 p.m.
Conference Rooms 1A and 1B – City Hall
Columbia, Missouri

Council members present: Mayor McDavid, Fred Schmidt, Jason Thornhill, Gary Kespohl, Daryl Dudley, Helen Anthony, and Barbara Hoppe

Absent: None

Mayor McDavid called the meeting to order at 6:00 p.m.

Ken Burton reviewed the responsive governance initiatives being undertaken at the Columbia Police Department – see attached. The Mayor expressed an interest in developing customer service and employee engagement benchmarks. He would like these benchmarks to be developed in the very near future.

John Glascock made a presentation regarding the storm water ordinance (second read and vote on tonight's agenda). Mayor was critical of the process. He praised the process Parks and Recreation followed for their ballot issue and suggested the storm water ballot issue be modeled after that process. Before the issue is placed on the ballot, he wants support from the major stakeholder's – Columbia Public Schools and Chamber of Commerce. In his opinion, we are behind in the marketing process for this complicated issue. Mayor outlined three options – proceed with ordinance, as written; cut the ballot amount by 50%; or, place on April ballot. Council requested a breakdown in costs for each of the categories, ie emergency repairs, maintenance, etc. It was pointed out that one of the important components of the P/R process was the survey. Ms. Messina pointed out the citizen survey included several questions pertaining to storm water.

With no further business, the meeting adjourned at approximately 6:55 p.m.

Responsive Governance Initiative
Columbia Police Department
May 16, 2011

Services:

- Patrol
- Traffic
- S.W.A.T.
- Criminal Investigations
- Internal Affairs
- Public Relations
- Vice, Narcotics, and Organized Crime (VNOC)
- Police Records
- Property/Evidence
- Quartermaster
- Police Training
- Police Administration

Expanding use of social media to enhance external communication

Working to maintain service levels in spite of vacancies

- Military Leave
- 12-hour shifts
- Vacancies carried throughout Department

Working to maintain acceptable level of supervision of arrestees in our custody

Working to expand level of services in areas of Criminal Investigation:

- Additional Detectives requested
- DEA HIDTA Assignment

Identification of strategies to reduce calls for service for some incidents:

- Minor accidents
- Shoplifting
- False burglar alarms

Requesting increase in officer candidate testing to fill vacancies (we continue to lose officers to DEA, FBI, ATF, U.S. Marshall's Service, Border Patrol, and the like)

Identifying opportunities to save money by reduction of police fleet

Continued work with Citizen Police Review Board to address procedural and ordinance issues

City of Columbia Presentation to City Council



Storm Water Utility Program Business Plan Development

Wednesday April 13, 2011

6:00 pm

The Problems

- Failing infrastructure
 - Rusted out metal pipe
 - Crumbling stone and concrete block “pipes”
 - Severe erosion threatening streets and utilities
- Water quality
 - Water quality issues concern citizens regardless of regulations
- Regulations
 - More and more stringent control of stormwater quality is required by state and federal regulations

Failing Infrastructure

- Columbia has approx. 45690 feet of pipe 40+ years old.
 - Much of it is Corrugated Metal Pipe (CMP)
 - 40 year expected life span

- The city has approx 450,000 feet of pipe of unknown age and type
 - Much of it is CMP
 - Much of it is more than 40 years old.

- Many drainage structures are more than 80 years old (past their service lives)
 - Vitrified Clay Pipe (VCP)
 - Rectangular “Pipes”
 - Reinforced Concrete
 - Large-Rock walls w/ concrete tops
 - Masonry Block walls w/ concrete tops

Bourn Avenue Failure, Feb. 2011



Condition Initiating Call.

Stormwater excavated the hole.



Bottom of CMP rusted out.



Because of Construction Method, this showed up as Concrete Pipe on City maps

Sinkhole from corrugated metal pipe failure in July 2010



Person for scale

Sinkhole was 15 feet deep and next to a building.

Rollins Road just east of Stadium



Note water running out through bottom of pipe.

Downstream of Hathman Place



Holes rusted through
bottom of pipe.

Downstream end of Quail Drive



Water pouring through holes rusted in bottom of pipe

Erosion extends far upstream under pipe.

North of Walnut near College



Bottom of old rectangular “pipe” is eroding away.

Conveyance is undersized causing intersection of College and Walnut to flood even in minor storms.

Underneath Walnut near College



Pipe cracked and deformed; also undersized.

Boyd Lane

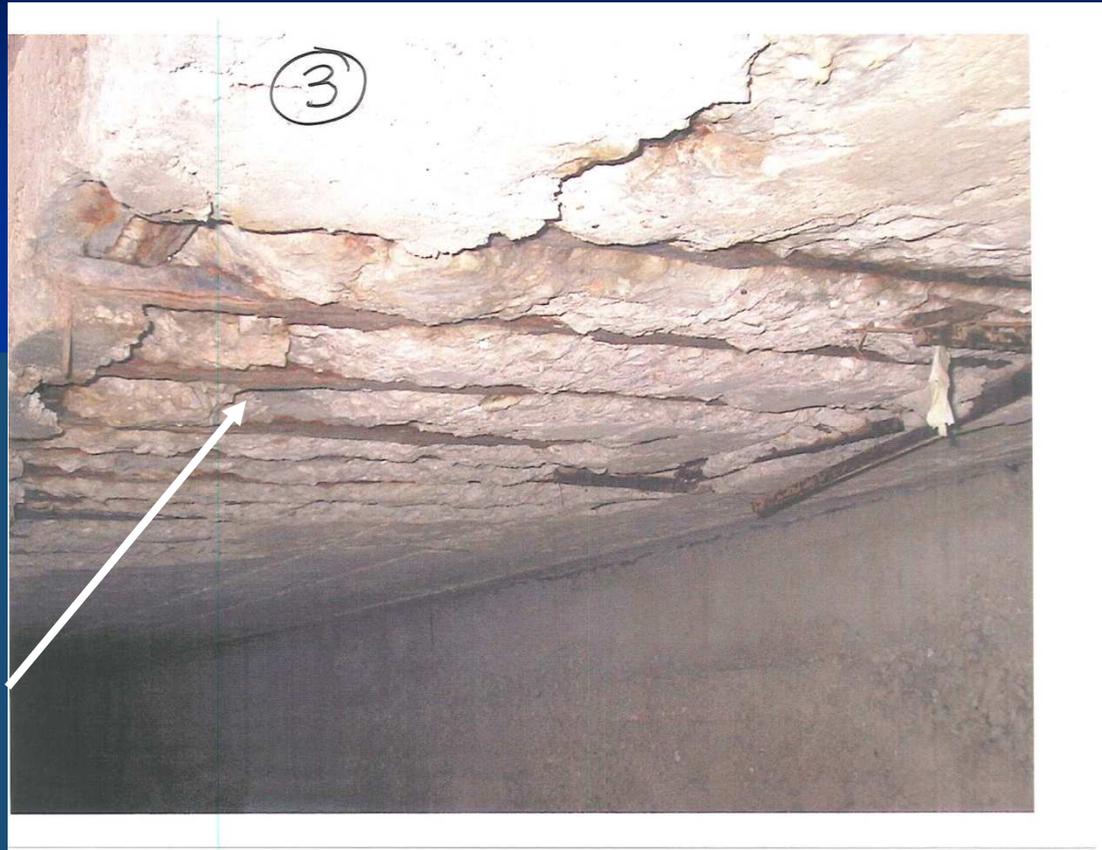


Inside Top of Rectangular “Pipe” near Broadway and Providence

Steel bars, which
hold the concrete
together, are rusting



Garth Street near Sexton Road



Steel, which holds concrete together, is badly rusted.

Photo taken 10 years ago.

Corrugated Metal Pipe on Lynwood



Pipe rusted through and soil underneath began eroding.



Erosion below pipe exposed buried electrical cable.

Winner of Scariest Storm Drain Contest



This culvert under Walnut near Old 63 was replaced in 2010

Introductions

- John F. Damico,
 - President, MBA
- Al C. Damico,
 - Vice President, MBA



Environmental Rate
Consultants, Inc.

Website:

www.ercerc.com

- Very Specialized Financial Consulting Firm
- Financial / Accounting and Computer Consultants
- Water and Sewer Rate Studies
- Storm Water Utility Implementation
- Revising & Updating Existing Storm Water Utilities
- Over 50 years of Experience
- Involved With Over 50 Storm Water Utility Programs
- Business Plan Development
- Four Expert Witness Projects

Project Background

- Began Business Plan Project January 2010
- Developed Plan by summer 2010
- Initial recommendation presented to City Council during 2010 summer retreat
- \$5 Million (based on 5 year average) annual budget
- City Council recommended a 7 year phased in plan and approach
- SWAC reviewed recommendations

ERC Business Plan Process/Approach

- Collected financial, billing, GIS and infrastructure data
- Developed “Business Plan” based on:
 - Staffing levels
 - Size of community
 - Amount of infrastructure to be maintained
 - Amount of infrastructure not maintained
 - Phase I versus Phase II NPDES Permit Requirements
 - Drainage/flooding issues
- Develop cost of service based on 50 years experience and over 80 business plans
- Team approach - city staff & consultants

Current Water Quantity Infrastructure

- Street curb inlets (7,684 curb inlets)
- Curbs and gutters
- Corrugated metal pipe (CMP) (625,272 linear ft)
- Box culverts or pipes constructed by the City or constructed to City standards, and accepted by the City, on or within public easements
 - Currently have 1,000,000 feet of storm system infrastructure
- Roadside ditches
- Improved open channels, such as paved ditches if on easement or right-of-way

Storm Water System Currently Not Being Maintained

- Unimproved open channels
 - creeks, ditches, swales
- Pipes which were not constructed to City standards
- Private piping systems in R-3 and higher zoned major developments
- Private detention/retention structures, including subdivision lakes
- Structures on Mo DOT right-of-way

Current Water Quantity Activities

- Areas regularly checked, cleaned, mowed
 - Again St, Forum Blvd, Glen Eagle Dr, Garden Dr and others
- Checked only after rain event
 - Blackfoot Rd, Sinclair St, Northland Dr, Eastwood Cir, Chambray Ct and others
- Sewer Division assisted with 137 hours of cleaning and inspection maintenance in 2009

Water Quality Activities

(Municipal Separate Storm Sewer System (MS4))

(Regulatory Required)

- 1990 EPA established Phase 1 NPDES storm water program for communities with population 100,000 or more
- 1999 EPA established Phase 2 NPDES storm water program for communities with population 10,000 or more
- MS4 Permit requires 6 minimum control measures
- Columbia, UMC & Boone County – Joint Permit Application and Plan “Phase 2” MS4 Permit since 2003
- The next 5 year plan will be measured with Phase I (more stringent) regulations

Municipal Separate Storm Sewer System (6 minimum control measures (MCM's))

- MCM # 1 - Public Education/Outreach
- MCM # 2 - Public Participation/Involvement
- MCM # 3 - Illicit Discharge Detection and Elimination
- MCM # 4 - Construction Site Runoff
- MCM # 5 - Post Construction Site Runoff
- MCM # 6 - Pollution Prevention / Good House Keeping

Storm Water Personnel Analysis

Fiscal Year	Full Time Equivalents
1997 – 1998	8.00
1999	8.43
2000 – 2004	8.94
2005 – 2006	10.43
2007 – 2008*	12.46
2009	11.55
2010	6.40

Storm Water Utility Revenues

Fiscal Year	Utility Fees	Development Charges	Total
FY 1997	\$999,744	\$0 *	\$999,744
FY 1998	\$1,031,428	\$0 *	\$1,031,428
FY 1999	\$1,009,052	\$45,007	\$1,054,059
FY 2000	\$751,946	\$389,526	\$1,141,472
FY 2001	\$766,857	\$381,743	\$1,148,600
FY 2002	\$776,600	\$324,262	\$1,100,862
FY 2003	\$798,681	\$598,831	\$1,397,512
FY 2004	\$850,508	\$539,176	\$1,389,684
FY 2005	\$895,918	\$608,039	\$1,503,957
FY 2006	\$953,189	\$629,529	\$1,582,718
FY 2007	\$977,324	\$397,419	\$1,374,743
FY 2008	\$1,013,142	\$371,837	\$1,384,979
FY 2009	\$1,022,725	\$200,379	\$1,223,104
FY 2010	\$984,426 **	\$148,869	\$1,133,295
TOTAL	\$12,831,540	\$4,634,617	\$17,466,157

* Development charges were not tracked separately in FY 1997, FY 1998 and most of FY 1999. The revenues were included with the utility fees.

** Refunded approximately \$44,000 to Kentucky Fried Chicken due to billing error.

Current “Funded” Personnel

Current 6.40

- 1 Maintenance Supervisor
- 3 Maintenance Operator II
- 1 Maintenance Operator I
- 1 Engineering Aide IV Storm Water Educator
- .4 (.2 Public Information, .1 Senior Rate Analyst,
.1 Rate Analyst)

Rate Structure Analysis

- Analyzed the two most generally accepted storm water rate structures & existing rate structure
- Existing rate structure
- ERU Based Impervious Area Method
- Total Impervious Area Method
- Approximately 90% of the programs use the ERU method
- Total Impervious is most accurate and most legally defensible
- Existing rate structure may have issues

ERC Recommendations

- Accept Business Plan recommendations
- Maintain the existing rate structure for 2 years (time required to build new rate structure)
- Increase the current rates by 100% in Year 1
- Increase Year 2 by an additional 20%
- Adopt the Total Impervious Area rate structure method beginning in Year 3
- Increase rates 20% in Year 3 and each year thereafter

Storm Water Business Plan Descriptions

➤ Engineering

personnel costs, flood plain mapping, aerial photography updates, planning, stream assessments, misc non-CIP project design

➤ Maintenance

Maintenance crew personnel & equipment costs, infrastructure inspection, cleaning and maintenance/replacement non-CIP projects

➤ Water Quality

MS4 NPDES related activities which include engineer & inspector personnel costs and equipment costs

➤ CIP

Survey, design, inspection, easement and construction costs for Capital Improvement Projects

Recommended 5 Year Cash Flow Analysis

Total Cash Flow Analysis	Year 1	Year 2	Year 3	Year 4	Year 5
Engineering	\$1,108,805	\$806,942	\$779,955	\$799,453	\$819,440
Maintenance	\$408,738	\$671,411	\$1,003,674	\$1,336,193	\$1,467,731
Water Quality	\$267,485	\$719,638	\$921,503	\$944,541	\$968,154
CIP	\$323,231	\$331,922	\$330,764	\$562,887	\$1,116,364
Total	\$2,108,260	\$2,529,912	\$3,035,895	\$3,643,074	\$4,371,689

Recommended Years 6 / 7 and Averages Cash Flow Analysis

Total Cash Flow Analysis	Year 6	Year 7	5 Year Average	6 Year Average	7 Year Average
Engineering	\$839,926	\$860,924	\$862,919	\$859,087	\$859,349
Maintenance	\$1,493,907	\$1,520,737	\$977,549	\$1,063,609	\$1,128,913
Water Quality	\$992,358	\$1,017,167	\$764,264	\$802,280	\$832,978
CIP	\$1,919,836	\$2,896,404	\$533,034	\$764,167	\$1,068,773
Total	\$5,246,027	\$6,295,232	\$3,137,766	\$3,489,143	\$3,890,013

Personnel Comparison

Community	Population	Monthly Rate	Annual Rate	Annual Revenue	Annual Cost per Person	Dedicated Staffing	Non-Maintenance Staffing (FTE's)	Maintenance Staffing (FTE's)
Lucas County, OH*	154,687	\$4.06	\$48.72	\$2,900,000	\$19	12	6	6
City of Chattanooga, TN	167,674	\$6.60	\$79.20	\$15,287,104	\$91	38	8	30
City of Newark, OH	47,573	\$6.25	\$75.00	\$2,952,312	\$62	12.5	2	10.5
City of Lancaster, OH	35,335	\$6.50	\$78.00	\$2,500,000	\$71	9.5	1.5	8
City of Milford, OH	6,284	\$5.50	\$66.00	\$500,000	\$80	2.5	1	1.5
City of Lima, OH	40,081	\$5.03	\$60.36	\$2,600,000	\$65	11	3	8
City of Suffolk, VA	84,585	\$5.24	\$62.88	\$3,290,000	\$39	42	22	20
Oldham County, KY*	60,316	\$3.43	\$41.16	\$851,271	\$14	10	5	5
Gwinnett County, GA**	588,488	\$8.64	\$86.52	\$34,000,000	\$58	65	45	20
Columbia, MO ST1	108,500	\$1.30	\$15.60	\$176,639	\$2			
Columbia, MO ST2	108,500	\$1.70	\$20.40	\$379,726	\$3			
Columbia, MO ST3	108,500	\$2.30	\$27.60	\$347,318	\$3			
Columbia, MO ST4	108,500	\$2.70	\$32.40	\$69,304	\$1			
Columbia, MO ST5***	108,500	\$8.00	\$96.00	\$1,135,274	\$10			
Columbia, MO Total	108,500			\$2,108,260	\$19	6.4	1.4	5

•Permit Only No Drainage Flooding / Townships perform roadside maintenance

** Gwinnett County Estimated Monthly Rate = \$2.46 per 100 sq ft of impervious area

*** \$8/month is the lowest possible commercial rate. For most properties it would be \$0.08/100 sq ft.

Historical City of Columbia Utility Rate Increases 1993 to 2010

- Electric + 46%
- Sewer + 78%
- Water + 87%
- Solid Waste + 87%
- Gas + 134%

- Storm Water Utility +0%

Storm Water Utility Rates

◆ Minneapolis, MN	\$9.77
◆ Gwinnet County, GA	\$8.64
◆ Boulder, CO	\$8.45
◆ Columbia, MO (ST - 4 Year 7 rate)	\$8.06*
◆ Austin, TX	\$7.15
◆ Newark, OH	\$6.50
◆ Lancaster, OH	\$6.50 to \$7.64 (2012)
◆ Louisville, KY	\$6.34
◆ Moline, IL	\$5.27
◆ Lenexa, KS	\$5.00
◆ Lubbock, TX	\$4.99
◆ Tulsa, OK	\$4.36
◆ Oklahoma City, OK	\$4.00
◆ Columbia, MO (ST-1 Year 7 rate)	\$3.88*
◆ Kansas City, MO	\$3.00
◆ Columbia, MO (ST - 4 Year 1 rate)	\$2.70
◆ Columbia, MO (ST- 4 current rate)	\$1.35
◆ Columbia, MO (ST-1 Year 1 rate)	\$1.30
◆ Columbia, MO (ST-1 current rate)	\$0.65



*Other City's rates will go up by Year 7 so Columbia's relative ranking will be lower

Impact on University of Missouri

- University storm water charges are governed by a 1996 agreement.
 - 40% of the commercial rate
 - Agreement will need to be negotiated

Fiscal Year	Impervious Surface (sq ft)	Rate (\$/100 sq ft)	Monthly Charge
FY09	15,327,111	.016	\$2,452.34
FY10	15,730,858	.016	\$2,516.94
FY11 (Year 1) (recommended)	15,730,858	.032	\$5,033.88

Typical Storm Water Credit Program

- Typically, there is a one time application required including an application fee
- Typically, there is a one page annual verification and submittal
- Typically, self monitoring by staff in the beginning
- Over time staff will field verify all credited BMPs, facilities accepted

Storm Water Credit Examples

(going above the requirement)

- Detention/Retention typically up to 30% reduction
- Buffers, Swales, Wetlands, Rain Gardens, LEED
- up to 30% reduction
- Education (schools) Credits up to 50%
- Maximum credit for each property up to 50%

Storm Water Utility Program

Future Challenges

- Lack of required funding to meet program needs
- Lack of dedicated personnel to meet program needs
- Aging Infrastructure
 - Maintain 1,000,000 ft (189,000 miles) of storm sewers
- MS4 Permit
 - Transition from Phase 2 to Phase 1
 - Monitoring is required with Phase 1 MS4s
- Continued increase with EPA Regulations
- August Ballot required to increase current rates

Next Steps

- Utilize August 2011 Ballot to request increase in storm water rates
- Begin implementing Business Plan recommendations after successful ballot initiative

Existing Rate Structure

- Five Tiers Based on Land Use

- 1. Multi-family bldgs with more than 4 units, and one-family residences with main floor area (MFA) of less than 750 sq. ft.

now \$0.65 per unit/resd./month

- Main floor area = first floor habitable area—no garage

Existing Rate Structure, Cont.

- 2. Multi-family bldgs with 4 units or fewer, and one-family residences with MFA of 750 sq. ft. to 1,200.
now \$0.85/unit or resd./month
- 3. One-family resd. w/ MFA of 1,251 sq. ft. – 2,000 sq. ft.
now \$ 1.15/ resd./month

Existing Rate Structure, Cont.

- 4. One-family resd. w/ MFA more than 2,000 sq. ft.
now \$1.35/resd./month
- 5. Non-residential
 - Now \$0.04/sq. ft./month (\$4 minimum/month)

Proposed Monthly Storm Water Rates Comparison

Existing Rate Structure

Total Impervious Rate Structure

Description	Current	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
ST1 (Less than 750 sq. ft.) (Assume 750 sq. ft.)	\$0.65 <i>Same</i>	\$1.30 <i>Same</i>	\$1.56 <i>Same</i>	\$1.87 \$1.05	\$2.25 \$1.28	\$2.70 \$1.50	\$3.23 \$1.80	\$3.88 \$2.18
ST2 (750-1,250 sq. ft.) (Assume 1250 sq. ft.)	\$0.85 <i>Same</i>	\$1.70 <i>Same</i>	\$2.04 <i>Same</i>	\$2.45 \$1.75	\$2.94 \$2.13	\$3.53 \$2.50	\$4.23 \$3.00	\$5.08 \$3.63
ST3 (1,251-2,000 sq. ft.) (Assume 2000 sq. ft.)	\$1.15 <i>Same</i>	\$2.30 <i>Same</i>	\$2.76 <i>Same</i>	\$3.31 \$2.80	\$3.97 \$3.40	\$4.77 \$4.00	\$5.72 \$4.80	\$6.87 \$5.80
ST4 (More than 2,000 sq. ft.) (Assume 4,000 sq. ft.)	\$1.35 <i>Same</i>	\$2.70 <i>Same</i>	\$3.24 <i>Same</i>	\$3.89 \$5.60	\$4.67 \$6.80	\$5.60 \$8.00	\$6.72 \$9.60	\$8.06 \$11.60
Commercial: (per 100 sq. ft.) (Assume 50 sq. ft.)	\$0.04 <i>Same</i>	0.08 <i>Same</i>	\$0.10 <i>Same</i>	\$0.12 \$0.14	\$0.14 \$0.17	\$0.17 \$0.20	\$0.20 \$0.24	\$0.24 \$0.29

Note:

Residential rate classes ST1-ST4 are based on first floor habitable area rather than total impervious area.

Monthly Rates for Large Non-Residential

Existing Rate Structure

Total Impervious Area Rate Structure

Facility	Current	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Grindstone Wal-Mart (1,507,450 sq. ft.)	\$602.98 (Same)	\$1,205.96 (Same)	\$1,447.15 (Same)	\$1,736.58 \$2,110.43	\$2,083.90 \$2,562.67	\$2,500.68 \$3,014.90	\$3,000.81 \$3,617.88	\$3,600.98 \$4,371.61
Columbia Mall LLC (1,173,950 sq. ft.)	\$469.58 (Same)	\$939.16 (Same)	\$1,126.99 (Same)	\$1,352.39 \$1,643.53	\$1,622.87 \$1,995.72	\$1,947.44 \$2,347.90	\$2,336.93 \$2,817.48	\$2,804.32 \$3,404.46
Cosmo Park (1,073,950sq. ft)	\$429.58 (Same)	\$859.16 (Same)	\$1,030.99 (Same)	\$1,237.19 \$1,503.53	\$1,484.63 \$1,826.72	\$1,781.55 \$2,147.90	\$2,137.87 \$2,557.48	\$2,565.44 \$3,114.46
State Farm Mutual (954,150 sq. ft.)	\$381.66 (Same)	\$763.32 (Same)	\$915.98 (Same)	\$1,099.18 \$1,335.81	\$1,319.02 \$1,622.06	\$1,582.82 \$1,908.30	\$1,899.38 \$2,289.96	\$2,279.26 \$2,767.04
3-M (949,200 sq. ft.)	\$379.68 (Same)	\$759.36 (Same)	\$911.23 (Same)	\$1,093.48 \$1,328.88	\$1,312.17 \$1,613.64	\$1,574.61 \$1,898.40	\$1,889.53 \$2,278.08	\$2,267.44 \$2,752.68
Rock Bridge High School (823,500 sq. ft.)	\$329.40 (Same)	\$658.80 (Same)	\$790.56 (Same)	\$948.67 \$1,152.90	\$1,138.41 \$1,399.95	\$1,366.09 \$1,647.00	\$1,639.31 \$1,976.40	\$1,967.17 \$2,388.15
Broadway Wal-Mart (801,450 sq. ft.)	\$320.58 (Same)	\$641.16 (Same)	\$769.39 (Same)	\$923.27 \$1,122.03	\$1,107.92 \$1,362.47	\$1,329.51 \$1,602.90	\$1,595.41 \$1,923.48	\$1,914.49 \$2,324.21
Columbia Foods (791,000 sq. ft.)	\$316.40 (Same)	\$632.80 (Same)	\$759.36 (Same)	\$911.23 \$1,107.40	\$1,093.48 \$1,344.70	\$1,312.17 \$1,582.00	\$1,574.61 \$1,898.40	\$1,889.53 \$1,293.90
Home Depot (470,800 sq. ft.)	\$188.32 (Same)	\$376.64 (Same)	\$451.97 (Same)	\$542.36 \$659.12	\$650.83 \$800.36	\$781.00 \$941.60	\$937.20 \$1,129.92	\$1,124.64 \$1,365.32

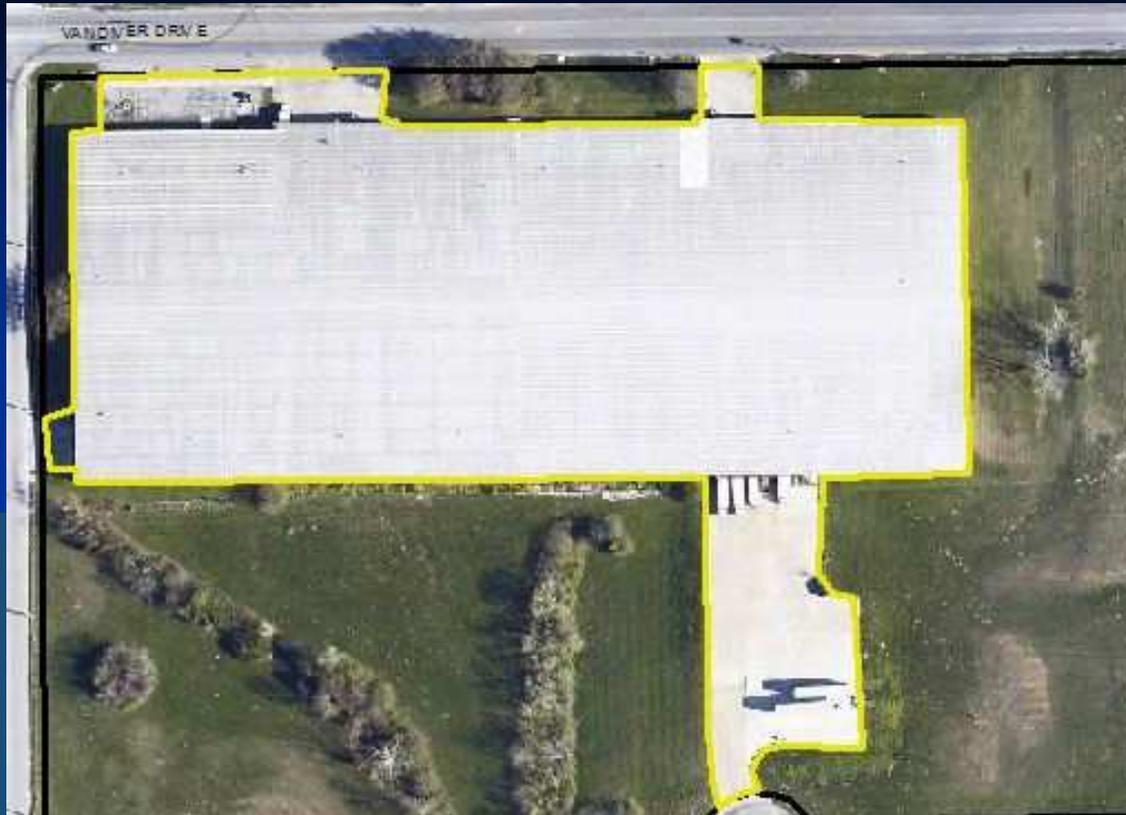
Monthly Charge on Example Properties

Example Changes to Monthly Charge											
Property	Main Floor Area (sf)	Apartment Units	Impervious Area (sf)	Year							
				Current	1	2	*3	4	5	6	7
Church											
Ex. Rate Structure			47953	\$11.94	\$23.88	\$28.66	\$34.39	\$41.26	\$49.52	\$59.42	\$71.31
<i>Total Impervious Rate Structure</i>				<i>Same</i>	<i>Same</i>	<i>Same</i>	\$67.13	\$80.56	\$96.67	\$116.01	\$139.21
Warehouse											
Ex. Rate Structure			242815	\$87.85	\$175.70	\$210.84	\$253.01	\$303.61	\$364.33	\$437.20	\$524.64
<i>Total Impervious Rate Structure</i>				<i>Same</i>	<i>Same</i>	<i>Same</i>	\$339.94	\$412.79	\$485.63	\$582.76	\$704.16
School											
Ex. Rate Structure			64428	\$29.60	\$59.20	\$71.04	\$85.25	\$102.30	\$122.76	\$147.31	\$176.77
<i>Total Impervious Rate Structure</i>				<i>Same</i>	<i>Same</i>	<i>Same</i>	\$90.20	\$109.53	\$128.86	\$154.63	\$186.84
Apartment											
Ex. Rate Structure		36		\$23.40	\$46.80	\$56.16	\$67.39	\$80.87	\$97.04	\$116.45	\$139.74
<i>Total Impervious Rate Structure</i>			36062	<i>Same</i>	<i>Same</i>	<i>Same</i>	\$50.49	\$61.31	\$72.12	\$86.55	\$104.58
Home											
Ex. Rate Structure	2072			\$1.35	\$2.70	\$3.24	\$3.89	\$4.67	\$5.60	\$6.72	\$8.06
<i>Total Impervious Rate Structure</i>			4340	<i>Same</i>	<i>Same</i>	<i>Same</i>	\$6.08	\$7.38	\$8.68	\$10.42	\$12.59



Example Changes to Monthly Charge for a Church

Rate Structure Method	Impervious Area (sf)	Year							
		Current	1	2	3	4	5	6	7
Existing	47953	\$11.94	\$23.88	\$28.66	\$34.39	\$41.26	\$49.52	\$59.42	\$71.31
Total Impervious		Same	Same	Same	\$67.13	\$80.56	\$96.67	\$116.01	\$139.21



Example Changes to Monthly Charge for a Warehouse

Rate Structure Method	Impervious Area (sf)	Year								
		Current	1	2	3	4	5	6	7	
	242815									
Existing		\$87.85	\$175.70	\$210.84	\$253.01	\$303.61	\$364.33	\$437.20	\$524.64	
Total Impervious Area		Same	Same	Same	\$339.94	\$412.79	\$485.63	\$582.76	\$704.16	



Example Changes to Monthly Charge for a School

Rate Structure Method	Impervious Area (sf)	Year							
		Current	1	2	3	4	5	6	7
Existing		\$29.60	\$59.20	\$71.04	\$85.25	\$102.30	\$122.76	\$147.31	\$176.77
Total Impervious Area	64428	Same	Same	Same	\$90.20	\$109.53	\$128.86	\$154.63	\$186.84



Example Changes to Monthly Charge for an Apartment Bldng

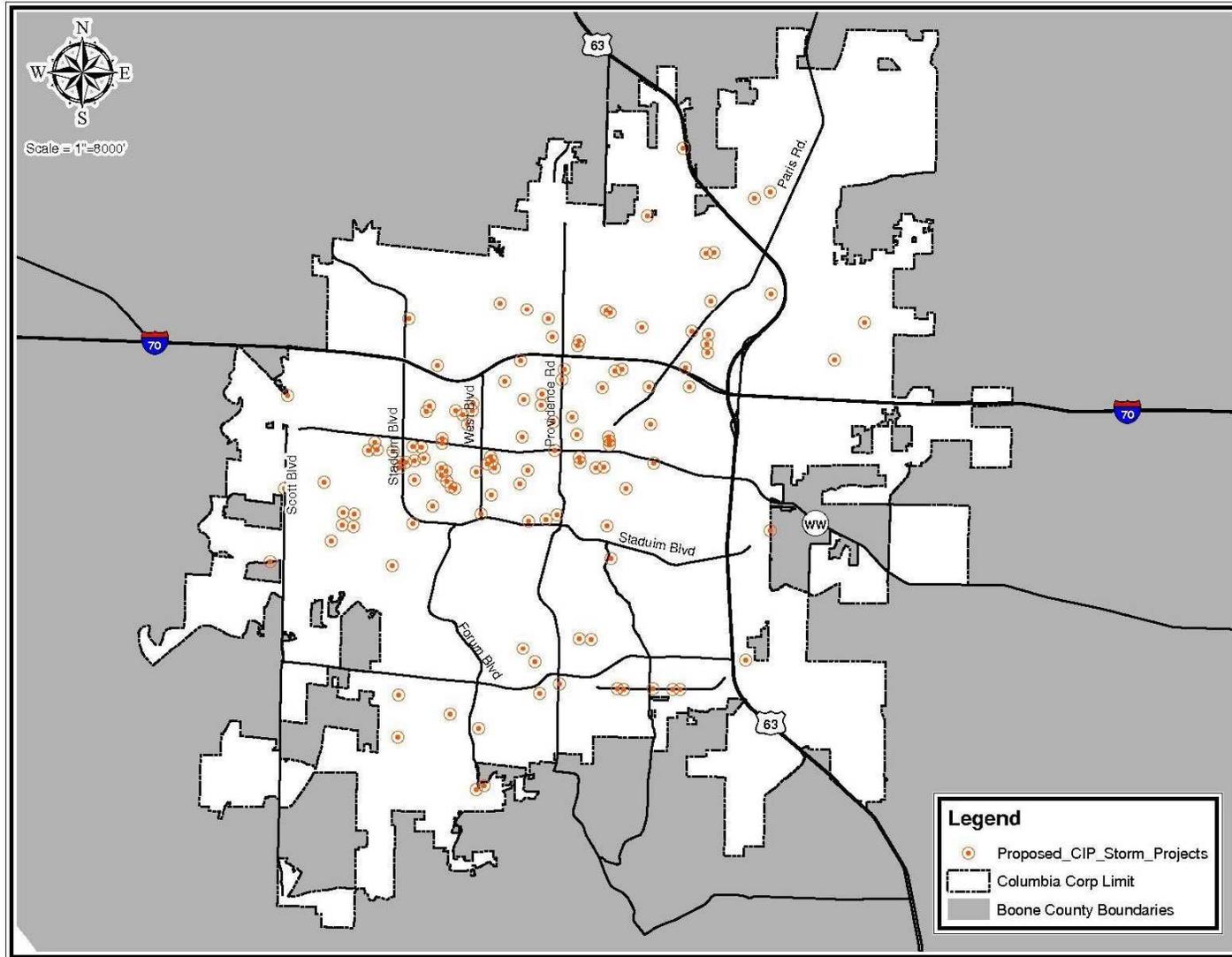
Rate Structure Method	Apt Units	Impervious Area (sf)	Year							
			Current	1	2	3	4	5	6	7
Existing	36		\$23.40	\$46.80	\$56.16	\$67.39	\$80.87	\$97.04	\$116.45	\$139.74
Total Impervious Area		36062		Same	Same	\$50.49	\$60.58	\$72.70	\$87.24	\$104.69



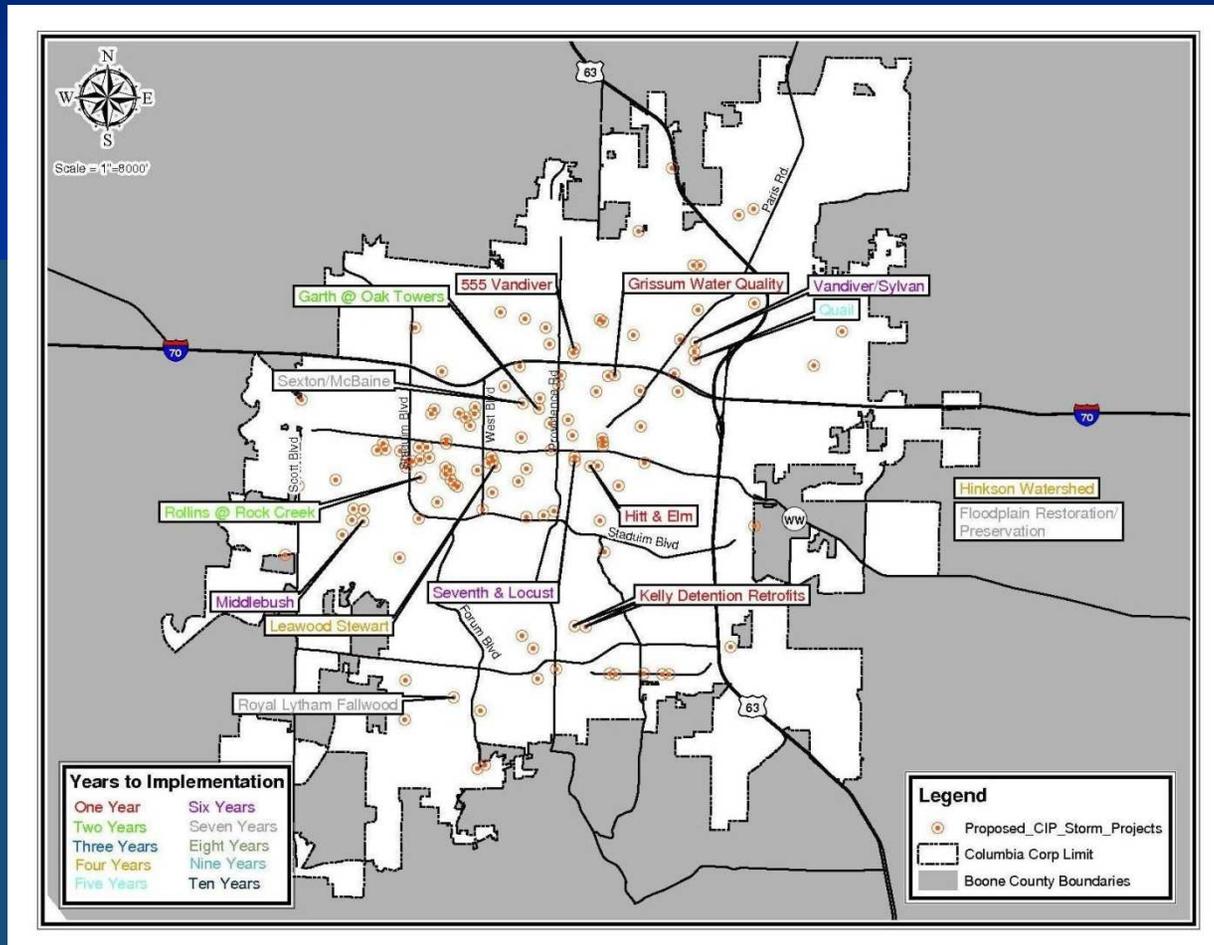
Example Changes to Monthly Charge for a Residence

Rate Structure Method	Main Floor Area (sf)	Impervious Area (sf)	Year							
			Current	1	2	3	4	5	6	7
Existing	2072		\$1.35	\$2.70	\$3.24	\$3.89	\$4.67	\$5.60	\$6.72	\$8.06
Total Impervious Area		4340		Same	Same	\$6.08	\$7.38	\$8.68	\$10.42	\$12.59

Identified Projects



Proposed Projects First 7 Years



Question and Answer

7-Year Project List

■ Year 1

- 555 Vandiver - Rusted CMP undermining sidewalk and road
- Hitt and Elm – Rusted CMP undermining road
- Grissum Water Quality – Match Grant to retrofit Water Quality Basins
- Kelly Detention Retrofit – Retrofit water quality functions in existing detention basins

7-Year Project List, Cont.

■ Year 2

- Garth at Oak Towers – Replace deteriorating storm conveyance
- Rollins at Rock Creek – Replace rusting CMP

■ Year 3

- Rollins at Rock Creek, continued
- Leawood to Stewart – Replace deteriorating storm conveyance

7-Year Project List, Cont.

■ Year 4

- Leawood to Stewart, Continued
- Floodplain Restoration/Preservation – Try for grant to match funds for project in Hinkson watershed
- Generate Master Plan for future work

■ Year 5

- Quail Drive – Replace deteriorating and undersized CMP
- Vandiver and Sylvan – Replace badly undersized system

7-Year Project List, Cont.

■ Year 6

- Vandiver and Sylvan, Continued
- Seventh and Locust – Replace deteriorating conveyance and address flooding problem
- 2302 Business 70 East – Replace deteriorated and undersized system, try to partner with MoDOT on water quality
- Line pipes insitu – Based on Master plan findings
- Middlebush – Replace rusting out CMPs
- Sexton McBaine – Replace deteriorating and undersized system

7-Year Project List, Cont.

■ Year 7

- Sexton McBaine, Continued
- Vandiver and Sylvan – Replace badly undersized system
- Floodplain Restoration/Preservation
- Culvert Lining
- Royal Lythum Fallwood