

**Columbia City Council Pre-Council Minutes
Monday, February 7, 2011 – 6 p.m.
Conference Rooms 1A and 1B – City Hall
Columbia, Missouri**

Council members present: Paul Sturtz, Jason Thornhill, Gary Kespohl, Daryl Dudley, Laura Nauser, Barbara Hoppe

Absent: Mayor McDavid

The City Manager provided an update regarding the health and pharmacy benefits review. He described the options available – see handout. The City Manager will forward a recommendation to Council prior to leaving city employment.

John Hooey, Chair of the Sanitary Sewer Task Force; and, John Glascock made a power point presentation regarding the task force recommendations – see attached. A public hearing will be held at the March 21 Council meeting.

The Council received a copy of a letter from FEMA dated 1/31/2011 regarding floodplain management measures.

With no further business, the meeting adjourned at approximately 6:50 p.m.

Benefit eligibility review – July 2009
Employment Benefit Fund – Health and Pharmacy Benefits

Internal audit was conducted by Human Resources (HR) staff in July, 2009 to verify coverage eligibility of all covered membership on Caremark and United Health Care (UHC) census lists.

Census membership lists were compared between Caremark and UHC. The combined census report included birthdates of dependents to determine ineligible dependents due to age limit. Dependents could not be covered over the age of 23 unless COBRA was elected.

Once Caremark and UHC membership lists were verified and matched, the list was compared to active benefited employees from HTE to determine any ineligible employees due to termination.

Identified ineligible employees and dependents were checked against Finance Department records to determine if retirement, disability or COBRA benefits were applicable or needed.

Once all ineligible dependents and employees were identified, HR staff entered the applicable termination date to the ineligible member record on the Caremark and/or UHC website.

A reconciliation policy was established at the conclusion of the audit (July 2009) to routinely verify employee and dependent coverage eligibility. The policy has been reviewed and approved by the City's independent audit firm and by the City's Internal Auditor. Census reports are verified on a quarterly basis to check for ineligible membership on Caremark and UHC.

Rx CLAIMS PAID AFTER TERMINATION DATE - TOTAL BY YEAR

YEAR	AMOUNT PAID AFTER TERM		# Claims	# Individuals *	TOTAL Rx PAID PER YEAR	ELIGIBLE
	DATE					MEMBERS AS OF JAN 1**
2001	\$4,416.48		40	1	\$ 1,479,472.27	Not available
2002	\$11,366.81		94	6	\$ 2,633,190.82	Not available
2003	\$21,966.48		273	12	\$ 1,901,518.76	Not available
2004	\$24,063.42		270	15	\$ 2,301,880.96	Not available
2005	\$25,243.03		255	16	\$ 2,376,225.67	Not available
2006	\$28,519.05		321	25	\$ 2,313,172.98	2977
2007	\$25,945.58		367	26	\$ 2,406,754.49	3014
2008	\$42,789.38		514	33	\$ 2,135,101.81	2787
2009	\$14,047.00		181	28	\$ 1,746,718.27	2769
2010	\$0.00				\$ 1,792,494.32	2368
	\$198,357.23					

Pharmacare was the Rx carrier prior to 2006. Caremark has purged the Pharmacare information and is no longer available.

* Individuals include former employees and dependents

** Eligible members include employee and dependents

Min	Max	# of People with Claims
\$ -	\$ 100.00	32
\$ 100.00	\$ 500.00	11
\$ 500.00	\$ 1,000.00	10
\$ 1,000.00	\$ 2,000.00	7
\$ 2,000.00	\$ 5,000.00	5
\$ 5,000.00	\$ 10,000.00	1
\$ 10,000.00	\$ 25,000.00	0
\$ 25,000.00	\$ 50,000.00	1
\$ 50,000.00	\$ 75,000.00	0
\$ 75,000.00	\$ 100,000.00	0
\$ 100,000.00	\$ 110,000.00	1
		68

After a long time employee retired from H.R. in May of 2009, irregularities were discovered in payments made to Caremark. Caremark oversees the prescription drug program for the city. As a result, H.R. Director Buckler requested an "Eligibility Audit" be conducted of the employee benefit system. This audit was from 2001-2009.

This audit revealed that 401 *former* employees and their dependents had not been *removed* from the Caremark system, thus making them eligible to fraudulently receive prescription drugs. Of these 401 former employees and their dependents, 18 employees and 50 dependents did so. These 68 individuals resulted in;

- \$198,500 in wrongful prescription claims
- 18 employees represented over 13 city departments
- 2 employees represented 83% of this loss ((Name withheld) \$108,000 – Fire and (Name withheld) \$57,000 – Public Works Transit)
- The ex-employee from Fire died in 2009 and the ex-employee from Transit worked for the city for three months in 2002

These 18 employees who wrongfully obtained prescription drugs from the Caremark system represents 2% of those 926 employees who left the city during the same time frame.

United Healthcare has located approximately \$43,000 in losses as a result of employees not being removed and receiving medical services wrongfully, we continue to look further.

- 89% of this is also from the ex-employee from Fire (\$38,000)

All these losses were a result of *one employee's* failure to remove employees who had left the city, from the Caremark and Healthcare system.

Employee in question was interviewed on 01/13/11. Employee stated:

- All requests for changes in employees status were requested via e-mail even though the recommended method was to make on-line changes.
- Majority of these requests for changes were not followed up on. Employee denied having any knowledge of ex-employees fraudulently receiving benefits.
- Denied any personal relationship with the Fire and Transit ex-employees or any of the other employees (2) that received prescription drugs fraudulently.

IT provided access to the email backups for the former employee. Email records are maintained two years.

- Reviewed backup folders starting with 12/8/08, which contained emails from 8/18/08 to 5/27/09.
- Reviewed each backed up mailbox (714 emails), sent box (803 emails) and trash folder (36 emails).
- 129 emails flagged that included "update" in the title to CVS Caremark/Pharmcare. Some of those emails were duplicative.

Found numerous email record updates for the pharmacy program that the former employee sent to Caremark. There are also response emails back from Caremark that correspond to some, but not all, of those emails that confirm Caremark made the requested changes.

- Reviewed each email sent requesting an employee/dependent be removed from the system, and compared all of those names against the list of employees/dependants that received benefits erroneously. None of those names matched against each other.

It appears the former employee did send emails that Caremark used to make enrollment changes, and Caremark did acknowledge at least some of those changes. However, none of the emails or incoming confirmations from Caremark included any of the employees/dependents that received benefits and should not have.

Investigation continues

- Waiting for final results from United Healthcare audit
- Plan to interview Transit ex-employee if can be located
- Interview surviving family members of Fire ex-employee. (?)

HEALTH PLAN RECONCILIATION POLICY AND DUTIES

FUNCTION FREQUENCY: DAILY

Staff has developed check lists to ensure all necessary steps are completed to enroll, terminate or change health and prescription coverage for active employees, retirees and COBRA participants.

RESPONSIBLE POSITION: HUMAN RESOURCE TECHNICIAN

Human Resource Technicians are responsible for following the check lists for each new hire or termination. Technicians sign and date the check list when entries have been made on insurance carrier websites.

FUNCTION FREQUENCY: BI-WEEKLY

Staff generates reports from the payroll system to verify benefit changes are processed in the payroll system and check for accuracy of benefit changes.

Review payroll reports to verify employee deductions are accurate for health and dental premiums.

Staff updates a shared spreadsheet of COBRA information as new COBRA participants are added to the health plan.

Staff updates a shared spreadsheet of Medicare retirees including name and address information.

RESPONSIBLE POSITION: HUMAN RESOURCE TECHNICIAN

Human Resource Technicians are responsible for generating payroll reports to verify applicable changes have been entered in the payroll system.

Human Resource Technicians are responsible for updating the shared spreadsheets for new enrollees, terminations or changes in coverage for COBRA and retiree participants.

RESPONSIBLE POSITION: HUMAN RESOURCE ANALYST

Human Resource Analyst is responsible for verifying health and dental deductions are accurate for benefited employees in payroll system.

Human Resource Analyst will sign off on the payroll reports verifying the report and applicable changes have been made.

FUNCTION FREQUENCY: MONTHLY

Verify retiree and COBRA membership with insurance carriers.

Verify accuracy of retiree and COBRA deductions and invoiced premium amounts.

RESPONSIBLE POSITION: HUMAN RESOURCE ANALYST

Human Resource Analyst is responsible for verifying accuracy of the retiree membership census with the finance billing report and pension reports.

Human Resource Analyst is responsible for the accuracy of COBRA and Retiree health and dental premium deductions and invoiced amounts.

FUNCTION FREQUENCY: QUARTERLY

Compare United Health Care census to Caremark census to verify employee and dependent coverage match on both census reports.

Determine the reason for any differences in the census reports and verify if changes in membership are necessary with either carrier.

Compare final census report to HTE Health/Dental Report to verify census report matches current benefit eligible employee report.

Determine the reason for any differences between final census report and HTE report to verify if changes in membership are necessary with United Health Care and Caremark.

Compare United Health Care and Caremark Non-Medicare Retiree membership to the COBRA/Retiree billing from Finance and HTE Pension report to verify covered retirees and COBRA participants are invoiced correctly.

Review payroll reports to verify employee health and dental deductions are accurate.

Review pension reports to verify retiree are invoiced correctly for health and dental coverage.

RESPONSIBLE POSITION: HUMAN RESOURCE ANALYST

Human Resource Analyst is responsible for comparing health/dental and pharmacy census reports to verify accuracy. Human Resource Analyst is responsible for comparing final census report to benefit eligible employee list.

NEW EMPLOYEE PAYROLL CHECKLIST

NAME _____

Hire Date _____ Insurance Eff Date _____

ENROLLMENT FORMS

Life _____ Health _____ Retirement _____

ABTs

Basic Life WL/773 (B2) Basic Life CPD(B3)

Basic Life PPT (B1) \$ _____ *H.S.A. (B4)

Dental _____ UHC _____

EE EE+CH EE+SP FF
(D1) (D3) (D2) (D4)

	Check Date	Eff. Month
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____

Medical UHC _____ CAREMARK _____

\$750 EE EE+CH EE+SP FF M/Pr M/Sc
(H5) (H3) (H2) (H4) (HM) (HS)

\$1500 EE EE+CH EE+SP FF M/Pr M/Sc
(F5) (F3) (F2) (F4) (H7) (H6)

*HDHP EE EE+CH EE+SP FF M/Pr M/Sc
(S5) (S3) (S2) (S4) (H9) (H8)

Vision EE EE+CH EE+SP FF
(V5) (V3) (V2) (V4)

	Check Date	Eff. Month
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____

DEDUCTIONS

Supp Life .5 1 1.5 2 2.5 3 _____
 Dependent Life 1 2 3 _____
 Supp Spouse Life FX \$ _____
 Spouse Info _____

Domestic Partners: Dental (DZ) Vision (VZ)
 Medical \$750 (HZ) \$1500 (HH) HDHP (H5)

COBRA: Dental (D1) Vision (V1)
 Medical \$750 (H1) \$1500 (H2) HDHP (H3)

BENEFITS

\$750 Health Ins. (HE)/(DE) P-T (HX)/(DX)

\$1500 Health Ins (FE)/(DF) P-T (FX)/(FD)

HDHP Health Ins (SH)/(DS) P-T (SX)/(XD)

	Check Date	Eff. Month
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____

Subsidy

\$750 EE+SP (HA) EE+CH (HC) FF (HF)

\$1500 EE+SP (FA) EE+CH (FC) FF (FF)

HDHP EE+SP (SA) EE+CH (SC) FF (SF)

	Check Date	Eff. Month
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____

***Employer H.S.A.:** Single (S1) Family (S2)

Life Unaffiliated (L3) (REQUIRED)

Life WL773 (L2) Life PPT (L1) \$ _____

Long Term (DI) (REQUIRED) _____

UNION CODE _____

INSURANCE CHANGE PAYROLL CHECKLIST

NAME _____

Insurance Effective Date _____

ABTs

Basic Life WL/773 (B2) Basic Life CPD(B3)

Basic Life PPT (B1) \$ _____ *H.S.A. (B4)

Dental UHC _____

EE EE+CH EE+SP FF
(D1) (D3) (D2) (D4)

	Check Date	Eff. Month
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____

Medical UHC _____ CAREMARK _____

\$750 EE EE+CH EE+SP FF M/Pr M/Sc
(H5) (H3) (H2) (H4) (HM) (HS)

\$1500 EE EE+CH EE+SP FF M/Pr M/Sc
(F5) (F3) (F2) (F4) (H7) (H6)

*HDHP EE EE+CH EE+SP FF M/Pr M/Sc
(S5) (S3) (S2) (S4) (H9) (H8)

Vision EE EE+CH EE+SP FF
(V5) (V3) (V2) (V4)

	Check Date	Eff. Month
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____

DEDUCTIONS

Supp Life .5 1 1.5 2 2.5 3 _____

Dependent Life 1 2 3 _____

Supp Spouse Life FX \$ _____

Spouse Info _____

Domestic Partners: Dental (DZ) Vision (VZ)
Medical \$750 (HZ) \$1500 (HH) HDHP (H5)

COBRA: Dental (D1) Vision (V1)
Medical \$750 (H1) \$1500 (H2) HDHP (H3)

BENEFITS

\$750 Health Ins. (HE)/(DE) P-T (HX)/(DX)

\$1500 Health Ins (FE)/(DF) P-T (FX)/(FD)

HDHP Health Ins (SH)/(DS) P-T (SX)/(XD)

	Check Date	Eff. Month
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____

Subsidy

\$750 EE+SP (HA) EE+CH (HC) FF (HF)

\$1500 EE+SP (FA) EE+CH (FC) FF (FF)

HDHP EE+SP (SA) EE+CH (SC) FF (SF)

	Check Date	Eff. Month
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____

***Employer H.S.A.**: Single (S1) Family (S2)

Life Unaffiliated (L3) (REQUIRED)

Life WL773 (L2) Life PPT (L1) \$ _____

Long Term (DI) (REQUIRED) _____

UNION CODE _____

TERMINATION OF EMPLOYMENT

Employee's Last Name First Name M.I. Effective Date

____ / ____ / ____

REASON FOR TERMINATION

Resignation	Retirement	Discharge	Layoff	Death
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ABTs (REFUNDS)

Basic Life WL/773 \$ _____ CPD \$ _____ Basic Life PPT \$ _____

Dental				Medical			
Refund		Pre-Pay		Refund		Pre-Pay	
EE (D1)	EE + CH (D3)	EE + SP (D2)	FAMILY (D4)	EE (H5)	EE + CH (H3)	EE + SP (H2)	FAMILY (H4)
		Check Date				Check Date	
\$ _____		_____		\$ _____		_____	
Inactivate _____		_____		Inactivate _____		_____	

DEDUCTIONS (REFUNDS)

Dependent Life	1	2	3	Supplemental Life	Supplemental Spouse Life
	Check Date			Check Date	Check Date
\$ _____	_____			\$ _____	\$ _____
Inactivate _____	_____			Inactivate _____	Inactivate _____

BENEFITS (REFUNDS)

Subsidy H2 = HA H3 = HC H4 = HF	Life Unaffiliated	Life WL/773	Life PPT
Check Date	Check Date	Check Date	Check Date
\$ _____	\$ _____	\$ _____	\$ _____
Inactivate _____	Inactivate _____	Inactivate _____	Inactivate _____

E-Mail to Payroll: Refunds Negative ABTs Overrides PEHP Hrs (10+ yrs /Retirement)↑	UHC _____	CAREMARK _____	COBRA Notice _____ COBRA Spreadsheet
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NOTES

RETIREE ENROLLMENT BILLING CHECKLIST

MARCIA BILLING OR PAYROLL DEDUCTION

NAME _____ RETIREMENT DATE _____

DEPENDENT NAME & RELATIONSHIP: _____

Medical Insurance Prepaid? Y N If yes prepaid ins: ABT: R1 (Medicare) R2 (non-medicare)
Benefit: R1 (Medicare) R2 (non-medicare)

Date Billing Starts: _____

CODES TO E-MAIL MARCIA:

Medical Code: _____ Medical Code: _____ Dental Code: _____
Amount: _____ Amount: _____ Amount: _____

Subsidy Code: _____
Amount: _____

Medical Adjustment \$ _____ Month _____
Subsidy Adjustment \$ _____ Month _____
Dental Adjustment \$ _____ Month _____

Month to set adjustments to default: _____

CODES FOR POLICE & FIRE PENSION IN PENSION SYSTEM:

Medical Code: _____ Amount: _____
Medical Code: _____ Amount: _____
Dental Code: _____ Amount: _____
Subsidy Code: _____ Amount: _____

Medical Adjustment \$ _____ Month _____
Medical Adjustment \$ _____ Month _____
Medical Adjustment \$ _____ Month _____
Medical Adjustment \$ _____ Month _____

Subsidy Adjustment \$ _____ Month _____
Subsidy Adjustment \$ _____ Month _____

Dental Adjustment \$ _____ Month _____
Dental Adjustment \$ _____ Month _____

MARCIA _____ UHC _____ CAREMARK _____ E-MAIL UA _____
UPDATE UA SPREADSHEET _____

RETIREE CHANGE BILLING CHECKLIST

MARCIA BILLING OR PAYROLL DEDUCTION

NAME: _____ EFFECTIVE DATE: _____

DEPENDENT NAME & RELATIONSHIP: _____

CODES TO E-MAIL MARCIA:

Medical Code: _____ Medical Code: _____ Dental Code: _____
Amount: _____ Amount: _____ Amount: _____

Subsidy Code: _____
Amount: _____

Medical Adjustment \$ _____ Month _____
Subsidy Adjustment \$ _____ Month _____
Dental Adjustment \$ _____ Month _____

Month to set adjustments to default: _____

CODES FOR POLICE & FIRE PENSION IN PENSION SYSTEM:

Medical Code: _____ Amount: _____
Medical Code: _____ Amount: _____
Dental Code: _____ Amount: _____
Subsidy Code: _____ Amount: _____

Medical Adjustment \$ _____ Month _____
Medical Adjustment \$ _____ Month _____
Medical Adjustment \$ _____ Month _____
Medical Adjustment \$ _____ Month _____

Subsidy Adjustment \$ _____ Month _____
Subsidy Adjustment \$ _____ Month _____

Dental Adjustment \$ _____ Month _____
Dental Adjustment \$ _____ Month _____

MARCIA _____ UHC _____ CAREMARK _____ E-MAIL UA _____

UPDATE UA SPREADSHEET _____

TERMINATION OF RETIREE BILLING CHECKLIST

MARCIA BILLING OR PAYROLL DEDUCTION

RETIREE NAME _____

DEPENDENT NAME & RELATIONSHIP: _____

COVERAGE TERMINATION DATE _____

DATE NOTIFIED TO TERMINATE COVERAGE _____

Date Marcia Billing Ends (Month): _____

If Applicable: Date to end deductions from Pension record in H.T.E. _____

If Applicable: REFUND OF PREMIUMS FROM H.T.E.: _____ Amount
_____ Paycheck or Month

If Applicable: Email termination of coverage to United American _____

MARCIA (CC: CAROL WILSON) _____

INACTIVATE DEDUCTION IN H.T.E. _____

UHC _____ CAREMARK _____ UNITED AMERICAN _____

COBRA BILLING CHECKLIST

MARCIA BILLING OR PAYROLL DEDUCTION

EMPLOYEE NAME _____

EMPLOYMENT TERMINATION DATE _____

DATE ELECTED COVERAGE _____

DATE COBRA COVERAGE BEGINS _____

DATE COBRA COVERAGE ENDS _____

IF APPLICABLE: DATE COBRA SUBSIDY BEGINS _____

IF APPLICABLE: DATE COBRA SUBSIDY ENDS _____

Date Marcia Billing Starts (Month): _____

Deadline for 1st payment (45 days from election) _____

Medical Code: _____

Dental Code: _____

Amount: _____

Amount: _____

If Applicable: Date to begin deductions from Pension or normal Payroll record _____

MARCIA (CC: CAROL WILSON) _____ SETUP DEDUCTION IN H.T.E. _____

COBRA TICKLER SPREADSHEET _____

UHC _____ CAREMARK _____

E-MAIL UA _____ UPDATE UA SPREADSHEET _____



FEMA

JAN 31 2011

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Honorable Bob McDavid
Mayor, City of Columbia
Post Office Box 6015
Columbia, Missouri 65205

RECEIVED
FEB 07 2011

BY: CCO

Dear Mayor McDavid:

I am writing this letter as an official reminder that the City of Columbia, Missouri, has until March 17, 2011, to adopt and have the Department of Homeland Security's Federal Emergency Management Agency (FEMA) Regional Office approve floodplain management measures that satisfy 44 Code of Federal Regulations (CFR) Section 60.3(d) of the National Flood Insurance Program (NFIP) regulations.

The City of Columbia must adopt floodplain management measures, such as a floodplain management ordinance, that meet or exceed the minimum NFIP requirements (copy enclosed) by March 17, 2011, to avoid suspension from the NFIP. If suspended, your community becomes ineligible for flood insurance through the NFIP, new insurance policies cannot be sold, and existing policies cannot be renewed.

Under the Flood Disaster Protection Act of 1973, as amended, flood insurance must be purchased by property owners seeking any Federal financial assistance for construction or acquisition of buildings in SFHAs. This financial assistance includes certain federally guaranteed mortgages and direct loans, federal disaster relief loans and grants, as well as other similarly described assistance from FEMA and other agencies.

In addition, all loans individuals obtain from Federally regulated, supervised, or insured lending institutions that are secured by improved real estate located in SFHAs are also contingent upon the borrower obtaining flood insurance coverage on the building. However, purchasing and maintaining flood insurance coverage on a voluntary basis is frequently recommended for properties located outside SFHAs.

Your NFIP State Coordinator and FEMA would like to assist the City of Columbia to ensure it remains in good standing with the NFIP and avoids suspension from the Program. If your community is suspended, it may regain its eligibility in the NFIP by enacting the floodplain management measures established in 44 CFR Section 60.3 of the NFIP regulations. As stated in my previous correspondence, I recommend you contact your NFIP State Coordinator or the FEMA Regional Office if the City of Columbia is encountering difficulties in enacting its measures.

The Honorable Bob McDavid

JAN 31 2011

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I recognize that your community may be in the final adoption process or may have recently adopted the appropriate floodplain management measures. Please submit these measures to the Floodplain Management Program at the Missouri State Emergency Management Agency. Randy Scrivner, the NFIP State Coordinator, is accessible by telephone at (573) 526-9141, in writing at Post Office Box 116, Jefferson City, Missouri 65102, or by electronic mail at randy.scrivner@sema.dps.mo.gov.

The FEMA Regional staff in Kansas City, Missouri, is also available to assist you with your floodplain management measures. The FEMA Regional Office may be contacted by telephone at (816) 283-7002 or in writing. Please send your written inquiries to the Director, Federal Insurance and Mitigation Division, FEMA Region VII, at 9221 Ward Parkway, Suite 300, Kansas City, Missouri 64114-3372.

In the event your community does not adopt and/or submit the necessary floodplain management measures that meet or exceed the minimum NFIP requirements, I must take the necessary steps to suspend your community from the NFIP. This letter is FEMA's final notification before your community is suspended from the Program.

Sincerely,



Sandra K. Knight, PhD, PE
Deputy Federal Insurance and
Mitigation Administrator, Mitigation

cc: Beth Freeman, Regional Administrator, FEMA Region VII
Randy Scrivner, NFIP State Coordinator, Missouri State Emergency Management Agency
John Glascock, Floodplain Administrator/Director of Public Works, City of Columbia

§ 60.3 Flood plain management criteria for flood-prone areas.

The Federal Insurance Administrator will provide the data upon which flood plain management regulations shall be based. If the Federal Insurance Administrator has not provided sufficient data to furnish a basis for these regulations in a particular community, the community shall obtain, review and reasonably utilize data available from other Federal, State or other sources pending receipt of data from the Federal Insurance Administrator. However, when special flood hazard area designations and water surface elevations have been furnished by the Federal Insurance Administrator, they shall apply. The symbols defining such special flood hazard designations are set forth in §64.3 of this subchapter. In all cases the minimum requirements governing the adequacy of the flood plain management regulations for flood-prone areas adopted by a particular community depend on the amount of technical data formally provided to the community by the Federal Insurance Administrator. Minimum standards for communities are as follows:

(a) When the Federal Insurance Administrator has not defined the special flood hazard areas within a community, has not provided water surface elevation data, and has not provided sufficient data to identify the floodway or coastal high hazard area, but the community has indicated the presence of such hazards by submitting an application to participate in the Program, the community shall:

(1) Require permits for all proposed construction or other development in the community, including the placement of manufactured homes, so that it may determine whether such construction or other development is proposed within flood-prone areas;

(2) Review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334;

(3) Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall (i) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, (ii) be constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damages, and (iv) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(4) Review subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding. If a subdivision proposal or other proposed new development is in a flood-prone area, any such proposals shall be reviewed to assure that (i) all such proposals are consistent with the need to minimize flood damage within the flood-prone area, (ii) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and (iii) adequate drainage is provided to reduce exposure to flood hazards;

(5) Require within flood-prone areas new and replacement water supply systems to be designed to minimize or eliminate infiltration of flood waters into the systems; and

(6) Require within flood-prone areas (i) new and replacement sanitary sewage systems to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and (ii) onsite waste disposal systems to be located to avoid impairment to them or contamination from them during flooding.

(b) When the Federal Insurance Administrator has designated areas of special flood hazards (A zones) by the publication of a community's FHBM or FIRM, but has neither produced water surface elevation data nor identified a floodway or coastal high hazard area, the community shall:

(1) Require permits for all proposed construction and other developments including the placement of manufactured homes, within Zone A on the community's FHBM or FIRM;

(2) Require the application of the standards in paragraphs (a) (2), (3), (4), (5) and (6) of this section to development within Zone A on the community's FHBM or FIRM;

- (3) Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data;
- (4) Obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source, including data developed pursuant to paragraph (b)(3) of this section, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on the community's FHBM or FIRM meet the standards in paragraphs (c)(2), (c)(3), (c)(5), (c)(6), (c)(12), (c)(14), (d)(2) and (d)(3) of this section;
- (5) Where base flood elevation data are utilized, within Zone A on the community's FHBM or FIRM:
- (i) Obtain the elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures, and
 - (ii) Obtain, if the structure has been floodproofed in accordance with paragraph (c)(3)(ii) of this section, the elevation (in relation to mean sea level) to which the structure was floodproofed, and
 - (iii) Maintain a record of all such information with the official designated by the community under §59.22 (a)(9)(iii);
- (6) Notify, in riverine situations, adjacent communities and the State Coordinating Office prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the Federal Insurance Administrator;
- (7) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained;
- (8) Require that all manufactured homes to be placed within Zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.
- (c) When the Federal Insurance Administrator has provided a notice of final flood elevations for one or more special flood hazard areas on the community's FIRM and, if appropriate, has designated other special flood hazard areas without base flood elevations on the community's FIRM, but has not identified a regulatory floodway or coastal high hazard area, the community shall:
- (1) Require the standards of paragraph (b) of this section within all A1-30 zones, AE zones, A zones, AH zones, and AO zones, on the community's FIRM;
 - (2) Require that all new construction and substantial improvements of residential structures within Zones A1-30, AE and AH zones on the community's FIRM have the lowest floor (including basement) elevated to or above the base flood level, unless the community is granted an exception by the Federal Insurance Administrator for the allowance of basements in accordance with §60.6 (b) or (c);
 - (3) Require that all new construction and substantial improvements of non-residential structures within Zones A1-30, AE and AH zones on the community's firm (i) have the lowest floor (including basement) elevated to or above the base flood level or, (ii) together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
 - (4) Provide that where a non-residential structure is intended to be made watertight below the base flood level, (i) a registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of paragraph (c)(3)(ii) or (c)(8)(ii) of this section, and (ii) a record of such certificates which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained with the official designated by the community under §59.22(a)(9)(iii);
 - (5) Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to

(iii) Meet the permit requirements of paragraph (b)(1) of this section and the elevation and anchoring requirements for "manufactured homes" in paragraph (c)(6) of this section.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

(d) When the Federal Insurance Administrator has provided a notice of final base flood elevations within Zones A1-30 and/or AE on the community's FIRM and, if appropriate, has designated AO zones, AH zones, A99 zones, and A zones on the community's FIRM, and has provided data from which the community shall designate its regulatory floodway, the community shall:

- (1) Meet the requirements of paragraphs (c) (1) through (14) of this section;
- (2) Select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood, without increasing the water surface elevation of that flood more than one foot at any point;
- (3) Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge;
- (4) Notwithstanding any other provisions of §60.3, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community first applies for a conditional FIRM and floodway revision, fulfills the requirements for such revisions as established under the provisions of §65.12, and receives the approval of the Federal Insurance Administrator.

(e) When the Federal Insurance Administrator has provided a notice of final base flood elevations within Zones A1-30 and/or AE on the community's FIRM and, if appropriate, has designated AH zones, AO zones, A99 zones, and A zones on the community's FIRM, and has identified on the community's FIRM coastal high hazard areas by designating Zones V1-30, VE, and/or V, the community shall:

- (1) Meet the requirements of paragraphs (c)(1) through (14) of this section;
- (2) Within Zones V1-30, VE, and V on a community's FIRM, (i) obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures, and whether or not such structures contain a basement, and (ii) maintain a record of all such information with the official designated by the community under §59.22(a)(9)(iii);
- (3) Provide that all new construction within Zones V1-30, VE, and V on the community's FIRM is located landward of the reach of mean high tide;
- (4) Provide that all new construction and substantial improvements in Zones V1-30 and VE, and also Zone V if base flood elevation data is available, on the community's FIRM, are elevated on pilings and columns so that (i) the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level; and (ii) the pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of paragraphs (e)(4) (i) and (ii) of this section.
- (5) Provide that all new construction and substantial improvements within Zones V1-30, VE, and V on the community's FIRM have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or State

flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(6) Require that manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on the community's FIRM on sites

(i) Outside of a manufactured home park or subdivision,

(ii) In a new manufactured home park or subdivision,

(iii) In an expansion to an existing manufactured home park or subdivision, or

(iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist floatation collapse and lateral movement.

(7) Require within any AO zone on the community's FIRM that all new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified);

(8) Require within any AO zone on the community's FIRM that all new construction and substantial improvements of nonresidential structures (i) have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified), or (ii) together with attendant utility and sanitary facilities be completely floodproofed to that level to meet the floodproofing standard specified in §60.3(c)(3)(ii);

(9) Require within any A99 zones on a community's FIRM the standards of paragraphs (a)(1) through (a)(4)(i) and (b)(5) through (b)(9) of this section;

(10) Require until a regulatory floodway is designated, that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

(11) Require within Zones AH and AO, adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

(12) Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A-1-30, AH, and AE on the community's FIRM that are not subject to the provisions of paragraph (c)(6) of this section be elevated so that either

(i) The lowest floor of the manufactured home is at or above the base flood elevation, or

(ii) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist floatation, collapse, and lateral movement.

(13) Notwithstanding any other provisions of §60.3, a community may approve certain development in Zones A1-30, AE, and AH, on the community's FIRM which increase the water surface elevation of the base flood by more than one foot, provided that the community first applies for a conditional FIRM revision, fulfills the requirements for such a revision as established under the provisions of §65.12, and receives the approval of the Federal Insurance Administrator.

(14) Require that recreational vehicles placed on sites within Zones A1-30, AH, and AE on the community's FIRM either

(i) Be on the site for fewer than 180 consecutive days,

(ii) Be fully licensed and ready for highway use, or

codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

- (i) Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and,
- (ii) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural). Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards.

Such enclosed space shall be useable solely for parking of vehicles, building access, or storage.

(6) Prohibit the use of fill for structural support of buildings within Zones V1-30, VE, and V on the community's FIRM;

(7) Prohibit man-made alteration of sand dunes and mangrove stands within Zones V1-30, VE, and V on the community's FIRM which would increase potential flood damage.

(8) Require that manufactured homes placed or substantially improved within Zones V1-30, V, and VE on the community's FIRM on sites

- (i) Outside of a manufactured home park or subdivision,
- (ii) In a new manufactured home park or subdivision,
- (iii) In an expansion to an existing manufactured home park or subdivision, or
- (iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, meet the standards of paragraphs (e)(2) through (7) of this section and that manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones V1-30, V, and VE on the community's FIRM meet the requirements of paragraph (c)(12) of this section.

(9) Require that recreational vehicles placed on sites within Zones V1-30, V, and VE on the community's FIRM either

- (i) Be on the site for fewer than 180 consecutive days,
- (ii) Be fully licensed and ready for highway use, or
- (iii) Meet the requirements in paragraphs (b)(1) and (e) (2) through (7) of this section.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

(f) When the Federal Insurance Administrator has provided a notice of final base flood elevations within Zones A1-30 or AE on the community's FIRM, and, if appropriate, has designated AH zones, AO zones, A99 zones, and A zones on the community's FIRM, and has identified flood protection restoration areas by designating Zones AR, AR/A1-30, AR/AE, AR/AH, AR/AO, or AR/A, the community shall:

- (1) Meet the requirements of paragraphs (c)(1) through (14) and (d)(1) through (4) of this section.
- (2) Adopt the official map or legal description of those areas within Zones AR, AR/A1-30, AR/AE, AR/AH, AR/A, or AR/AO that are designated developed areas as defined in §59.1 in accordance with the eligibility procedures under §65.14.
- (3) For all new construction of structures in areas within Zone AR that are designated as developed areas and in other areas within Zone AR where the AR flood depth is 5 feet or less:
 - (i) Determine the lower of either the AR base flood elevation or the elevation that is 3 feet above highest adjacent grade; and
 - (ii) Using this elevation, require the standards of paragraphs (c)(1) through (14) of this section.

(4) For all new construction of structures in those areas within Zone AR that are not designated as developed areas where the AR flood depth is greater than 5 feet:

(i) Determine the AR base flood elevation; and

(ii) Using that elevation require the standards of paragraphs (c)(1) through (14) of this section.

(5) For all new construction of structures in areas within Zone AR/A1-30, AR/AE, AR/AH, AR/AO, and AR/A:

(i) Determine the applicable elevation for Zone AR from paragraphs (a)(3) and (4) of this section;

(ii) Determine the base flood elevation or flood depth for the underlying A1-30, AE, AH, AO and A Zone; and

(iii) Using the higher elevation from paragraphs (a)(5)(i) and (ii) of this section require the standards of paragraphs (c)(1) through (14) of this section.

(6) For all substantial improvements to existing construction within Zones AR/A1-30, AR/AE, AR/AH, AR/AO, and AR/A:

(i) Determine the A1-30 or AE, AH, AO, or A Zone base flood elevation; and

(ii) Using this elevation apply the requirements of paragraphs (c)(1) through (14) of this section.

(7) Notify the permit applicant that the area has been designated as an AR, AR/A1-30, AR/AE, AR/AH, AR/AO, or AR/A Zone and whether the structure will be elevated or protected to or above the AR base flood elevation.

**SANITARY SEWER TASK
FORCE ORDINANCE
RECOMMENDATIONS**

February 7, 2011

Current Definitions of Classifications

- **Residential:** Any premises served, upon which is located a structure housing one or two (2) families.
- **Public Authority:** Any governmental, educational, municipal or institutional user of the system; provided, however, that when, in the judgement of the director or his authorized representative, the waste, sewage or discharge of public authority is other than normal wastewater, such waste, sewage or discharge shall be regulated as that of a commercial or industrial user; provided further, that only the specific waste which is other than normal wastewater shall be so regulated; all other waste, sewage or discharge of the public authority shall be treated as that of a residential user.
- **Commercial and industrial:** All users of the system other than those above classified.

Proposed Definitions of Classifications

- **Dwelling Unit**: One or more rooms arranged for the use of one or more individuals living together as a single housekeeping unit, with cooking, living, sanitary and sleeping facilities.
- **Residential**: A residential user is a user of a dwelling unit that is connected to the city's sanitary sewer system and served by one (1) water meter.
- **Non-residential**: Non-residential users are all users of the city's sanitary sewer system that are not residential users.

Proposed Components of Sewage Service Charge

- **Base Charge:** A base charge will be charged for each user as follows:

- a. One base charge shall be charged per residential user.
- b. One base charge shall be charged per non-residential user. The non-residential base charge shall be set to the size of the water meter, starting with a base charge equal to a residential base charge for meters 5/8 inches and shall scale upwards based on the size of the meter.

Proposed Components of Sewage Service Charge

- Volume Charge: Subject to the exceptions provided in this article, a volume charge shall be based upon the volume of water used in or on the premises as the same is measured by a water or sewer meter or sewer meters approved by the city; provided, however, that if actual sewer service cannot reasonably be determined from the water or sewage so metered, whether due to defect, tampering or causes unknown, the amount of sewage, waste or waters discharged into such system shall be estimated and billed as provided for in section 27-19

Current Rate Table

	User Charge Portion	Capital Charge Portion	Total
Service Charge, per month:			
All customers...	\$5.677	\$1.328	\$7.00
Quantity Charge, per Ccf:			
All volume...	\$1.391	\$0.268	\$1.66
Ccf= 100 cubic feet			

Proposed Rate Table

■ Base Charge:

Water Meter Size	Meter Capacity (gpm)	Capacity Difference	Base Charge by Meter Capacity
5/8-inch (typical residential)	15	-	\$5.52
3/4 -inch	25	1.67	\$9.20
1-inch	50	3.33	\$18.40
1 1/2-inch	100	6.67	\$36.80
2-inch	160	10.67	\$58.88
3-inch	320	21.33	\$117.76
4-inch	500	33.33	\$184.00
6-inch	3,000	200.00	\$1,104.00
8-inch	4,000	266.67	\$1,472.00
10-inch	5,500	366.67	\$2,024.00
12-inch	7,500	500.00	\$2,760.00

Proposed Rate Table

- Volume Charge:

Volume charge, per Ccf:.....\$1.825
Ccf= 100 cubic feet

Other Recommendations

- Consultant (Baker, Tilly) recommended revenue recovery of 75% from volume charges and 25% from base charges. Sewer Task Force agreed.
- Sewer Task Force agreed to continue charging a base charge, since it is a stable revenue source for fixed costs. A volume only charge would not have that stability.

Top 10 Sewer Commercial Customers

Customer #1

6" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 7.00	\$ 1,104.00
Volume Charge	\$ <u>40,981.08</u>	\$ <u>45,049.03</u>
Subtotal	\$ 40,988.08	\$ 46,153.03
5/8" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 7.00	\$ 5.52
Volume Charge	\$ <u>62.08</u>	\$ 68.26
Subtotal	\$ 69.08	\$ 73.78
TOTAL BILL	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 14.00	\$ 1,109.52
Volume Charge	\$ <u>41,043.16</u>	\$ <u>45,117.29</u>
Total	\$ 41,057.16	\$ 46,226.81

Top 10 Sewer Commercial Customers

Customer #2

4" water meter Base Charge	Current (Fixed base)	Proposed (meter equivalency)
Volume Charge	\$ 7.00	\$ 184.00
Total	<u>\$ 4,669.58</u>	<u>\$ 5,133.73</u>
	\$ 4,676.58	\$ 5,317.73

Top 10 Sewer Commercial Customers

Customer #3

6" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 7.00	\$ 1,104.00
Volume Charge	\$ 2,685.88	\$ 2,952.85
Subtotal	\$ 2,692.88	\$ 4,056.85
6" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 7.00	\$ 1,104.00
Volume Charge	\$ 2,755.60	\$ 3,029.50
Subtotal	\$ 2,762.60	\$ 4,133.50
5 / 8" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 7.00	\$ 5.52
Volume Charge	\$ 1.66	\$ 1.83
Subtotal	\$ 8.66	\$ 7.35
TOTAL BILL	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 21.00	\$ 2,213.52
Volume Charge	\$ 5,443.14	\$ 5,984.18
Total	\$ 5,464.14	\$ 8,197.70

Top 10 Sewer Commercial Customers

Customer #4

	Current (fixed base)	Proposed (meter equivalency)
4" water meter		
Base Charge	\$ 7.00	\$ 184.00
Volume Charge	\$ 3,686.86	\$ 4,053.33
Subtotal	\$ 3,693.86	\$ 4,237.33
4" water meter		
	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$7.00	\$184.00
Volume Charge	\$0.00	\$ 0.00
Subtotal	\$7.00	\$184.00
3" water meter		
	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 7.00	\$ 117.76
Volume Charge	\$ 258.96	\$ 284.70
Subtotal	\$ 265.96	\$ 402.46
TOTAL BILL	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 21.00	\$ 485.76
Volume Charge	\$3,945.82	\$ 4,338.03
TOTAL	\$ 3,966.82	\$ 4,823.79

Top 10 Sewer Commercial Customers

Customer #5

4" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 7.00	\$ 184.00
Volume Charge	<u>\$ 2,103.22</u>	<u>\$ 2,312.28</u>
Total	\$ 2,110.22	\$ 2,496.28

Customer #6

6" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 7.00	\$ 1,104.00
Volume Charge	<u>\$ 3,044.44</u>	<u>\$ 3,347.05</u>
Total	\$ 3,051.44	\$ 4,451.05

Customer #7

2" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 1,883.00	\$ 58.88
Volume Charge	<u>\$ 1,995.32</u>	<u>\$ 2,193.65</u>
Total	\$ 3,878.32	\$ 2,252.53

Top 10 Sewer Commercial Customers

Customer #8

4" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$1,225.00	\$ 184.00
Volume Charge	\$2,189.54	\$ 2,407.18
Total	\$ 3,414.54	\$ 2,591.18

Customer #9

2" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$7.00	\$58.88
Volume Charge	\$1,605.22	\$1,764.78
Total	\$1,612.22	\$1,823.66

Customer #10

6" water meter	Current (fixed base)	Proposed (meter equivalency)
Base Charge	\$ 7.00	\$ 1,104.00
Volume Charge	\$ 1,904.02	\$ 2,093.28
Total	\$ 1,911.02	\$ 3,197.28

University of Missouri

	Current (fixed base)	Proposed (meter equivalency)
Base Charge : (170 meters)	\$ 15,000.00 (based on 8,100 REU's)	\$ 11,533.12
Volume Charge: 48,790 ccf's (12 month average)	\$ <u>63,260.89</u>	\$ <u>89,041.75</u>
Total	\$ 78,260.89	\$ 100,574.87

REU - Residential Equivalent Unit

NOTE: If ordinance recommendations are approved, then the Universities volume charge would no longer be calculated based on winter-quarter average, but with actual usage.

Phase-In Changes

Phase-In Over 3 Years

Customer #1

6" water meter	Current (fixed base)	Year 1	Year 2	Year 3
Base Charge	\$ 7.00	\$ 1,302.00	\$ 1,202.00	\$ 1,104.00
Volume Charge	\$ 40,981.08	\$ 42,462.33	\$ 43,696.70	\$ 45,049.03
Subtotal	\$ 40,988.08	\$ 43,764.33	\$ 44,898.70	\$ 46,153.03
5/8" water meter				
Base Charge	\$ 7.00	\$ 6.51	\$ 6.01	\$ 5.52
Volume Charge	\$ 62.08	\$ 64.33	\$ 66.20	\$ 68.26
Subtotal	\$ 69.08	\$ 70.84	\$ 72.21	\$ 73.78
TOTAL BILL				
Base Charge	\$ 14.00	\$ 1,308.51	\$ 1,208.01	\$ 1,109.52
Volume Charge	\$ 41,043.16	\$ 42,526.66	\$ 43,762.90	\$ 45,117.29
Total	\$ 41,057.16	\$ 43,835.17	\$ 44,970.91	\$ 46,226.81

Phase-In Over 3 Years

Customer #2

4" water meter	Current (fixed base)	Year 1	Year 2	Year 3
Base Charge	\$7.00	\$217.00	\$200.33	\$184.00
Volume Charge	<u>\$4,669.58</u>	<u>\$4,838.36</u>	<u>\$4,979.01</u>	<u>\$5,133.73</u>
Total	\$4,676.58	\$5,055.36	\$5,179.34	\$5,317.73

Phase-In Over 3 Years

Customer #3

	Current (Fixed base)	Year 1	Year 2	Year 3
6" water meter				
Base Charge	\$7.00	\$1,302.00	\$1,202.00	\$1,104.00
Volume Charge	\$2,685.88	\$2,782.96	\$2,863.86	\$2,952.85
Subtotal	\$2,692.88	\$4,084.96	\$4,065.86	\$4,056.85
6" water meter	Current (Fixed base)	Year 1	Year 2	Year 3
Base Charge	\$7.00	\$1,302.00	\$1,202.00	\$1,104.00
Volume Charge	\$2,755.60	\$2,855.20	\$2,938.20	\$3,029.50
Subtotal	\$2,762.60	\$4,157.20	\$4,140.20	\$4,133.50
5/8" water meter	Current (Fixed base)	Year 1	Year 2	Year 3
Base Charge	\$7.00	\$6.51	\$6.01	\$5.52
Volume Charge	\$1.66	\$1.72	\$1.77	\$1.83
Subtotal	\$8.66	\$8.23	\$7.78	\$7.35
TOTAL BILL	Current (Fixed base)	Year 1	Year 2	Year 3
Base Charge	\$21.00	\$2,610.51	\$2,410.01	\$2,213.52
Volume Charge	\$5,443.14	\$5,639.88	\$5,803.83	\$5,984.18
TOTAL	\$5,464.14	\$8,250.39	\$8,213.84	\$8,197.70

Phase-In Over 3 Years

Customer #4

	Current (fixed base)	Year 1	Year 2	Year 3
4" water meter				
Base Charge	\$7.00	\$217.00	\$200.33	\$184.00
Volume Charge	\$3,686.86	\$3,820.12	\$3,931.17	\$4,053.33
Subtotal	\$3,693.86	\$4,037.12	\$4,131.50	\$4,237.33
4" water meter				
Current (fixed base)		Year 1	Year 2	Year 3
Base Charge	\$7.00	\$217.00	\$200.33	\$184.00
Volume Charge	\$0.00	\$0.00	\$0.00	\$0.00
Subtotal	\$7.00	\$217.00	\$200.33	\$184.00
3" water meter				
Current (fixed base)		Year 1	Year 2	Year 3
Base Charge	\$7.00	\$138.88	\$128.21	\$117.76
Volume Charge	\$258.96	\$268.32	\$276.12	\$284.70
Subtotal	\$265.96	\$407.20	\$404.33	\$402.46
TOTAL BILL	Current (fixed base)	Year 1	Year 2	Year 3
Base Charge	\$21.00	\$572.88	\$528.87	\$485.76
Volume Charge	\$3,945.82	\$4,088.44	\$4,207.29	\$4,338.03
TOTAL	\$3,966.82	\$4,661.32	\$4,736.16	\$4,823.79

Phase-In Over 3 Years

Customer #5

4" water meter	Current (fixed base)	Year 1	Year 2	Year 3
Base Charge	\$ 7.00	\$ 217.00	\$ 200.33	\$ 184.00
Volume Charge	<u>\$ 2,103.22</u>	<u>\$ 2,179.24</u>	<u>\$ 2,242.59</u>	<u>\$ 2,312.28</u>
Total	\$ 2,110.22	\$ 2,396.24	\$ 2,442.92	\$ 2,496.28

University of Missouri Phase-In Over 3 Years

	Current (fixed base)	Year 1	Year 2	Year 3
Base Charge: (170 meters)	\$ 15,000.00	\$ 13,601.56	\$ 12,556.89	\$ 11,533.12
Volume Charge: 48,790 ccf's (12 month average)	<u>\$ 78,260.89</u>	<u>\$ 83,918.80</u>	<u>\$ 86,358.30</u>	<u>\$ 89,041.75</u>
TOTAL	\$ 93,260.89	\$ 97,520.36	\$ 98,915.19	\$ 100,574.87