WORK SESSION

May 26, 2015
City Commission Room, 700 N. Jefferson, Junction City KS 66441

Mayor Mick McCallister
Vice Mayor Jim Sands
Commissioner Phyllis Fitzgerald
Commissioner Pat Landes
Commissioner Michael Ryan
City Manager Allen Dinkel
City Attorney Catherine Logan
City Clerk Tyler Ficken

1. **6:00 P.M. - CALL TO ORDER**

2. **NEW BUSINESS:**

   a. Presentation and Discussion of Storm Water Management Master Plan and Financial Business Plan

3. **ADJOURNMENT:**

Backup material for agenda item:

a. Presentation and Discussion of Storm Water Management Master Plan and Financial Business Plan

City of Junction City

City Commission

Agenda Memo

May 26, 2015

From: Gregory S. McCaffery, Director of Municipal Services

To: Allen Dinkel, City Manager and City Commission

Subject: **Workshop - Storm Water Management Master Plan**

Objective: Storm Water Program Overview and Financial Summary Presentation.

Explanation of Issue: The City, through Amec Foster Wheeler (AmecFW) complete a *Storm Water Management Master Plan* (SWMMP). This SWMMP document was developed and completed with the intent to address the physical storm water system; storm water program operations & maintenance; water quality regulations; storm water system improvements; and provide a *Financial Business Plan* towards storm water program funding through immediate, short & long term needs.

Presentations have been provided to the City Commission as follows:

July 8, 2014 - An overview of the City's storm water system's condition; regulatory permit obligations; operations & maintenance needs; capital improvement plan (CIP) needs; overview of the City's current rate structure; and policy considerations & options towards the development of an overall *Financial Business Plan* for implementation of the City's storm water system program was presented. A consensus at the workshop was to have staff work towards the overall development of a "*Minimal Plus Program.*"

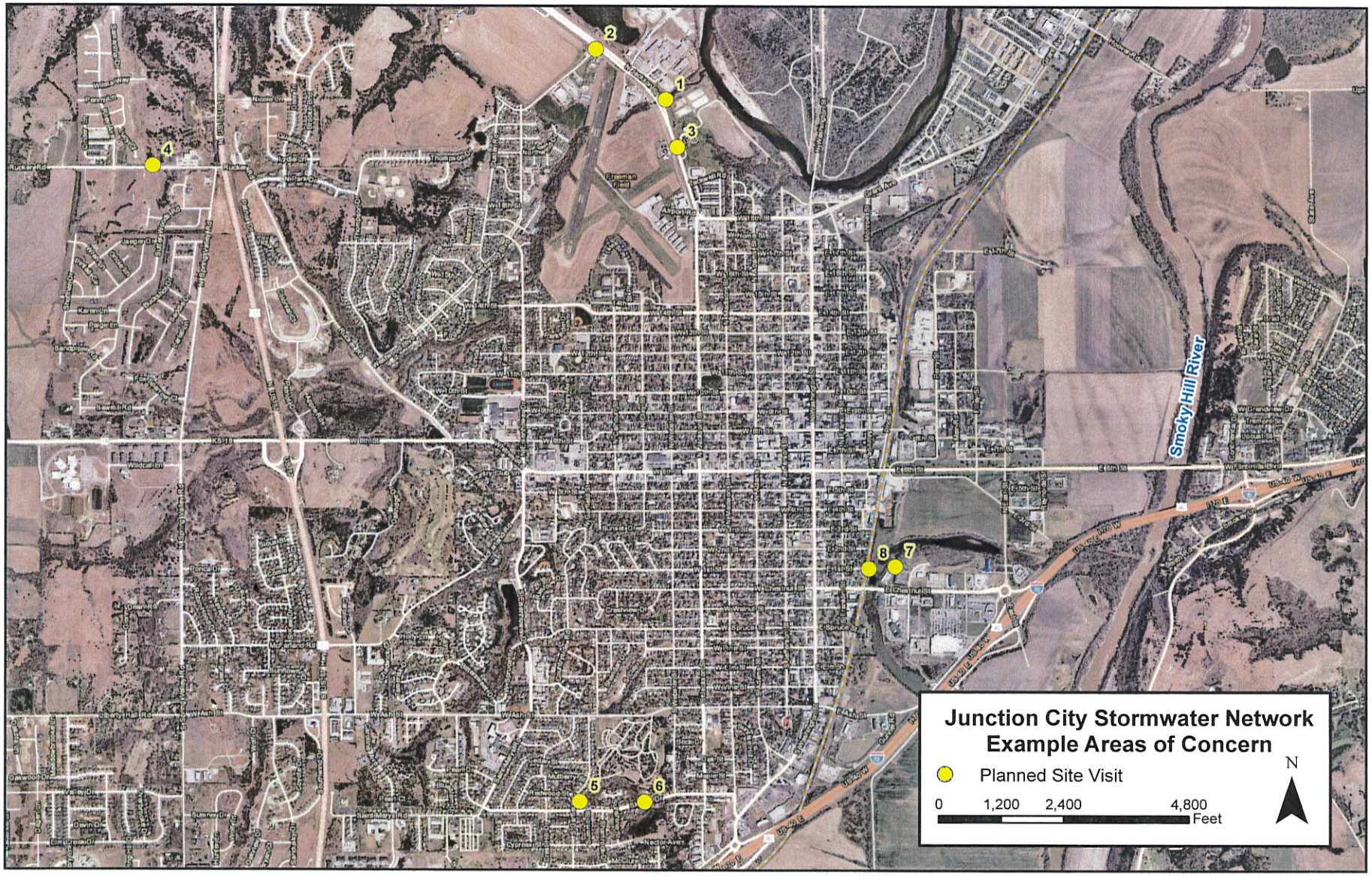
August 5, 2014 – It was recommended to complete the SWMMP with two rate scenarios for further consideration on the final *Financial Business Plan* and overall storm water rate for use with the final SWMMP.

December 2014 – A summary of the overall completed SWMMP was presented, with a "*Minimal Plus Program*." It was requested that staff develop additional information, including rate cap options, for consideration of the final FBP.

The intent of the present workshop is to provide the City Commission a sample representation of the conditions of the existing storm water system, a brief overview of prior actions and further provide the City Commission with additional financial information in order to work towards an amended rate methodology and means to fund the necessary related storm water system programs. The first part of the workshop will involve a drive around and review of a representation of the City's storm water system. Enclosed is a map and brief overview of each of the eight (8) locations which will be visited. The second part of the workshop will involve a PowerPoint presentation with a refresher of the SWMMP, the *Minimal Plus Program*, and storm water finance options.

City staff would be looking for general consensus from the City Commission on the overall program and a preferred rate methodology

Enclosures: Storm Water Visitation Locations
Storm Water Management Master Plan – PowerPoint Presentation


Junction City Stormwater Network
Example Areas of Concern
Planned Site Visit
0
1,200
2,400
4,800
Feet
N
Smoky Hill River
1
2
3
4
5
6
7
8

ID	Description	Location	Difficulty of Access	Photo
1	Erosion at Prices Ravine	2075 N Jackson St	Minor – just off highway	
2	Double 7' X 3' RCB silted in	N Jackson St & Elmdale Ave	Minor – just off highway	
3	Silted Inlet (grated) 15" CMP	2026 N Jackson St	Minor – highway traffic	

ID	Description	Location	Difficulty of Access	Photo
4	36" RCP, trash caught in grate	West of 2512 Rucker Rd	Minor – brush	
5	24" CMP - exposed rusting, erosion	1201 S Garfield St	Minor – across backyard	
6	Outlet of 5' X 5' RCB is completely obstructed	708 Skyline Dr	Moderate – trees & slope	

ID	Description	Location	Difficulty of Access	Photo
7	36" RCP, erosion at outlet, flared end section fallen off	100 S Hammons Dr	Moderate – trees	
8	Significant erosion at outlet of multiple 36" CMP culverts cutting into railroad embankment	Railroad at 1st St	Minor – across railroad	

City of Junction City KS
Financial Business Plan

May 26, 2015

Presentation Agenda

- Refresher
  - Master Plan Objectives & Project Scope
  - Overall Findings & Recommendations
- The Minimal Plus Program
  - How we got here
  - Cost-of-Service
- Storm Water Finance Refresher
  - 4 Key Principles
  - Standard Practices
- Financial Plan - Examples of Impacts

Master Plan Refresher

Objectives

- Understand the condition, needs and requirements of the City's current storm water program and infrastructure.
- Develop a Storm Water Management Master Plan
  - Recommendations, priorities, general costs and schedules to address programmatic and infrastructure needs
  - Future Program Plan
- Develop a Financial Business Plan to modify the City's Storm Water Fund so it can adequately support the Master Plan

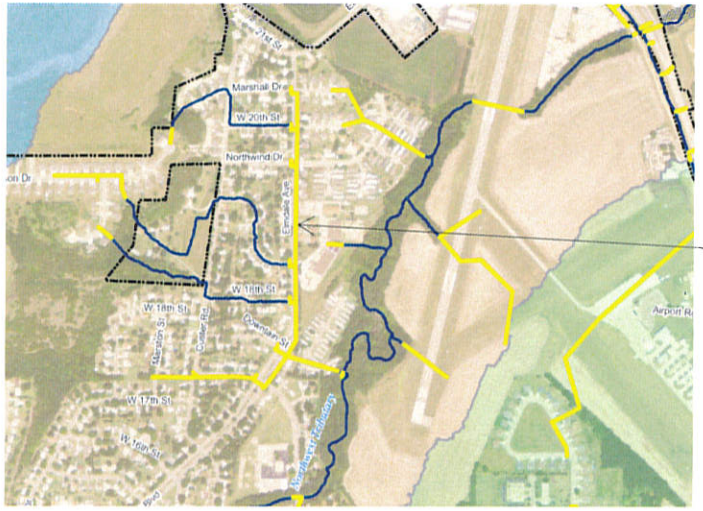
Project Scope

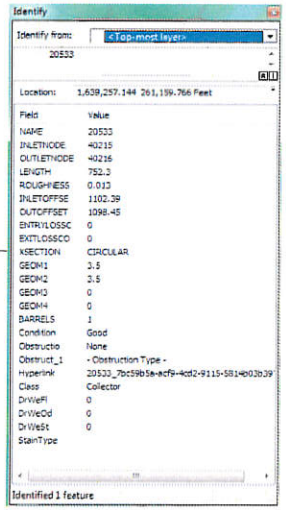
- Storm Water System Inventory and Modeling
- System Operations & Maintenance Program Review
- Capital Improvement Project (CIP) Planning
- NPDES-MS4 Regulatory and City Ordinance Review
- Develop Storm Water Management Master Plan
  - Recommend specific infrastructure and program improvements
  - Formulate a 20-Year Future Storm Water Program (with costs)
- Develop a Financial Business Plan
  - Review of rate methodology and rates
  - Recommendations for finance improvements

Overall Findings & Recommendations

Existing Storm Water System

- Approximately 51.4 Miles of System
  - 3432 conduits, ditches, etc.
  - 3204 Inlets, Outlets, Manholes, and Junctions
  - 12 City-Maintained Detention Facilities



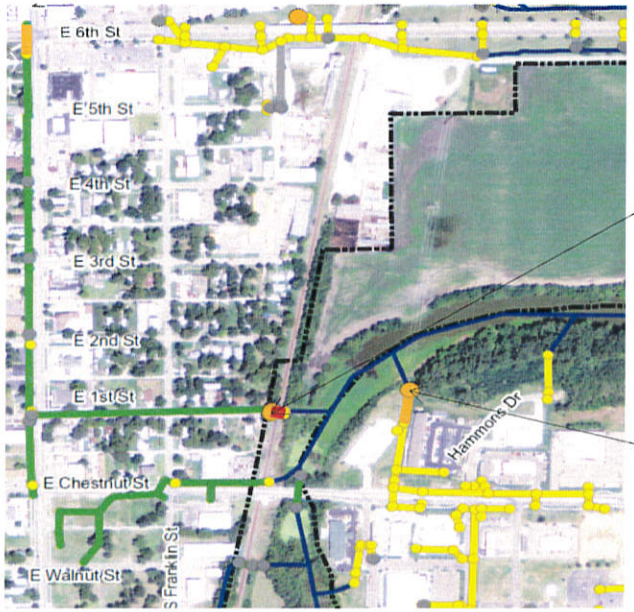


Storm Water System Evaluation

- Conduit Condition
- System Obstructions
- System Capacity

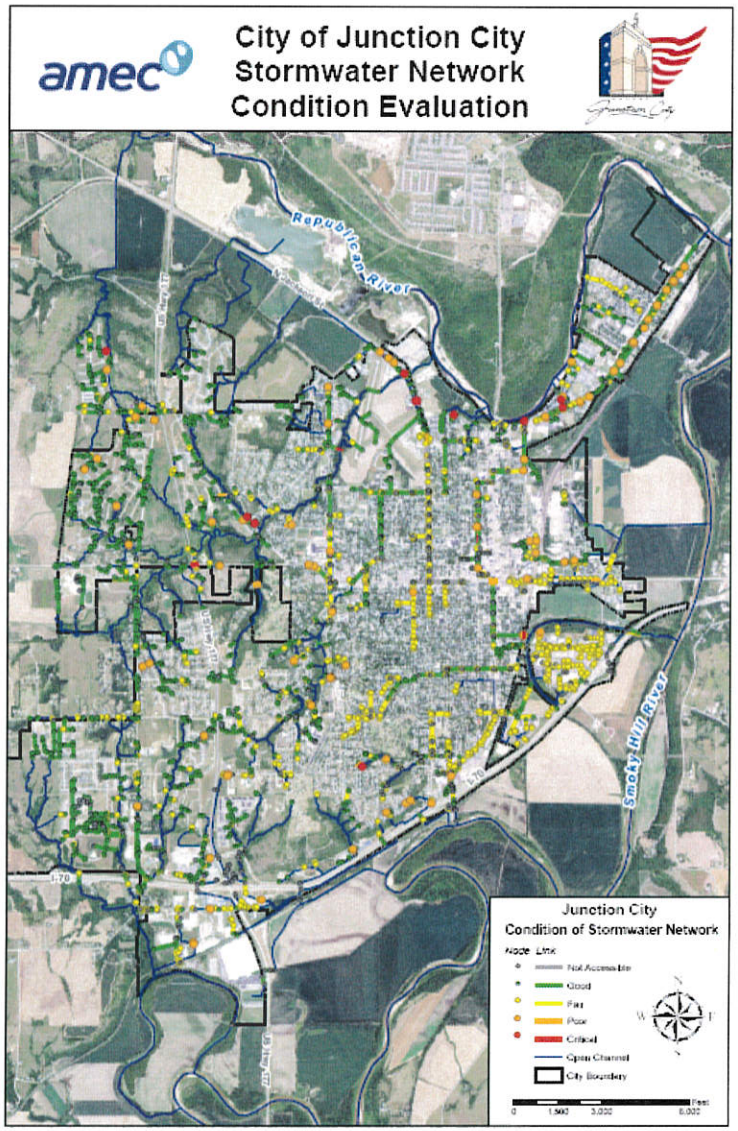
Node Link

- Not Accessible
- Good
- Fair
- Poor
- Critical



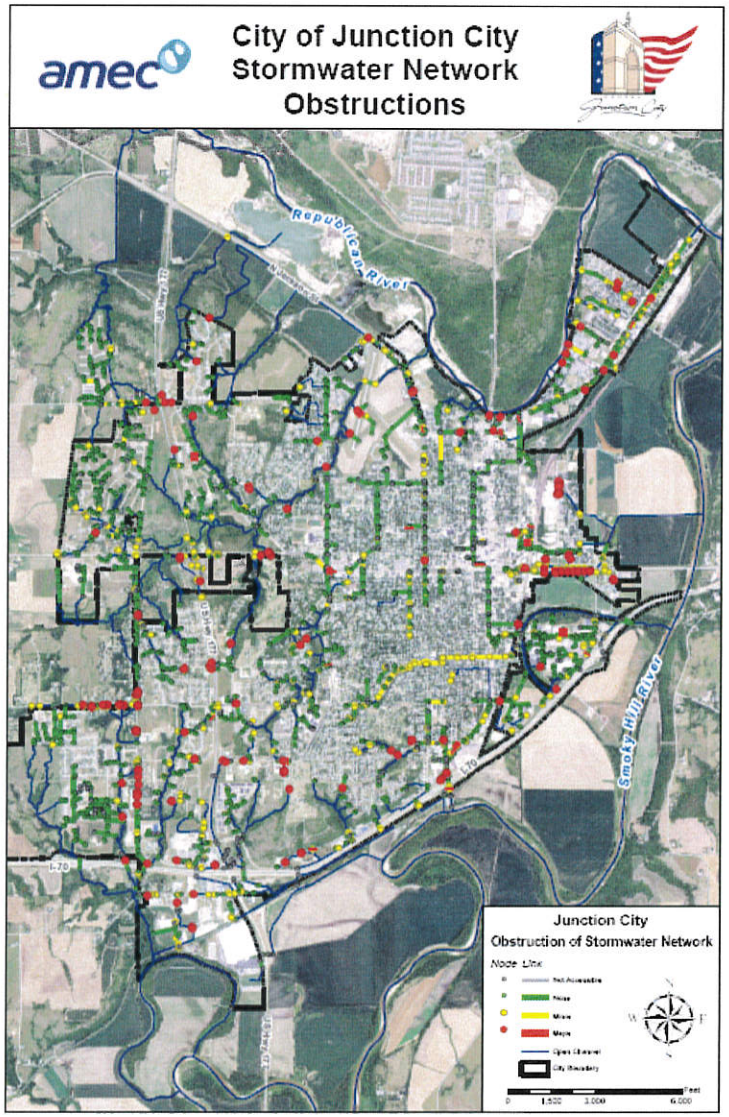
Storm Water System Evaluation

- 21 Critical Condition
- 92 Poor Condition



Storm Water System Evaluation

- 256 Major Obstructions
- 693 Minor Obstructions



Storm Water System Deficiency Examples

- Tier 1 CIP Projects
  - Includes 21 Critical Locations

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Storm Water System Deficiency Examples

- Obstructions
  - Includes 256 Major Locations

CIP Plan Development

- CIP Project Categories:

Category	Description
Tier 1	Pose a danger to public safety or critical infrastructure.
Tier 2	Significant deterioration or capacity issues. May elevate to Tier 1 in the next 20 years
Tiers 3 & 4	Have identified deficiencies, but pose no immediate danger and deficiencies are not as significant as Tier 1 or 2.

** Costly repairs for system deficiencies in areas where no potential significant public interest was identified are not included in the CIP Plan.

CIP Plan Summary

Project Number	CIP Name	Estimated Cost*
3	Dam Repair Projects	In progress
4	Railroad - E 1st St. System	$272,800
5	Prices Ravine Channel	$922,714
6	Aging Infrastructure - Critical	$136,552
		Tier 1 Total = $1,332,066
7A	N Madison System Phase I	$5,199,362
7B	N Madison System Phase II	$4,162,914
8A	N Calhoun - W 14th St, Ph I	$4,954,168
8B	N Calhoun - W 14th St. System Phase II	$2,981,756
9	N Webster - W 10th St. Sys.	$1,350,519
10	Elmdale System	$1,068,350
11A	N Jefferson System Phase I	$2,986,970
11B	N Jefferson System Phase II	$3,811,895
12	N Monroe System	$1,926,307
13	N Jackson System	$4,388,360
14	Aging Infrastructure - Poor	$520,161
15	Miscellaneous Locations	$1,067,914
		Tier 2 Total = $34,418,676

*Includes construction costs plus 25% contingency & 20% project cost.

Project Number	CIP Name	Estimated Cost*
16	N Eisenhower System	$5,611,525
18	Monroe - E 8th St. System	$1,786,451
19	HWY 40 System	$204,371
20	E 7th Street System	$44,285
21	N Webster - N Jackson - W 6th Street System	$2,249,083
23	Coyote System	$120,879
24	Dixon - E 6th Street System	$828,160
		Tier 3 Total = $10,815,742
2	Lacy Dr. Restrictor Plate Removal	$0
17	E Chestnut System	$301,124
22	Rucker System	$33,368
25	Garfield Plaza	In progress
26	W 5th Street System	$141,492
27	S Jackson - S Madison - S Washington System	$3,376,366
28	Westwood System	$2,303,552
29	N Garfield System	$1,128,526
30	N Washington - E 1st St. Sys.	$2,484,706
31	E Chestnut – S Franklin Sys.	$261,463
32	W Ash System	$286,925
33	Grant South System	$307,495
34	Grant North System	$1,248,976
35	Riverbend System	$323,056
		Tier 4 Total = $11,873,993

Operations & Maintenance - Needs

- Remediation
  - Infrastructure
  - Obstructions
  - Dams
  - Outfalls
  - Channel Stability
- Design Criteria

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Operations & Maintenance Assets

- Public Works Fixed Assets
  - Estimated 20% storm water usage of:

• 7 staff/maintenance trucks	• 2 back hoes
• 9 dump trucks	• 2 front loaders
• 2 street sweepers	• 1 bobcat
• 1 air compressor	• 1 sewer jet
• Various office, fleet and related staff & equipment buildings	

<u>Right Sizing the Funds:</u>

- Fixed Asset costs are currently handled by the Streets Fund
- Estimate - 20% should be paid by the Storm Water Fund

NPDES-MS4 Permit Findings

- Regulatory Review Findings:
  - 27 BMPs in City's Storm Water Management Program
  - 20 BMPs are deficient
    - Not implemented at all or as described to KDHE
    - Lack adequate content or reporting

  - Some strong elements (e.g., erosion control ordinance, outfall maps)
  - Some elements need scaling back (e.g., illicit discharge ordinance)
  - Some elements don't exist yet
  - Needs balance, cohesion and dedicated attention

Existing Storm Water Cost of Service

Existing Program Costs		
STORM WATER EXPENSES		
Personnel	$	142,156
Commodities	$	33,860
Contract Services	$	499,964
Capital	$	-
Franchise Fee Transfers	$	70,000
Debt Service	$	450,000
TOTAL STORM WATER EXPENSES	**$**	**1,195,980**

Master Plan Recommendation
The Minimal Plus Program

Program Planning Process

1. Compiled storm water system and program recommendations
   - Developed 20-year schedule with cost-of-service analyses
2. Developed four Planned Program Options
3. Presentations, discussions, re-prioritization, modifications
   - City staff (April to June 2014)
   - City Commission (July 8, 2014)
   - City Commission (December 2, 2014)
4. Final program – **MINIMAL PLUS**
5. Address Tier 2, 3 and 4 priorities after 2018

Recommendation: Minimal Plus Program

Program Functional Area
1. NPDES-MS4 Permit Compliance a. A part-time NPDES Permit staff member is added in 2015, increasing to full-time in 2019 (the start of the City's third permit cycle). b. The recommendations for NPDES compliance program improvements are fully implemented no later than 2016.
1. Tier 1 Capital Improvement Projects a. Tier 1 projects completed by 2017 ($1,294,646 total cost), using current cash-on-hand and a short-term loan.
1. On-going Remedial Maintenance a. Repairs or rehabilitation of individual smaller (i.e., non-CIP level) components of City's drainage system, including but not limited to: • Outfall/headwall/wingwall erosion; • Buried, crushed or clogged culverts, pipes and ditches; • Broken inlets and outlets. b. Includes both internal (City-performed) and external (engineer/contractor) services. c. Numerous remedial maintenance issues were identified in 2013. Remedial maintenance funding will be an annual, recurring expense to repair and ensure cost-effective maintenance of aging infrastructure.

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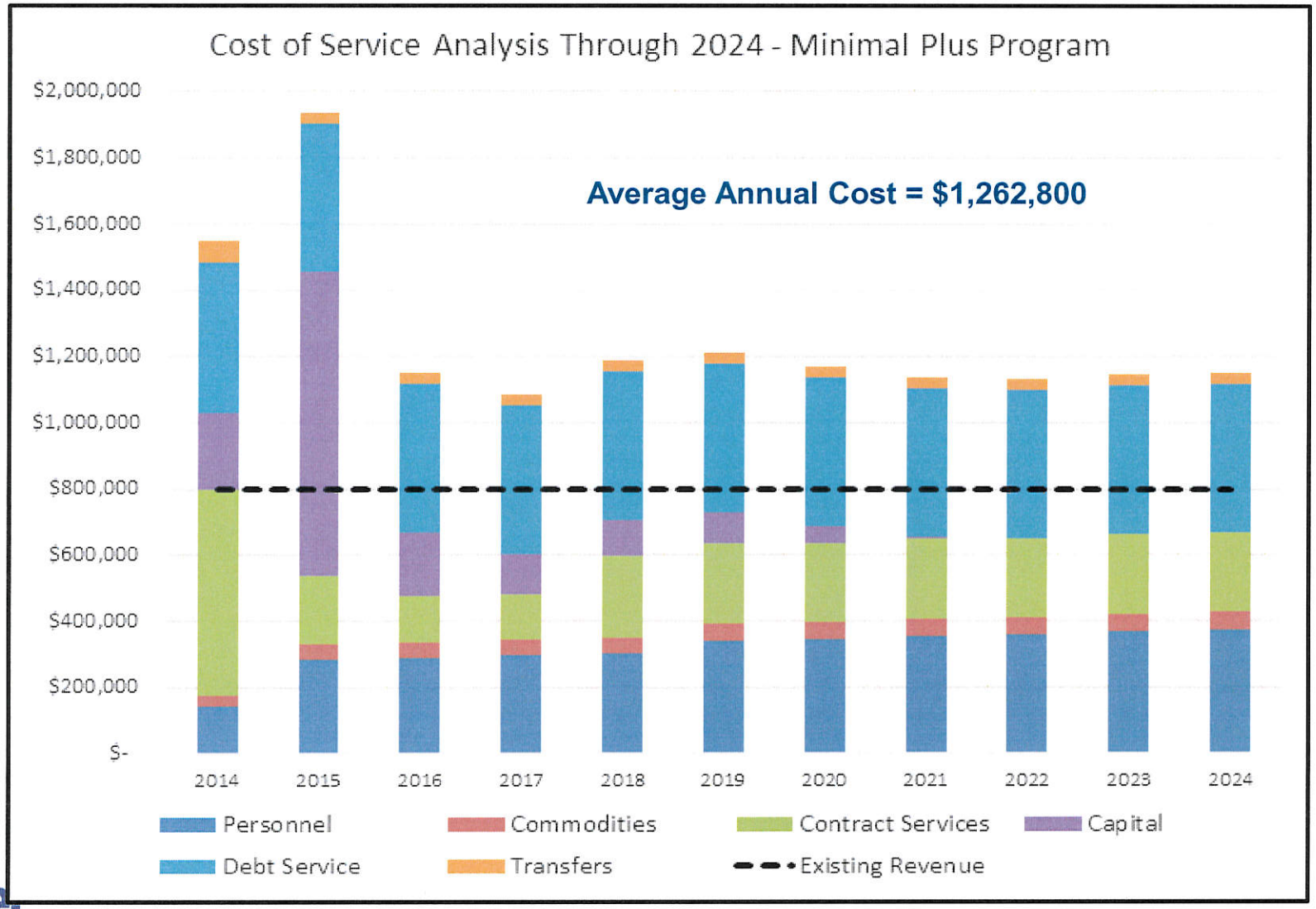
Minimal Plus Program Cost-of-Service



Storm Water Finance

Junction City Current Stormwater Fee Structure – Distribution of Costs - Residential

- $5 per month for **developed residential property** ($60 per year)
- $3 per month for **developed residential property with more than one meter** ($36 per year for each unit)
- $3 per month for **undeveloped residential property** per lot or tract ($36 per year)

Principle – every property pays
Simplicity versus equity – no direct correlation to need for Public drainage service

Current Stormwater Fee Revenue – Distribution of Costs – Non Residential

Area of Other Developed Property	Monthly Fee
Less than or equal to 20,000 square feet	$15.00
From 20,001 to 100,000 square feet	$32.00
From 100,001 to 200,000 square feet	$49.00
From 200,001 to 400,000 square feet	$66.00
From 400,001 to 1,000,000 square feet	$83.00
From 1,000,001 and above square feet	$100.00

Area of Other Undeveloped Property	Monthly Fee
Less than or equal to 20,000 square feet	$4.00
From 20,001 to 100,000 square feet	$8.00
From 100,001 to 200,000 square feet	$12.00
From 200,001 to 400,000 square feet	$16.50
From 400,001 to 1,000,000 square feet	$21.00
From 1,000,001 and above square feet	$25.00

AMEC Rate Structure Recommendation

- Change rate basis from lot size to imperviousness, using an ERU billing unit
  - 2500 sf/average imperviousness on single family detached properties
- Undeveloped properties exempt – no imperviousness present
- No credit program at this time – more analysis is needed and can be added in the future
- Based on cash flow demand analysis of cost of service:
  - Billing rate per ERU is $6.20/month ($74.40 annually)
  - Billing unit is 2500 square feet
  - Single family residential pay same amount - $6.20/month
  - All other property pay on the basis of imperviousness on each parcel

Increases Equity in Cost Distribution Based on System Needs

Sample of Rates in Kansas

City	ERU (square feet)	Monthly Fee per ERU
Dodge City	8,000	$1.16
El Dorado	2,314	$3.00
Fairway	3,200	$5.00
Hays	3,369	$3.62
Lawrence	2,366	$4.00
Lenexa	2,750	$7.50
Mission	2,485	$4.00
Ottawa	2,600	$4.00
Topeka	2,018	$4.25
Wichita	2,139	$2.00

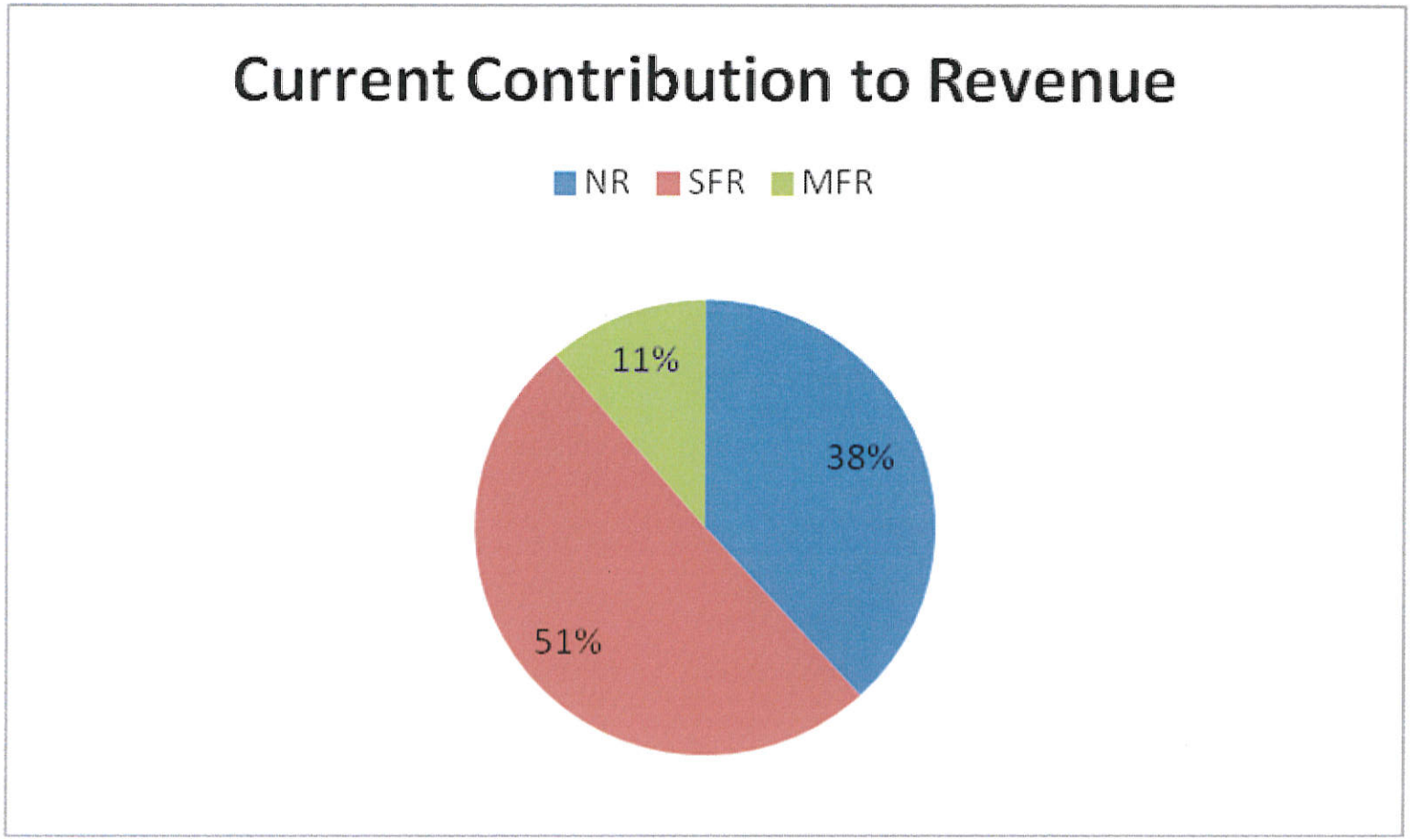
Junction City Recommended Rate: $6.20/ 2500 sf

Alternative Rate Analysis with a Rate Cap

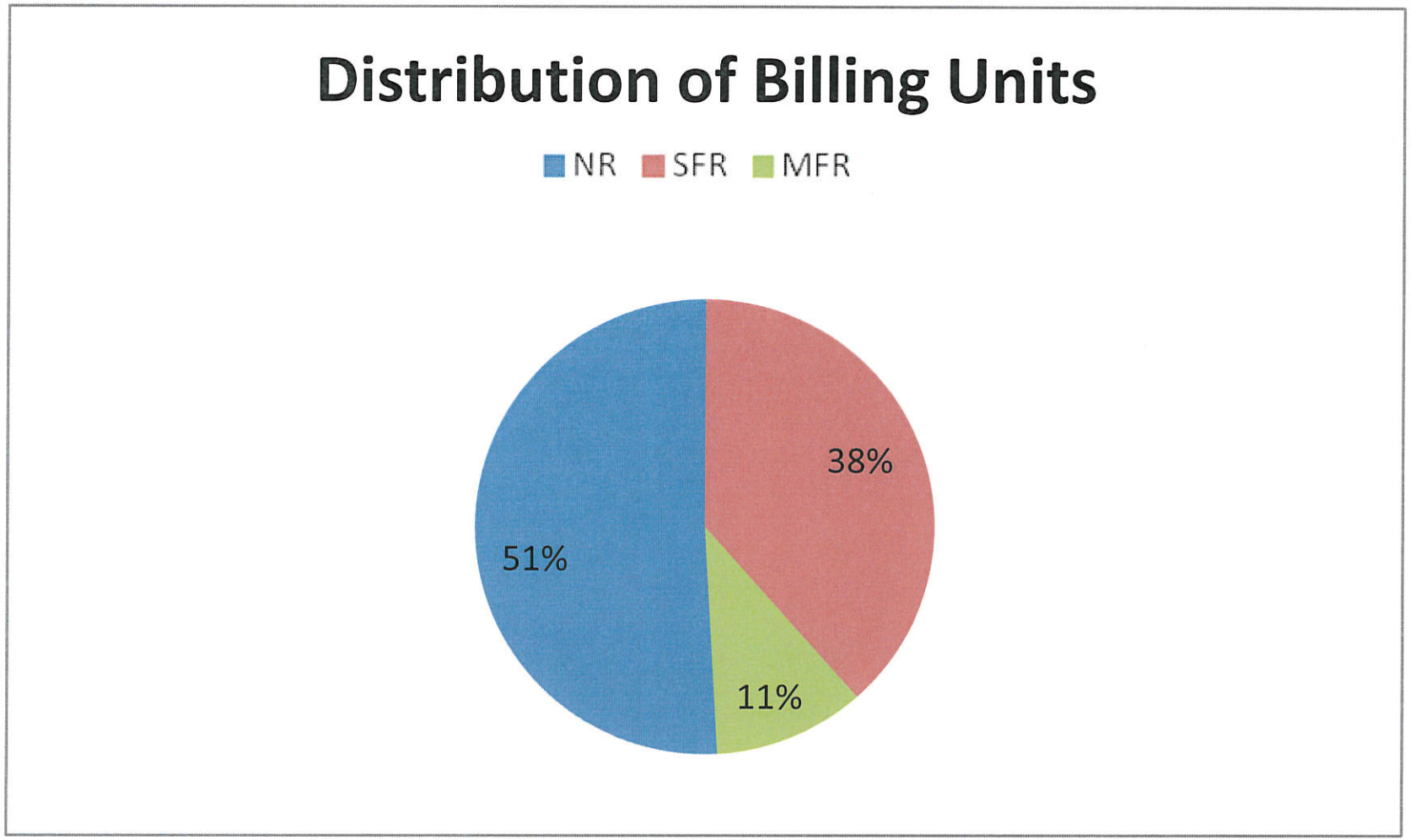
- All financial factors unchanged from recommended rate
- Cap set at $10,000 maximum fee annually
- **Increases the monthly fee by 50 cents per billing unit - to $6.70/ERU (annual user fee of $80.40)**.
- Increase is the result of a reduction of billing units of 8.5% (1584 units removed from billing base)
- Redistribute revenue across all rate payers

Examples of Impacts

Who Pays Based on Current Fee Structure



Who Will Pay Under Recommended Impervious Rate Structure



Impact Analysis – Shift in Fees by Current Rate Class (Using Amec Foster Wheeler Rate)

- Of the total rate base within the non-single family residential property class (995 parcels), **475 parcels owners will see a reduction or elimination of fees paid**.
- All developed single family residential rate payers will have an **increase from $5/mo. to $6.20/mo.**
- All undeveloped single family residential rate payers will have a **decrease from $3/mo. to "0".**
- 520 non-single family residential properties will have an increase.

Demand for Public Drainage Services is Correlated to Imperviousness

Single Family Residential Detached – Impacts at $6.20 per month

Type[1]	Current Annual Fee	Count	Current Contribution	ERU Count	Revenue[2]	% Change in Lot Class Fees
Developed SFR	$60	6,382	$382,920	7,513	$474,821	24%
Undeveloped SFR	$36	251	$9,036	0	$0	-100%
Developed MFR	$60	496	$29,760	2,095	$155,868	424%
Undeveloped MFR	$36	1,614	$58,104	0	$0	-100%
TOTALS	**-**	**8,743**	**$479,820**	**9,608**	**$630,689**	**31%**

[1] – SFR (Single Family Residential), MFR (Multi-Family Residential)

[2] – Revenue is calculated at $6.20 per month per ERU ($74.40 per year per ERU).

Non-Residential – Developed – Impacts at $6.20 per month

Lot Class	Lot Area (square feet)	Current Annual Fee	Count	Current Contribution	ERU Count	Revenue[1]	% Change in Lot Class Fees
1	Less than 20,000	$180	419	$75,420	1,170	$87,048	15%
2	20,001 to 100,000	$384	245	$94,080	2,437	$181,313	93%
3	100,001 to 200,000	$588	62	$36,456	1,458	$108,475	198%
4	200,001 to 400,000	$792	38	$30,096	1,482	$110,261	266%
5	400,001 to 1,000,000	$996	22	$21,912	1,230	$91,512	318%
6	1,000,000 and above	$1,200	14	$16,800	2,190	$162,936	870%
TOTALS	-	-	**800**	**$274,764**	**9967**	**$741,545**	**170%**

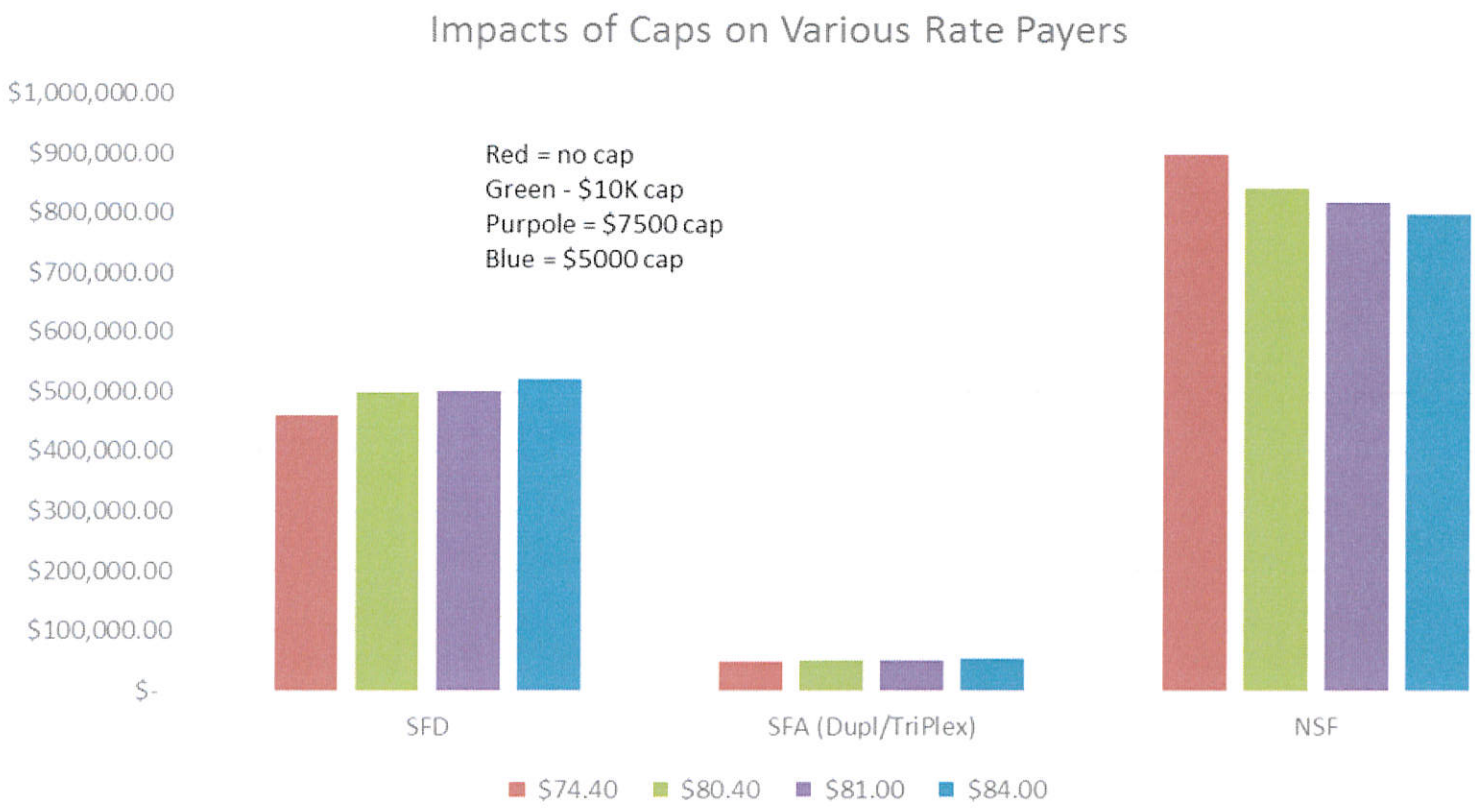
[1] – Revenue is calculated at $6.20 per month per ERU ($74.40 per year per ERU).

Non Residential – Undeveloped – No Longer Pay Fees

Lot Class	Lot Area (square feet)	Current Annual Fee	Count	Current Contribution	ERU Count	Revenue[1]	% Change in Lot Class Fees
1	Less than 20,000	$48	66	$3,168	0	$0	-100%
2	20,001 to 100,000	$96	77	$7,392	0	$0	-100%
3	100,001 to 200,000	$144	18	$2,592	0	$0	-100%
4	200,001 to 400,000	$198	13	$2,574	0	$0	-100%
5	400,001 to 1,000,000	$252	11	$2,772	0	$0	-100%
6	1,000,000 and above	$300	10	$3,000	0	$0	-100%
TOTALS	-	-	**195**	**$21,498**	**0**	**$0**	**-100%**

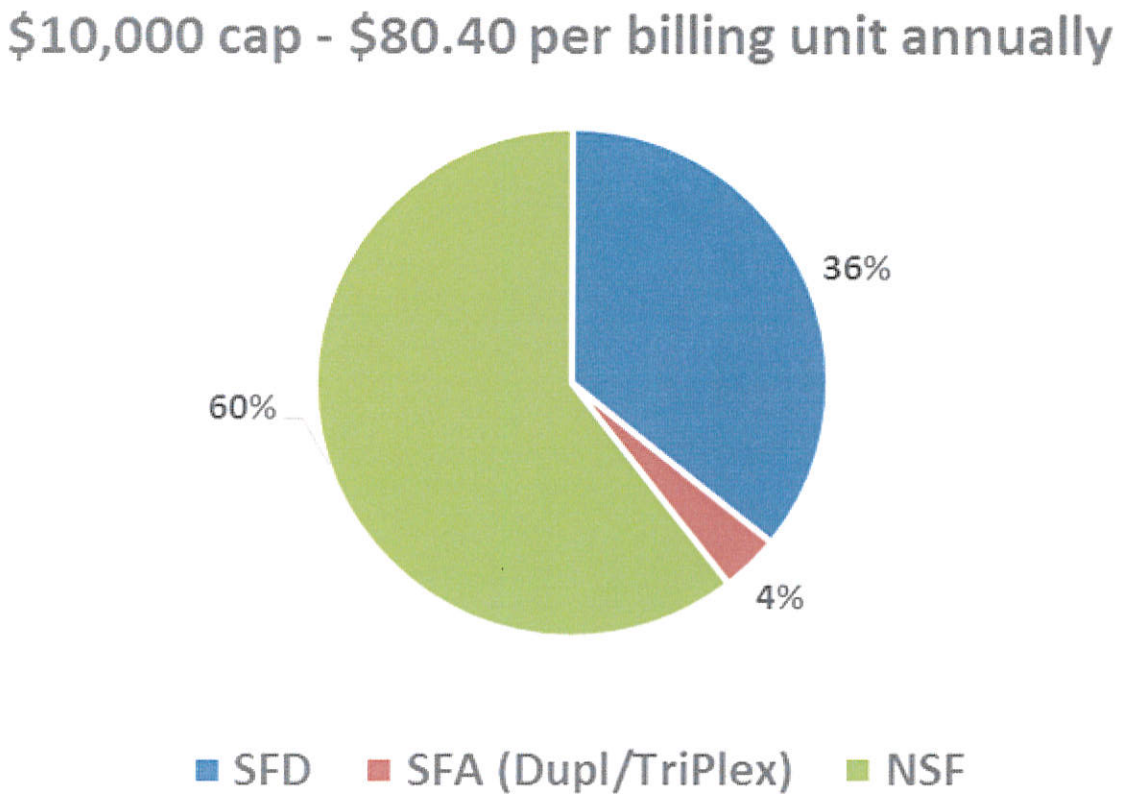
[1] – Revenue is calculated at $6.20 per month per ERU ($74.40 per year per ERU).

Comparison of Various Rates Analyzed

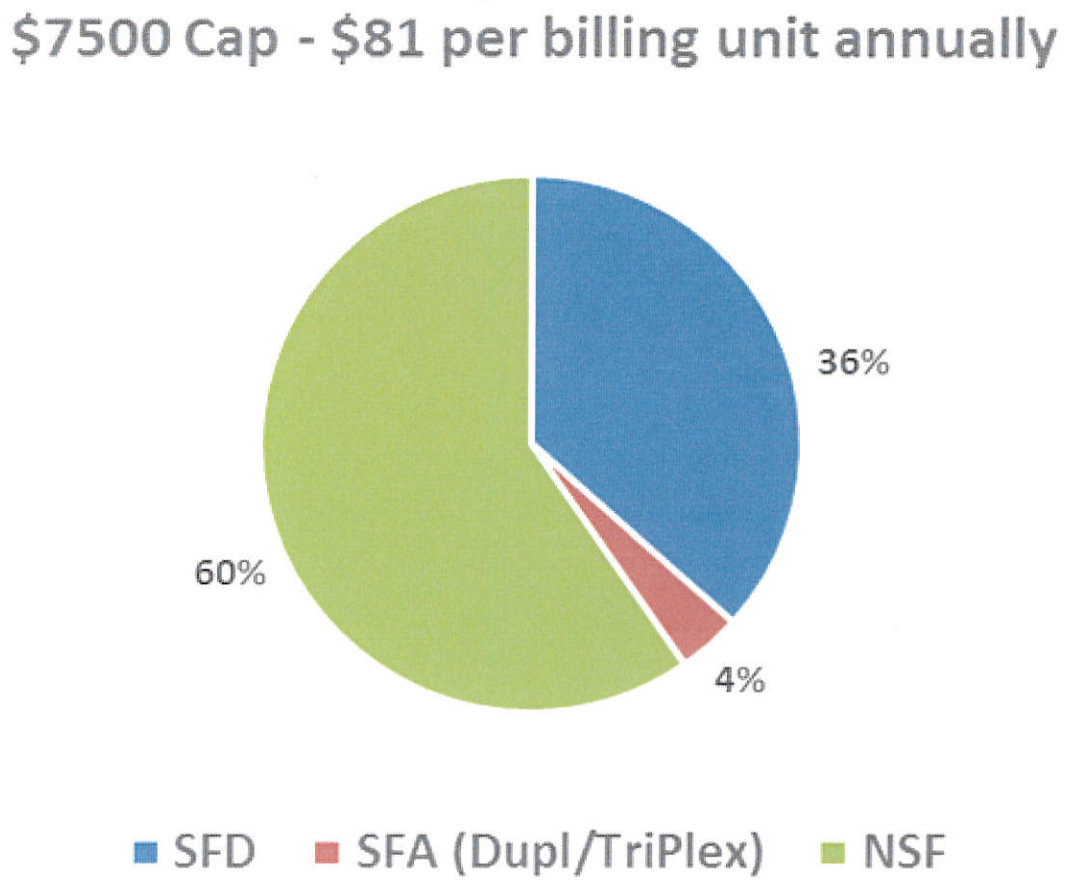


Number of Properties with Reduced Fees by Cap

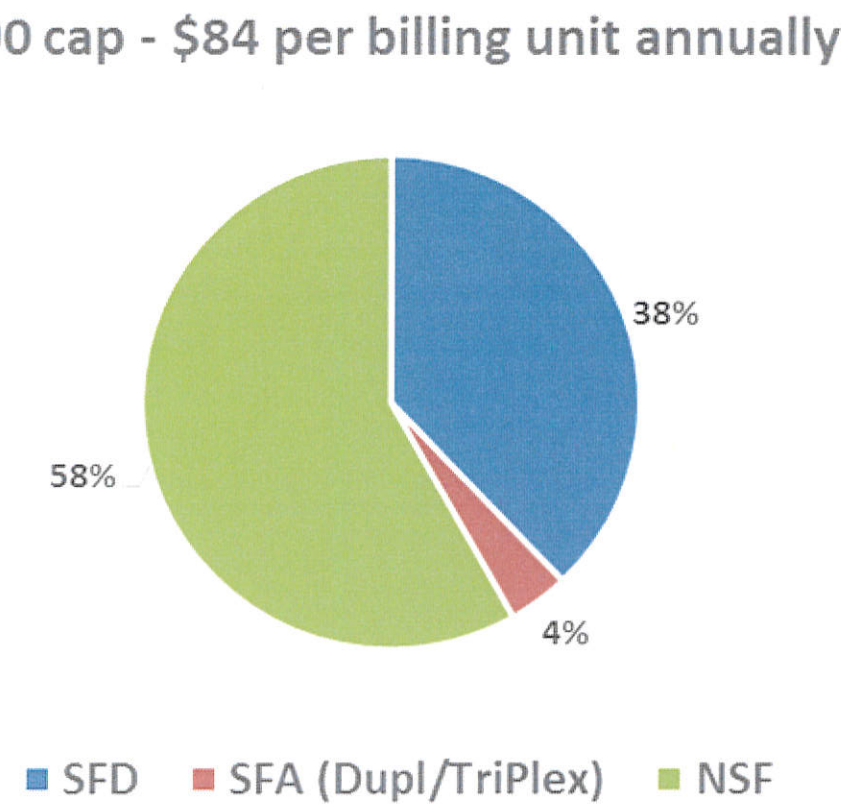
Impact Analysis - Rate with $10K/year Cap



Impact Analysis Using Rate with $7500/year Cap



Impact Analysis Using Rate with $5000/year Cap



Discussion