

Water Utilities Infrastructure Needs & Cost of Service Study Preliminary Results

Steve Adams, Director of Water & Power
Chris Matkins, Water Utilities Manager
Jim Lees, Utility Accounting Manager
Alan Krcmarik, Executive Fiscal Advisor
Jason Mumm, Stepwise Utility Advisors
Fernando Aranda, Stepwise Utility Advisors

City of Loveland
City Council Work Session: May 22, 2012

Roadmap for Tonight

1. Intro to the Water Utilities (Chris Matkins)
 2. Infrastructure Challenges (Chris Matkins)
 3. Cost of Service and Rate Study Preliminary Results (Jim Lees, Alan Krcmarik, Jason Mumm)
- * Needed tonight: Council input on options for rates and financing scenarios
 - * Will return for Council direction in August

Keeping it Simple:

To maintain the Utilities' historic service levels and provide additional system capacity for Economic Development, additional revenue to fund increased capital project investment is necessary.

- a) Expansion and reliability
- b) Aging infrastructure
- c) Cooperation
- d) Regulatory

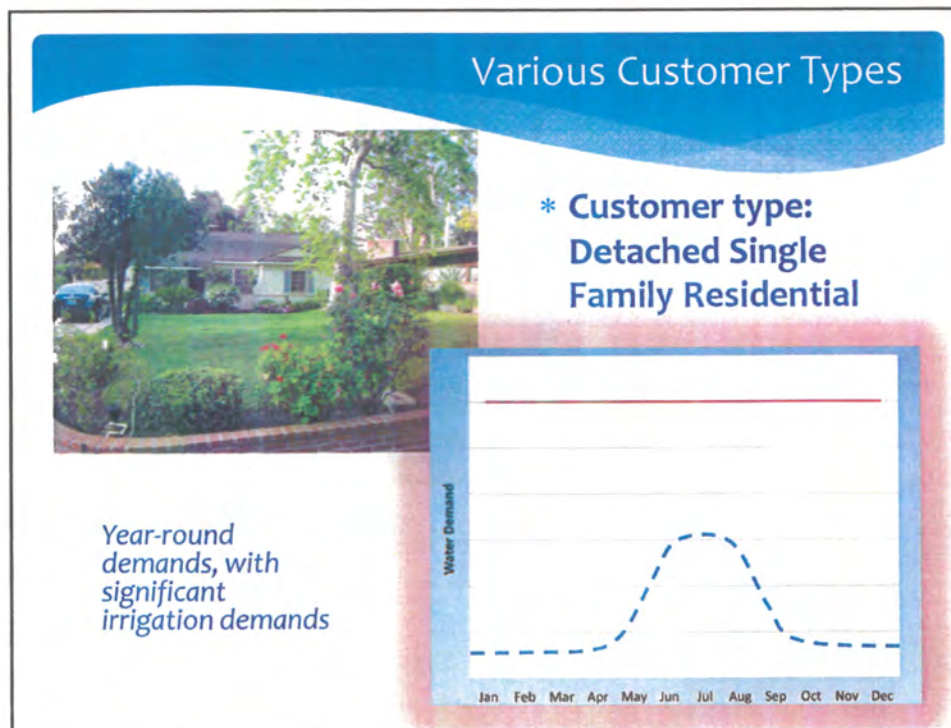
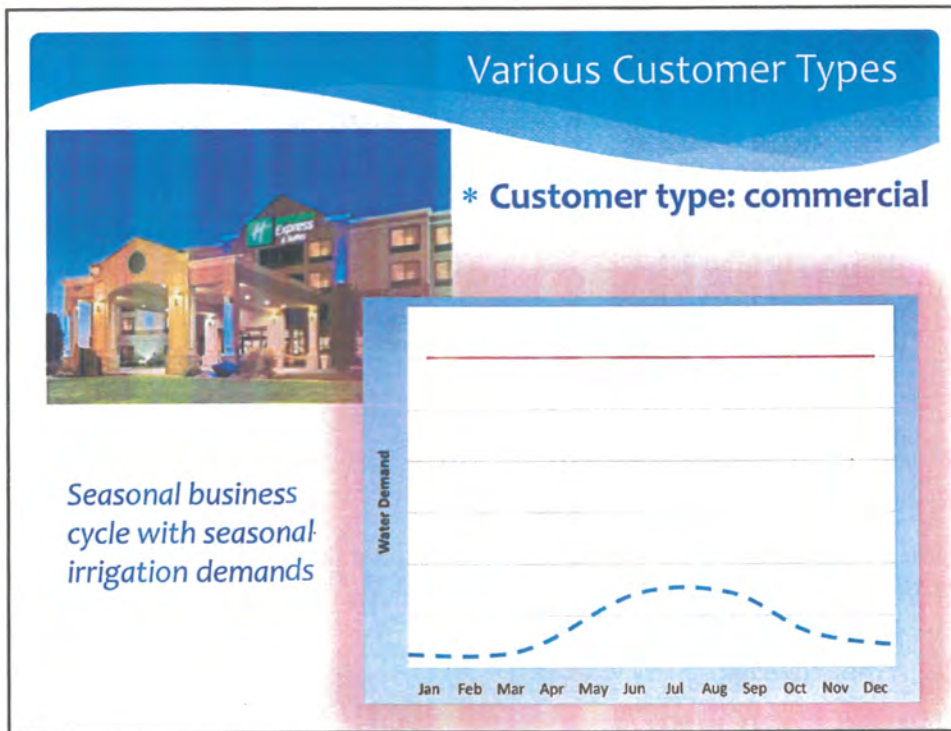
Various Customer Types




Year-round demands, with limited irrigation

*** Customer type:
Multifamily, dense loft
"urban" residential**



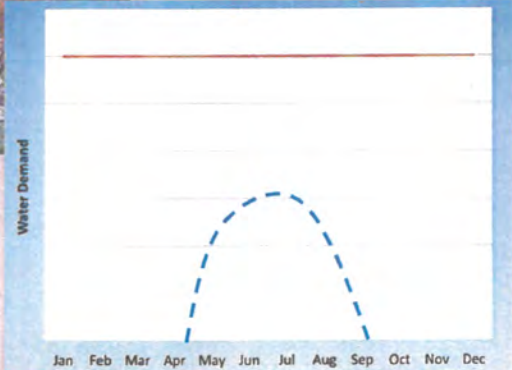


Various Customer Types



*** Customer type: Irrigation**

Peak season demands, no winter demands nor revenue

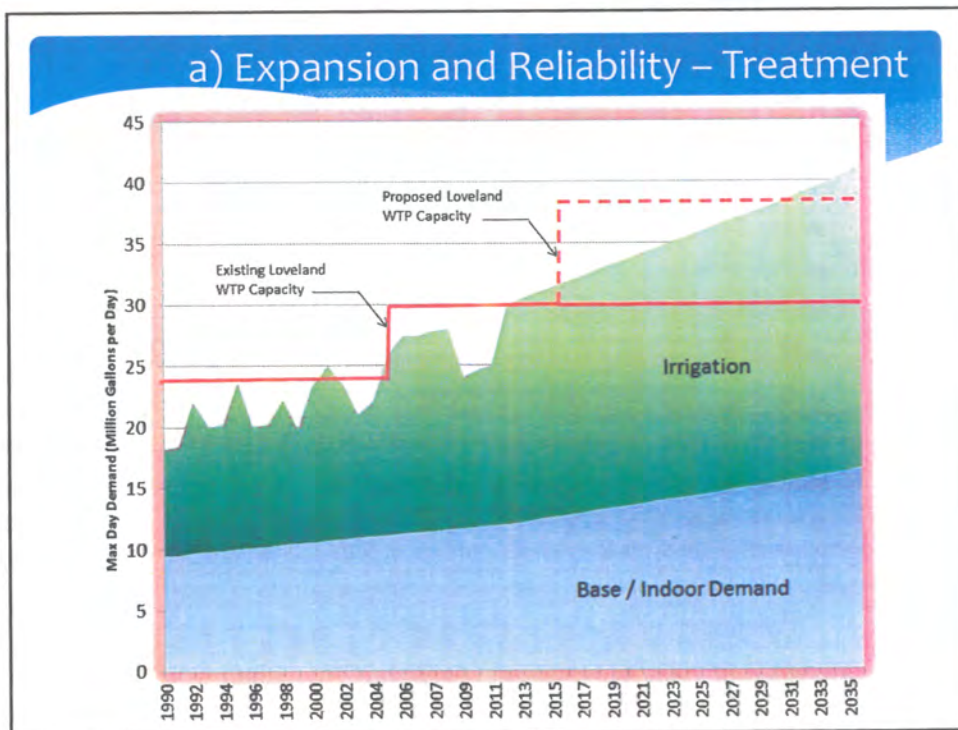
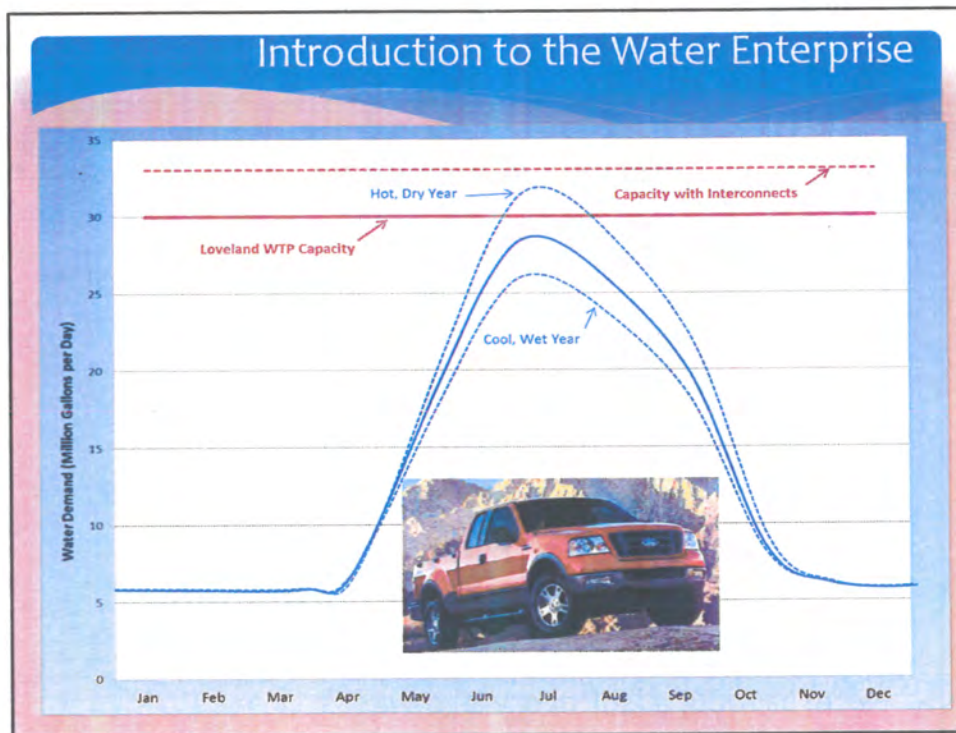


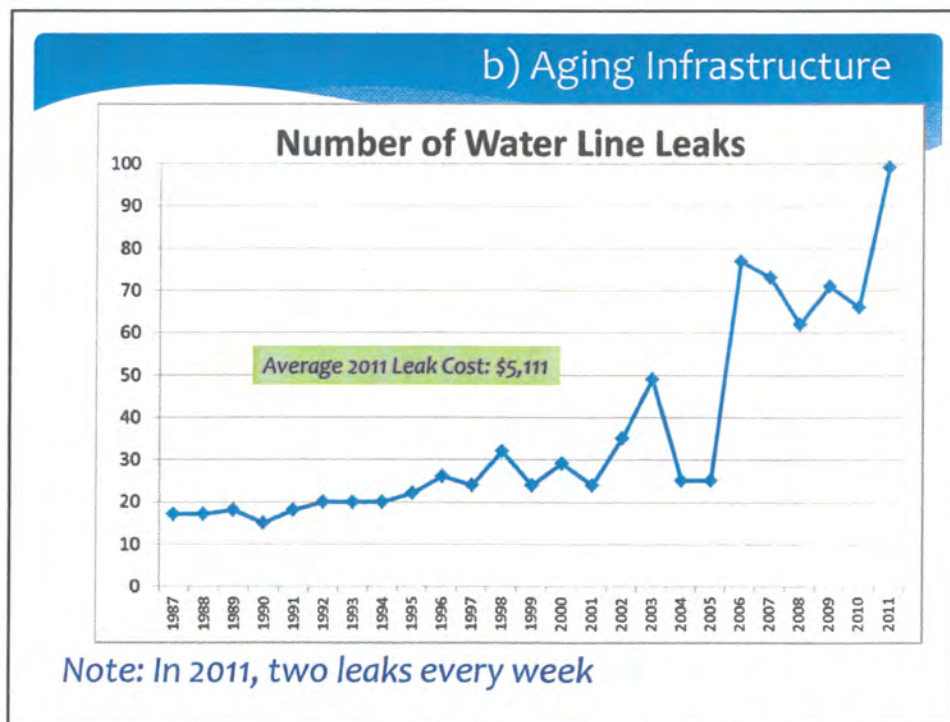
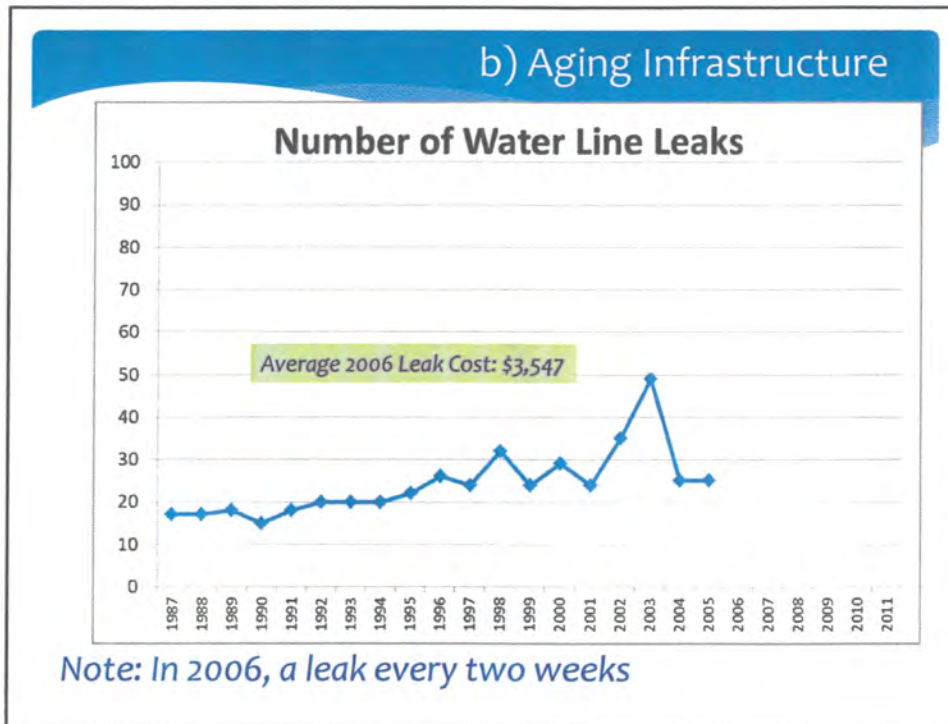
Month	Water Demand (Relative)
Jan	Low
Feb	Low
Mar	Low
Apr	Low
May	Low to Medium
Jun	Medium
Jul	High
Aug	High
Sep	High
Oct	Low
Nov	Low
Dec	Low

Various Customer Types

Water Treatment Plant Costs Required to Serve



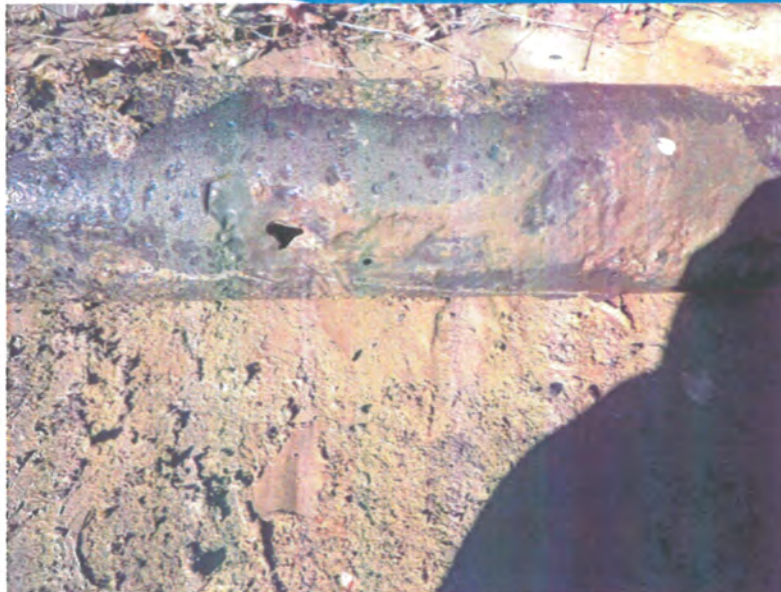


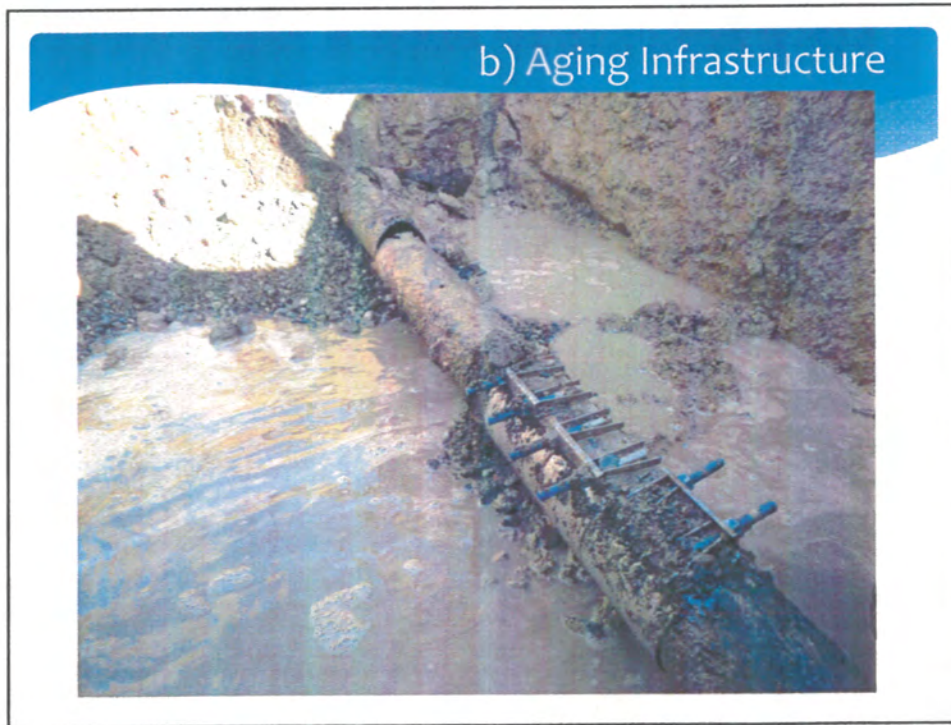
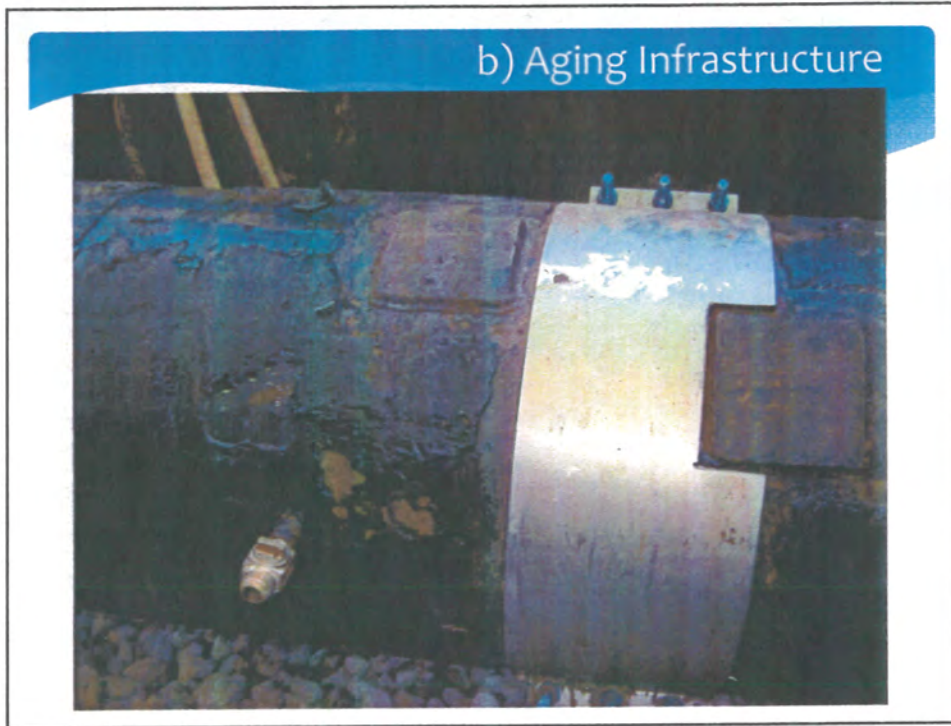


b) Aging Infrastructure



b) Aging Infrastructure





Long Term Challenge: Owning a Car Forever



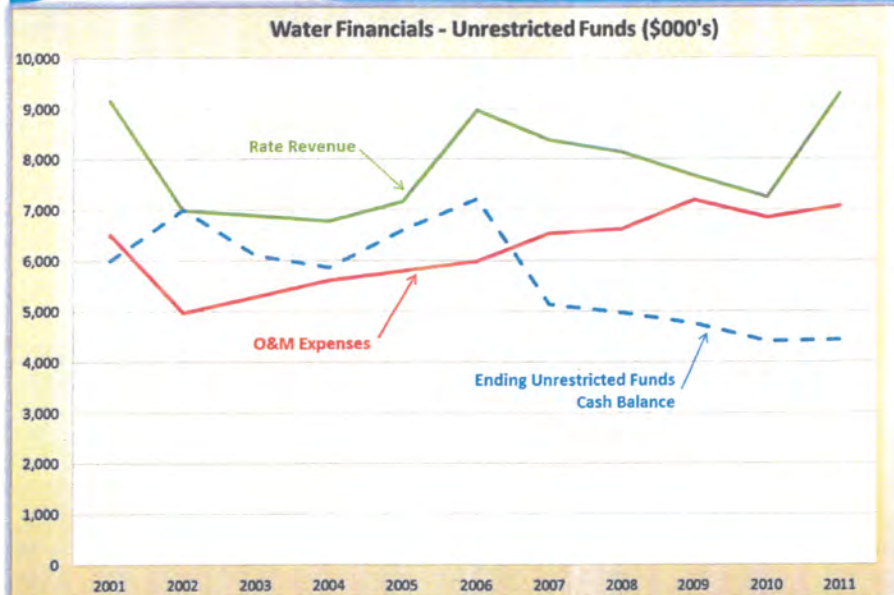
c) Cooperation

- * Cooperating with other Departments
 - * Meet two times annually to coordinate projects
 - * Washington Avenue Outfall
 - * 29th Street Waterline
- * Without funding, other O&M projects are delayed
- * Economic Development and Redevelopment
- * To participate, Utilities must have supporting revenue

d) Regulatory

- * Water Utility
 - * Treatment plant solids handling and removal
 - * Treatment chemical requirements (chlorine gas)
 - * WTP improvements to meet current fire and electric code
- * Wastewater Utility
 - * Known reduced nutrient loading requirements (WWTP)
 - * Exceeding 80% design limit for organic/hydraulic loading (WWTP)
 - * Potential discharge temperature standards (WWTP)
 - * Potential reduced mercury discharge standards (WWTP)
 - * Trend to increase regulations of pretreatment and collections
- * Must fund and comply with Regulatory requirements, little or no room for discretion

Financial Considerations

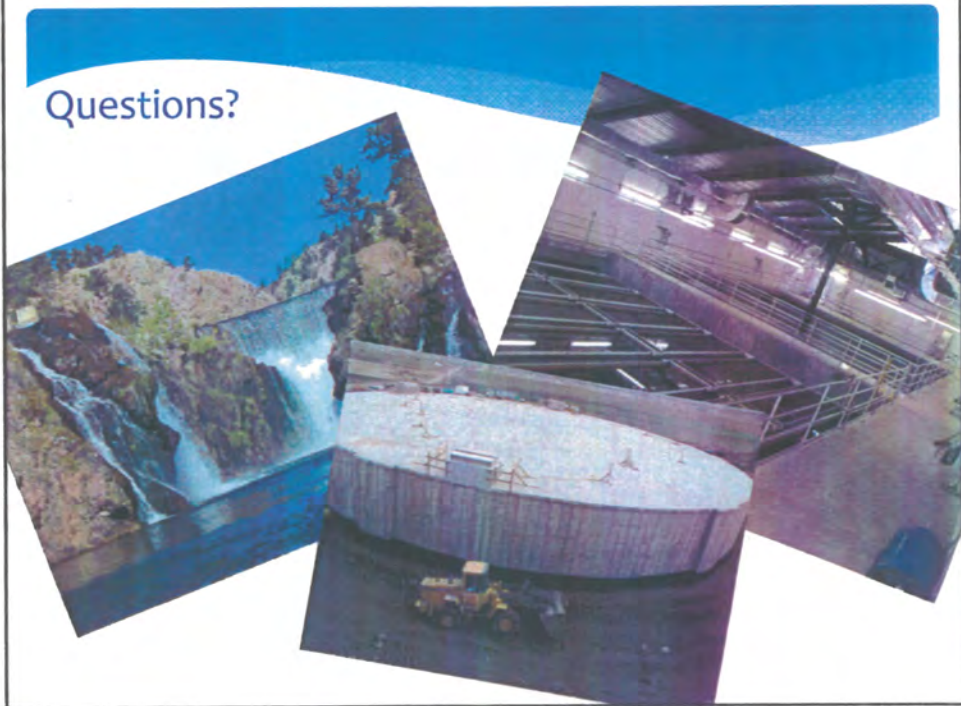



Summary

To maintain the Utilities' historic service levels and provide additional system capacity for Economic Development, additional revenue to fund increased capital project investment is necessary.

- a) Expansion and reliability
- b) Aging infrastructure
- c) Cooperation
- d) Regulatory

Questions?





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(855) 935-3101

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Preliminary Water/Sewer Rate Study Results


Loveland City Council
May 22, 2012



Agenda

2

- Direction Requests
- Overview of Water/Sewer Rate Study
- Scenarios Reviewed
- Scenario Results
- Discussion of Pros and Cons



Direction Needed

3

- Do you support a higher fixed monthly service charge and lower volume charge for the new rates....OR

- ...Do you support a higher volume charge and lower monthly service charge for the new rates?



Direction Needed

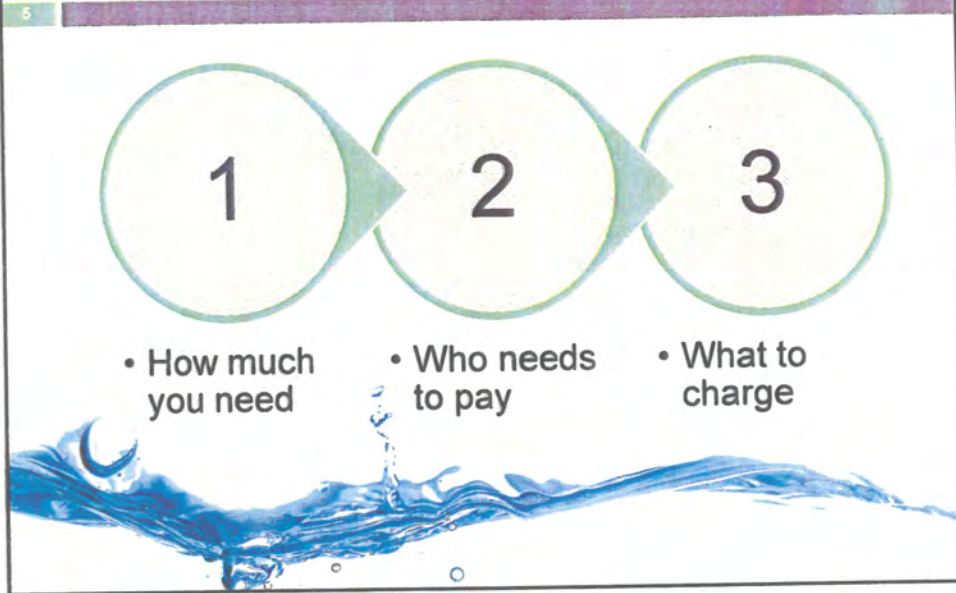
4

- Do you support short-term internal financing of water/sewer improvements in order to lower rate impacts?

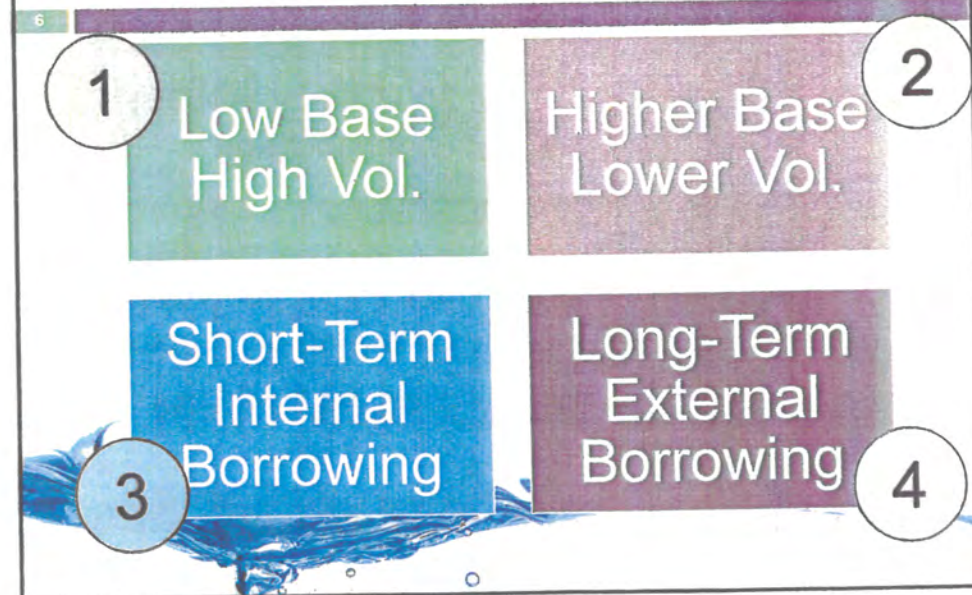
- Do you support long-term external financing of water/sewer improvements in order to lower rate impacts?



What's a Rate Study?



Scenarios



Low Base High Vol.

1

- Follows the same cost allocation and rate design as the 2007 Rate Study
- Pay-as-you go.... no debt
- Main features
 - Low amounts of cost allocated on a per-customer basis, resulting in low monthly service charges
 - Larger amounts of cost allocated to volumes used



Higher Base Lower Vol.

2

- Follows most of the 2007 study process with some differences in cost allocation
- Pay-as-you go... no debt
- Main features:
 - More costs allocated on a per-customer basis
 - Cost of small pipelines allocated on per-customer
 - Less cost allocated to volumes of usage



Short-Term Internal Borrowing

3

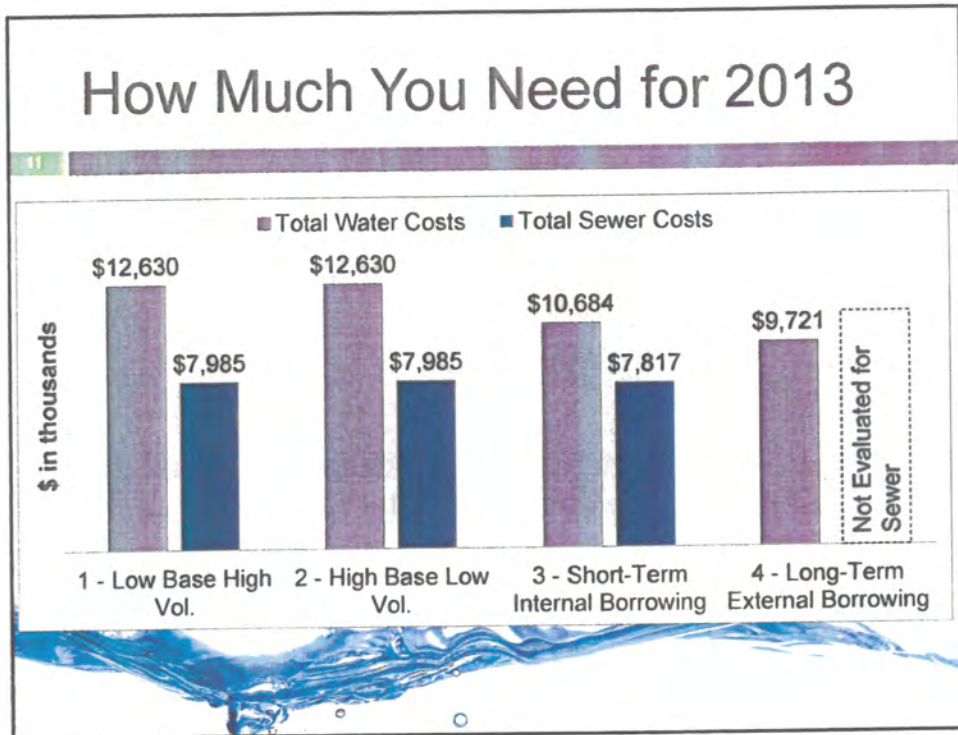
- Follows the *Increased Base Cost* approach (from Scenario 2)
- Includes some debt from internal funds loaned on a short-term basis
 - Water, \$4m in 2013
 - Wastewater, \$4m in 2015
- Main features:
 - Same allocation of cost as Scenario 2
 - Lower total revenue required – lower rates
 - 5-year term
 - Interest can change each year per City Charter

Long-Term External Borrowing (Water Only)

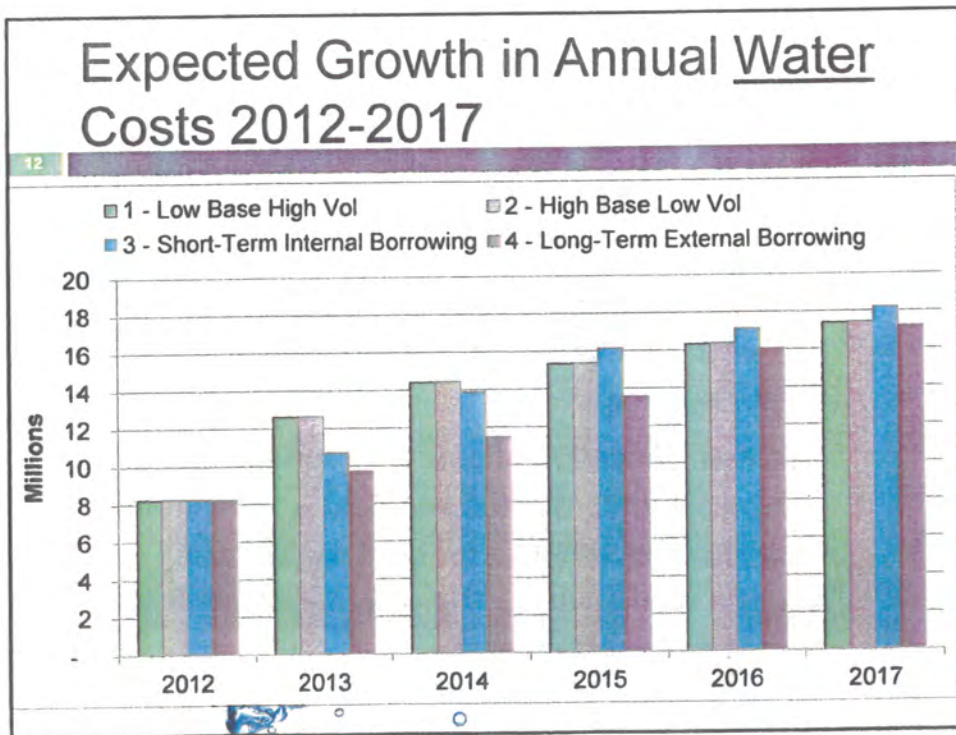
4

- Follows the *Increased Base Cost* approach (from Scenario 2)
- Includes some debt from external (bonds) with 25-year terms (\$10 million in 2013)
- Main features:
 - Same allocation of cost as Scenario 2
 - Lowest total revenue required – lowest rates
 - Increased liabilities for debt repayment
 - Only reviewed this scenario for Water Utility

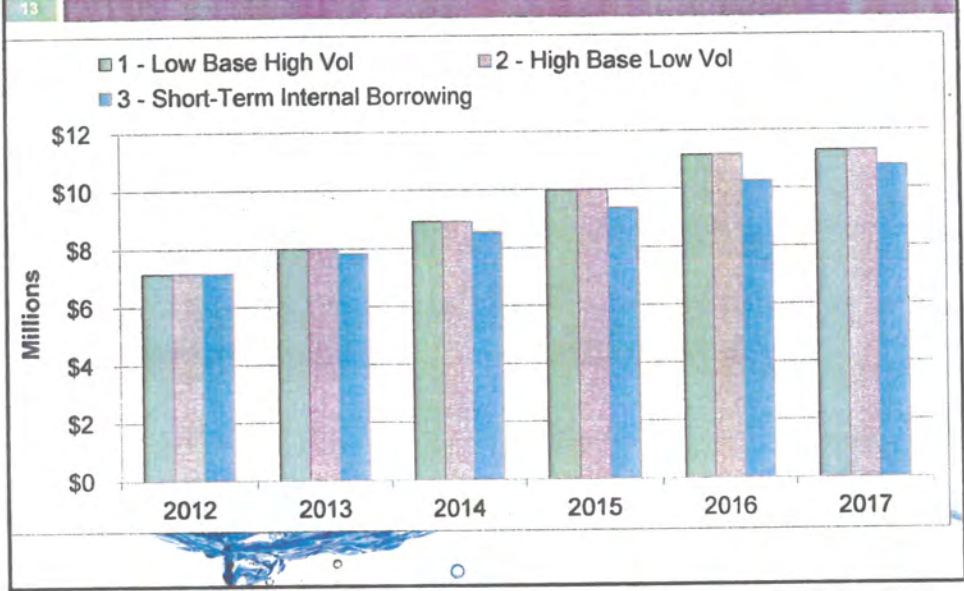
How Much You Need for 2013



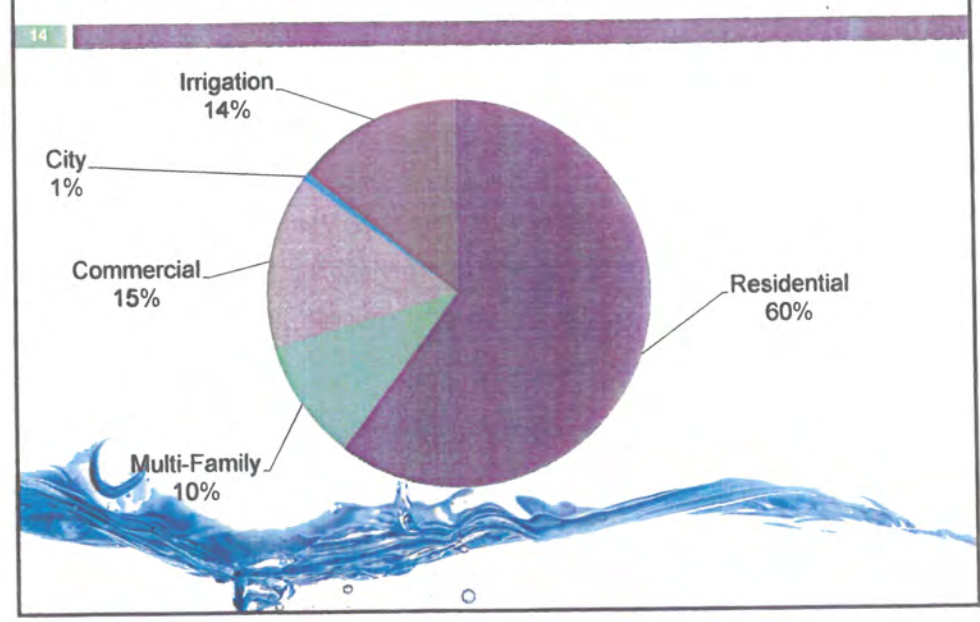
Expected Growth in Annual Water Costs 2012-2017



Expected Growth in Annual Sewer Costs 2012-2017



Who Needs to Pay for Water



What Determines % Cost for Water System?

15

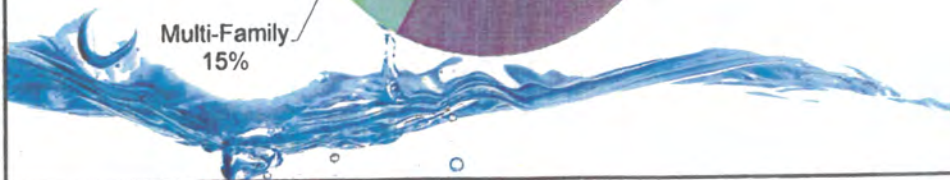
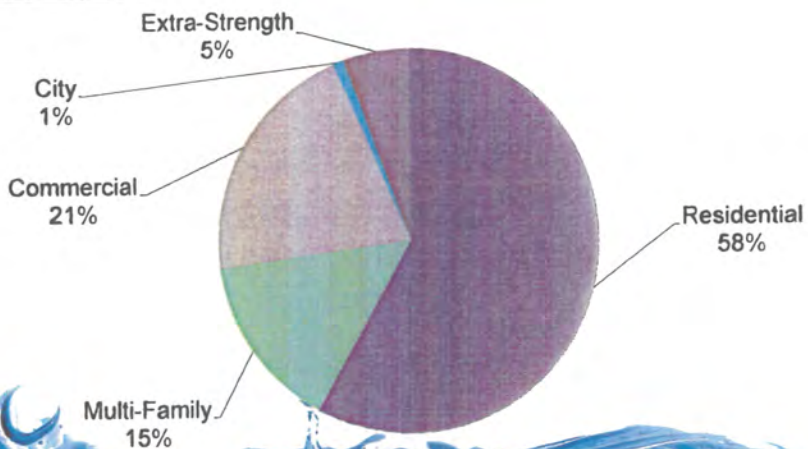
- Average daily usage
- Peak daily usage
 - Maximum-day demands
 - Maximum-hour demands
- Number of customers
- Sizes of meters

Different customers use the system in different ways. The study matches costs of usage with the right customers



Who Needs to Pay for Sewer

16

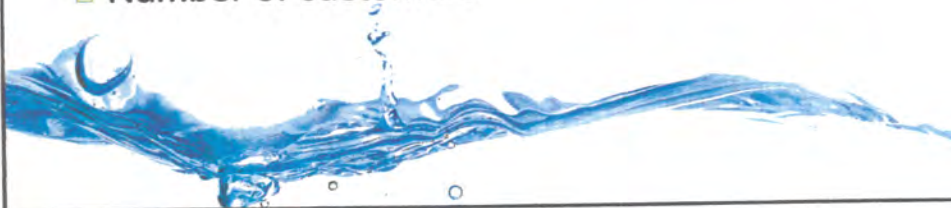


What Determines % Cost for Sewer System?

17

- Flows
 - Winter-quarter avg.
- Loadings
 - Organic loadings (BOD)
 - Solids loadings (TSS)
 - Normal vs. High loadings
- Number of customers

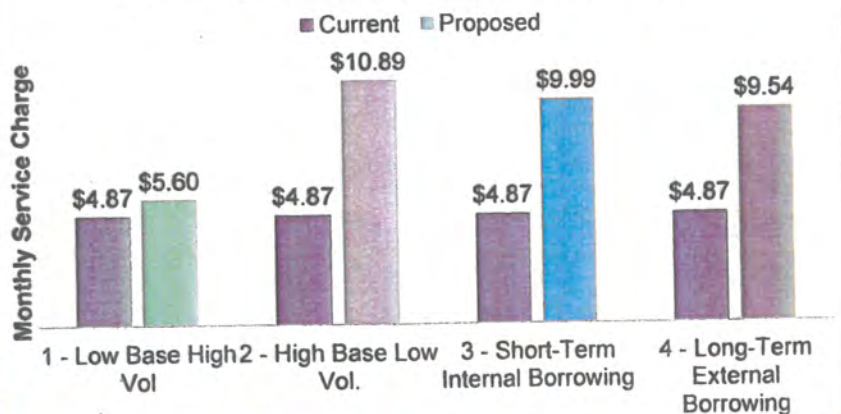
The primary difference in costs comes from differences in normal vs. high-strength discharges.



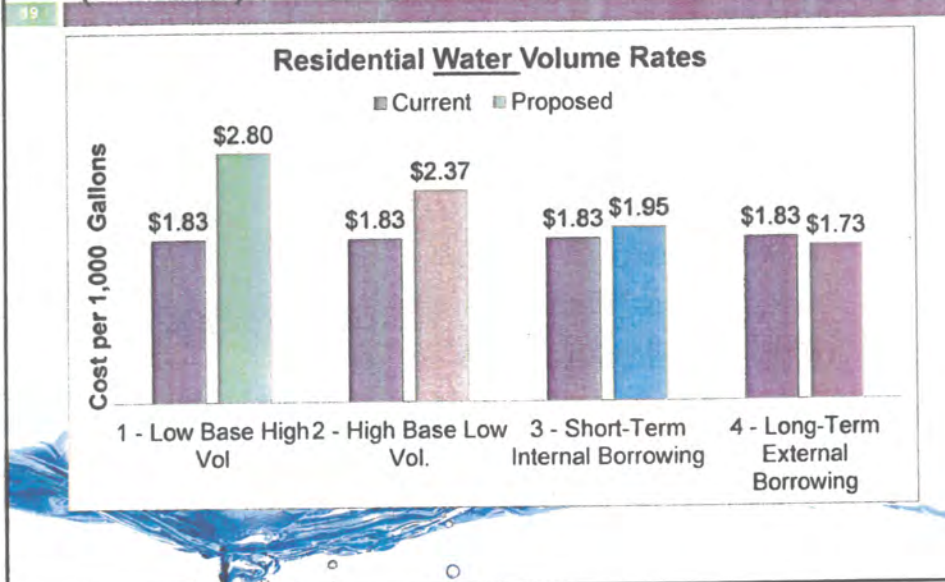
How to Pay – Monthly Service Fees (Water)

18

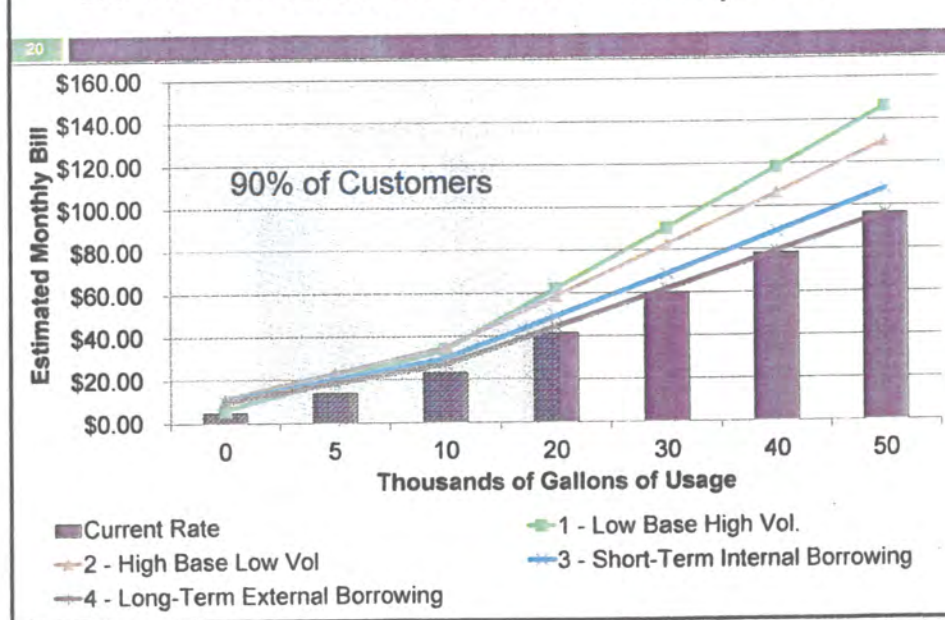
Residential Monthly Water Service Charges



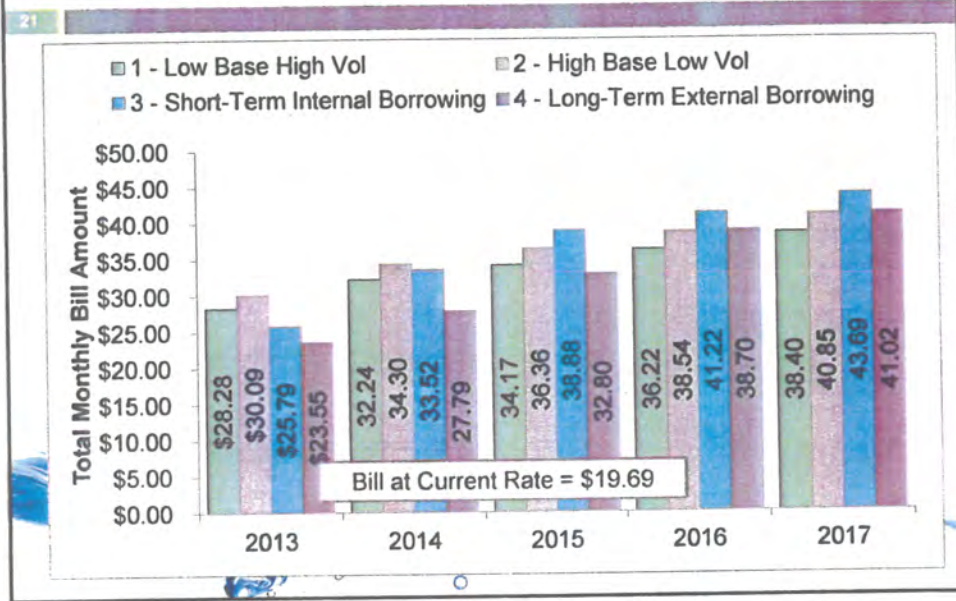
How to Pay – Volume Rates (Water)



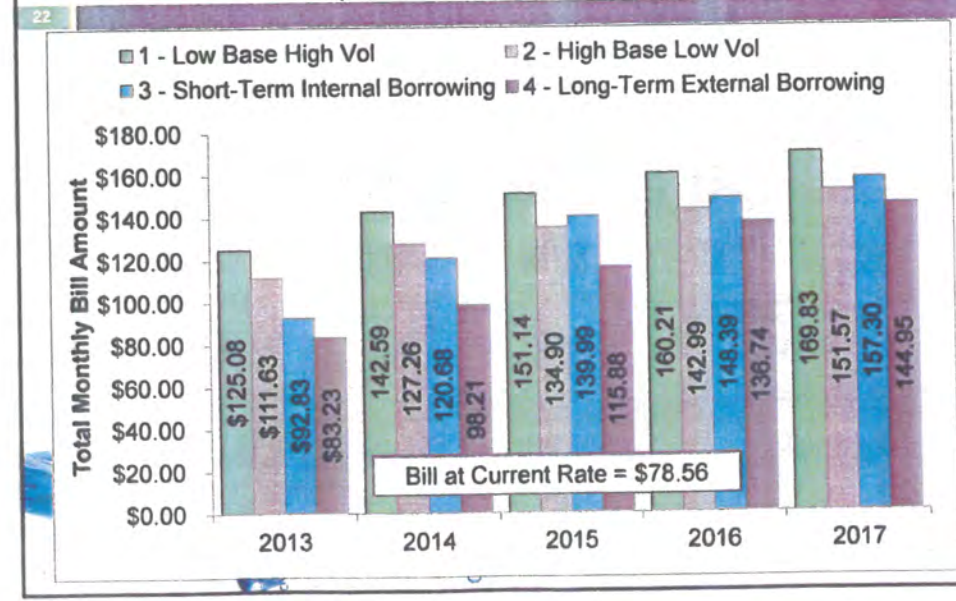
2013 Residential Water Bill Impacts



Estimated Average Monthly Residential Water Bills 2013-2017 (8,100 gallons)



Estimated Average Commercial Bills 2013-2017 (41,630 gallons)



Water Rate Comparisons-Residential

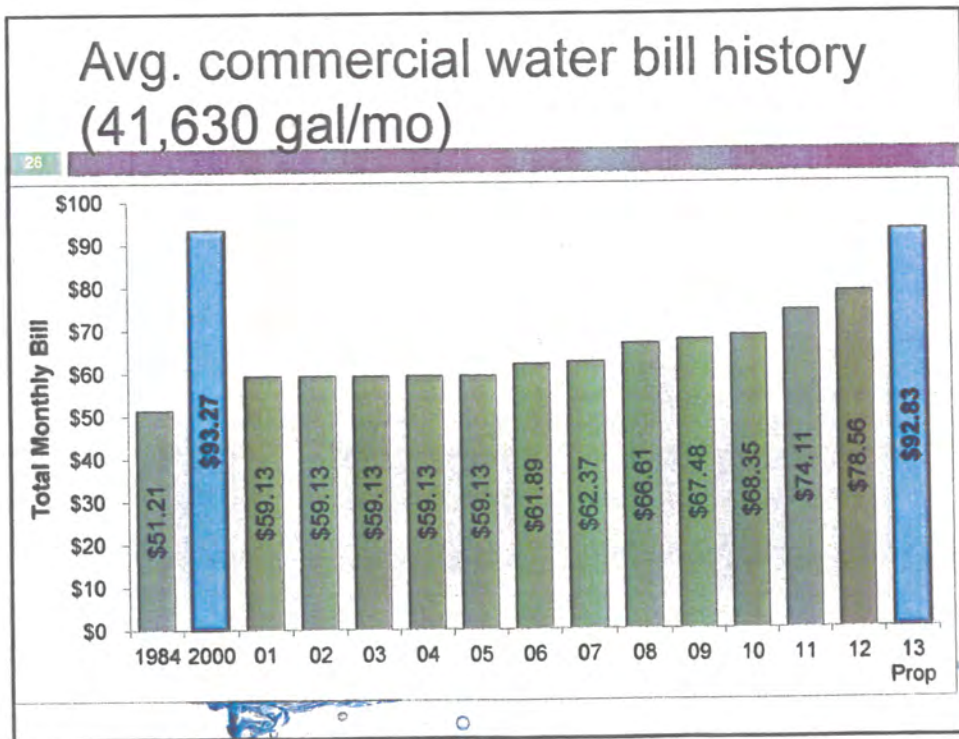
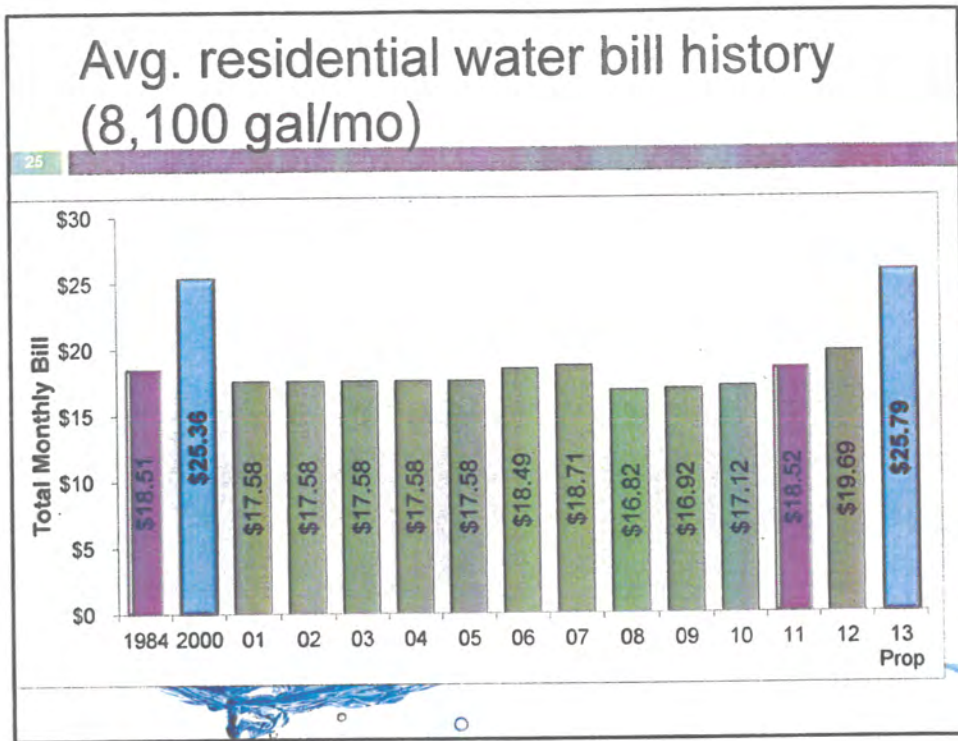
23

	Loveland 2013 (Proposed)	Ft. Collins (Current)	Greeley (Current)	Longmont 2013
Residential: 8,100 gallons/mo.; ¾" tap size				
Monthly Base Charge	\$9.99	\$14.42	\$10.00	\$4.36
Usage Charge per 1,000 Gallons	\$1.95	\$2.23+	\$3.56	\$1.89+
Total Bill	\$25.79	\$32.85	\$38.84	\$24.03
Rank (1=lowest)	2	3	4	1

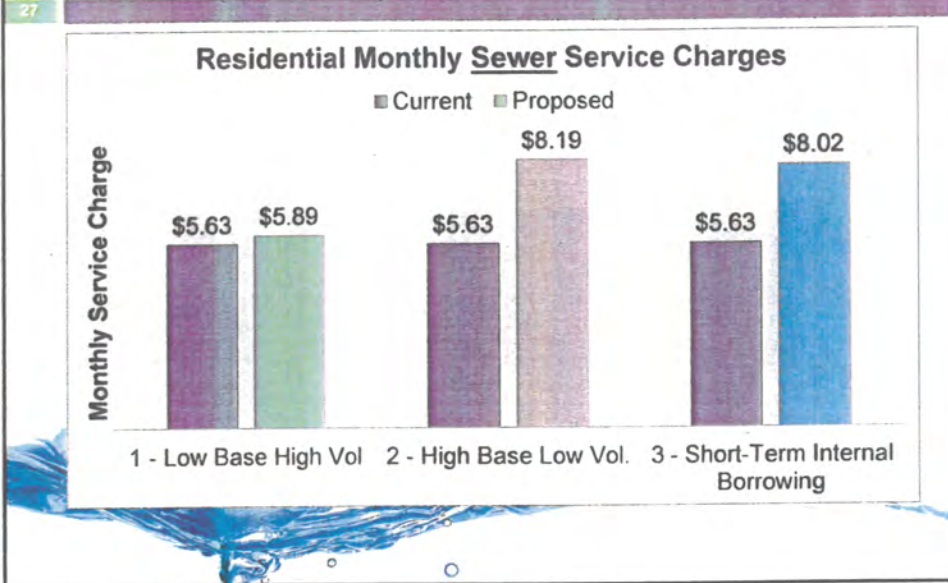
Water Rate Comparisons-Commercial

24

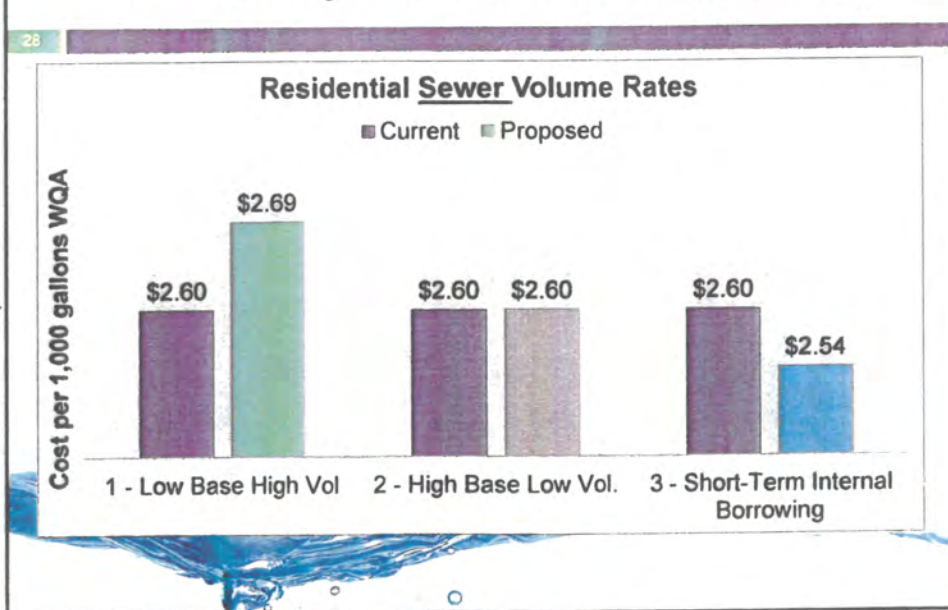
	Loveland 2013 (Proposed)	Ft. Collins (Current)	Greeley (Current)	Longmont 2013
Commercial: 41,630 gallons/mo.; ¾" tap size				
Monthly Base Charge	\$9.99	\$12.90	\$10.00	\$4.36
Usage Charge per 1,000 Gallons	\$1.99	\$1.79 (Winter)	\$3.22	\$2.55
Total Bill	\$92.83	\$87.61	\$144.05	\$110.52
Rank (1=lowest)	2	1	4	3

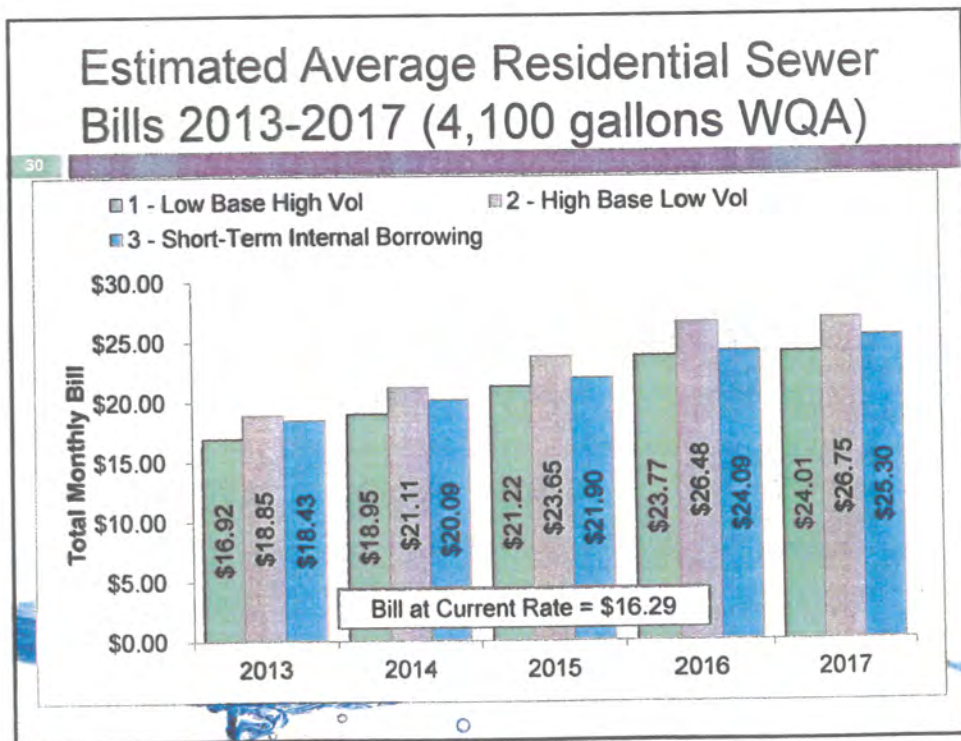
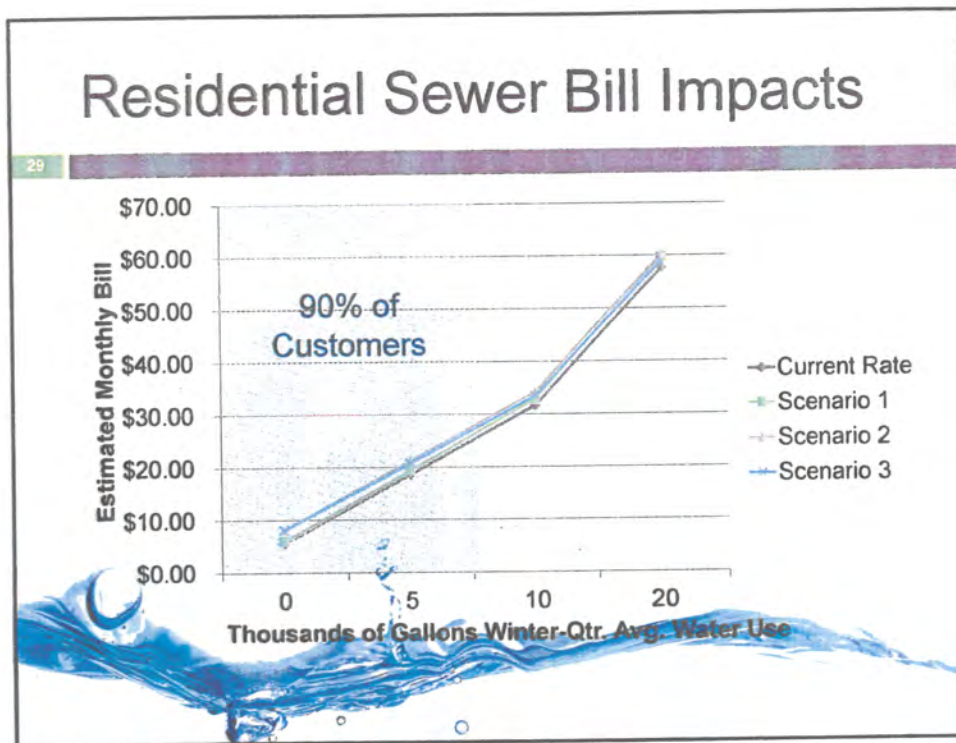


How to Pay – Monthly Service Fees (Sewer)

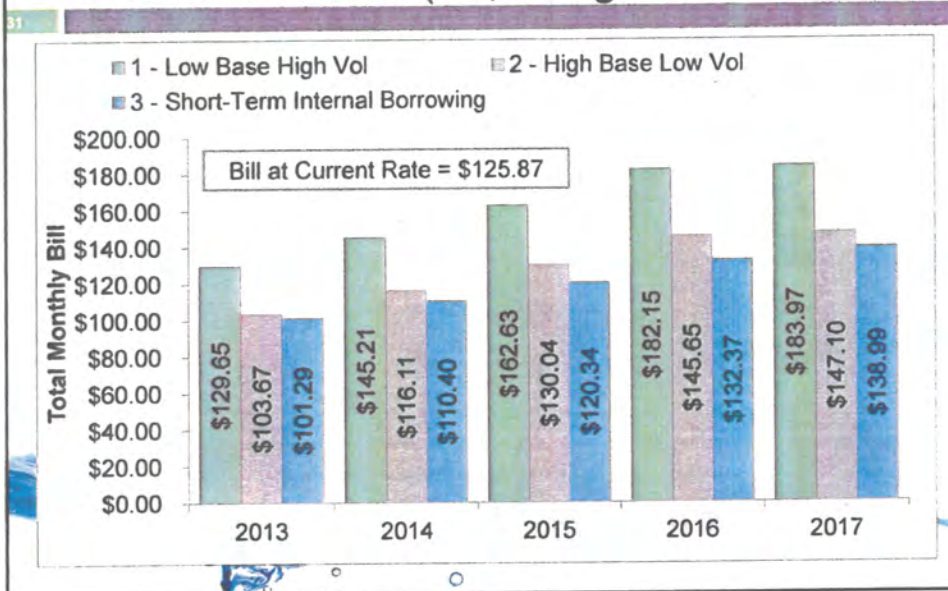


How to Pay – Flow Rates (Sewer)





Estimated Average Commercial Sewer Bills 2013-2017 (36,719 gallons WQA)



Wastewater Rate Comparisons-Residential

	Loveland 2013 (Proposed)	Ft. Collins (Current)	Greeley (Current)	Longmont 2013
Residential: 4,100 gallons/mo.				
Monthly Base Charge	\$8.02	\$15.97	\$11.55	\$8.09
Usage Charge per 1,000 Gallons	\$2.54	\$3.10	\$1.87	\$3.05
Total Bill	\$18.43	\$28.68	\$19.22	\$20.60
Rank (1=lowest)	1	4	2	3

Wastewater Rate Comparisons-Commercial

33

	Loveland 2013 (Proposed)	Ft. Collins (Current)	Greeley (Current)	Longmont 2013
Commercial: 36,719 gallons/mo.				
Monthly Base Charge	\$8.02	\$8.97	\$11.55	\$7.83
Usage Charge per 1,000 Gallons	\$2.54	\$3.10	\$2.11+	\$2.85
Total Bill	\$101.29	\$122.80	\$89.03	\$112.48
Rank (1=lowest)	2	4	1	3

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Public Finance Considerations Why and When should debt be used?

Presented by

Alan Krcmarik
Executive Fiscal Advisor
City of Loveland

Loveland Utility Commission — March 28, 2012
Updated for Council Meeting on May 22, 2012

Public Finance 101: *Diversify* your revenue sources and financing methods

A sound fiscal policy will seek to develop an appropriate mix among the three basic methods of financing capital improvements:

- (1) from current tax revenues;
- (2) by building a reserve fund; and
- (3) through the issuance of municipal bonds or other forms of borrowing.

What type of projects fit the debt (PAYUse) model?

Long-term borrowing is appropriate under the following conditions:

- (1) where the project will not require replacement for many years, such as a city hall, major health facility, water treatment facility or sewage disposal plant;
- (2) where the project can be financed by service charges to pay off the bond commitments;
- (3) where needs are urgent for public health and safety purposes or other emergency reasons;
- (4) where special assessment bonds are the only feasible means of financing improvements in the absence of subdivision regulations or other controls;
- (5) where intergovernmental revenues may be available on a continuous basis to guarantee the security of the bonds; and
- (6) for financing projects in newly annexed areas or areas of rapid expansion where the demands on local tax resources are comparatively large and unforeseen.

When is the best time to use debt for project financing?

- (1) When interest rates are low and the likelihood of future rates is higher;
- (2) When it is possible to get current project bids at competitive (low) levels;
- (3) When the probability of higher inflation rates in the future is strong;
- (4) When competition from other countries, states, cities, utilities is likely to be increasing over time;
- (5) When the type of improvement that you are building has a life much longer than the financing period;
- (6) When you are experiencing system failures on a consistent basis. The cost of many short-term repairs (baling wire and duct tape) to buy time to get to a full build replacement is not a good investment. It costs the utility money. It also can cost the customer money. Not very good for economic development.

THESE REASONS APPLY TO BOTH INTERNAL AND
EXTERNAL BORROWING SCENARIOS

Project Need is **\$10 million** Updated for May 18 Interest Rates

- **5 year bond - 1.2% Rate \$370,000 of interest**
 - If inflation averages 3% per year, the net present value payback is \$9.7 million
 - If inflation averages 3.5% per year, the net PV payback is \$9.5 million
 - If Water-Sewer Project Cost Index is 5.3%, like it has been for the last few years, the PV is down to \$9.1 million
- **10 year bond - 1.82% Rate \$1.05 million of interest**
 - If inflation averages 3% per year, the net PV payback is \$9.6 million
 - If inflation averages 3.5% per year, the net PV payback is \$9.3 million
 - If Water-Sewer Project Cost Index is 5.3%, like it has been for the last few years, the PV is down to \$8.5 million
- **25 year bond - 3.15% Rate \$4.7 million of interest**
 - If inflation averages 3% per year, the net PV payback is \$10.4 million
 - If inflation averages 3.5% per year, the net PV payback is \$9.8 million
 - If Water-Sewer Project Cost Index is 5.3%, like it has been for the last few years, the PV is down to \$8.1 million

Schedule

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- May - Preliminary study results presented to LUC
- May - Preliminary study results presented to CC
- May-July – 2013 Budget assembled and reviewed by City Manager
- August – Final study results presented to LUC
- August – Final study results presented to CC

Direction Needed

40

- Do you support a higher volume charge and lower monthly service charge for the new rates?

Pros

- Lower monthly bills for low-use customers
- Lower average cost per unit of usage for customers with below-average usage

Cons

- Decreased revenue stability allows for more consistent cash flow
- Requires more cash reserved for working capital needs
- Reduces cash for project spending

1

Direction Needed

41

- Do you support a higher fixed monthly service charge and lower volume charge for the new rates?

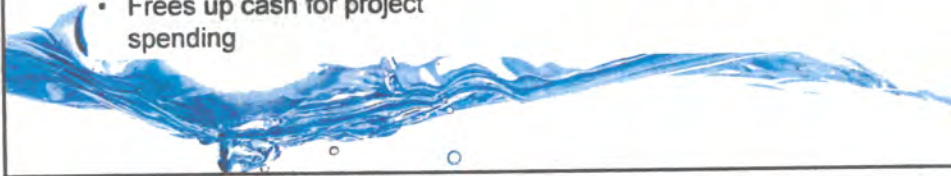
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Pros

- Increased revenue stability allows for more consistent cash flow
- Requires less cash reserved for working capital needs
- Frees up cash for project spending

Cons

- Higher monthly bills for low-use customers
- Higher average cost per unit of usage for customers with below-average usage



Direction Needed

42

- Do you support short-term internal financing of water/sewer improvements in order to lower rate impacts?

3

Pros

- Lower rates now
- Ability to smooth rate increases in the near term
- Less debt liability
- No issuance costs

Cons

- Principal and interest payments would last for 5 years
- Higher annual payments than external borrowing



Direction Needed

43

- Do you support long-term external financing of water/sewer improvements in order to lower rate impacts?

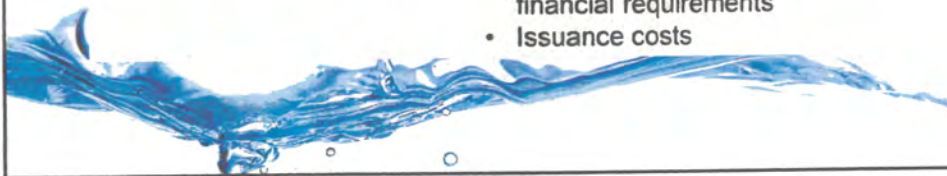
Pros

- Lower rates now
- Ability to smooth rate increases in the near term

Cons

- Principal and interest payments would last for 25 years
- City will be required to adhere to additional financial requirements
- Issuance costs

4



Q&A

44



Scenarios

6

1

Low Base
High Vol.

2

Higher Base
Lower Vol.

Short-Term
Internal
Borrowing

3

Long-Term
External
Borrowing

4



June 2012

June 2012							July 2012						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
3	4	5	6	7	8	9	1	2	3	4	5	6	7
10	11	12	13	14	15	16	8	9	10	11	12	13	14
17	18	19	20	21	22	23	15	16	17	18	19	20	21
24	25	26	27	28	29	30	22	23	24	25	26	27	28
							29	30	31				

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
May 27	28	29	30	31	Jun 1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

May 27 - Jun 2						
Jun 3 - 9	4:00pm 6:00pm Transportation Adv Bd (Chambers) 5:30pm 7:00pm Police Citizens' Adv Comm (Institute)	5:45pm 6:30pm Dinner-City Manager's Conference Room 6:30pm 10:00pm City Council Meeting	10:30am 11:30am Senior Adv Board (Library) 5:00pm 6:30pm Youth Adv Comm (Museum)	6:00pm 8:00pm Community Mktg Comm (CMCR)		
Jun 10 - 16	6:00pm 8:00pm Disabilities Adv Comm (Library) 6:30pm 8:30pm Planning Commission (Chamb)	6:30pm 9:30pm Study Session	5:30pm 7:00pm Fire & Rescue Adv Comm () 5:30pm 7:00pm Open Land Adv Comm (Pa 6:00pm 8:00pm Citizens' Finance Ad	4:30pm 6:00pm Parks & Rec Comm (Parks 5:00pm 6:30pm Visual Arts Comm (Museu 5:15pm 7:15pm Affordable Housing		
Jun 17 - 23	6:00pm 7:00pm Historic Preservation Comm (Chambers)	CML Annual Conference (Breckenridge CO)				
Jun 24 - 30	6:30pm 8:30pm Planning Commission (Chambers)	4:30pm 6:30pm Cultural Svcs Bd (Museum) 6:30pm 9:30pm Study Session	4:00pm 6:00pm Loveland Utilities Comm (Svc Ctr Board Rm)	5:00pm 6:30pm Library Board (Library)		

