



# **City of Grand Island**

**Tuesday, June 10, 2014**

**Council Session**

## **Item E-1**

**Public Hearing on Declaration of Intent to Use Clean Water State Revolving Fund (CWSRF) Loan Proceeds for Sanitary Sewer Collection System and Wastewater Treatment Plant Improvements**

**Staff Contact: John Collins**

# **Council Agenda Memo**

**From:** Marvin Strong PE, Wastewater Plant Engineer

**Meeting:** June 10, 2014

**Subject:** Declaration of Intent to Use Clean Water State Revolving Fund (CWSRF) Loan Proceeds for Sanitary Sewer Collection System and Wastewater Treatment Plant Improvements

**Item #'s:** E-1 & I-1

**Presenter(s):** Jaye Monter, Finance Director  
Marvin Strong P.E., Wastewater Plant Engineer  
Anna White, Black & Veatch  
Tom Fuenning, NDEQ  
Michael Rogers, Gilmore & Bell, P.C.

## **Background**

Public Works staff has been working with Black and Veatch and Olsson Associates to develop and implement a 5 Year Wastewater Capital Plan for the City of Grand Island based on the following:

- The comprehensive plan in CH2M Hill's "Wastewater Collection and Treatment Systems Comprehensive Plan Update"
- Black and Veatch's "Wastewater Treatment Plant and Collection System Improvements – Draft Technical Memorandum #2 Hydraulic Model Validation and Analysis"
- Wastewater Projects intended to accommodate growth

Examples of Wastewater projects included in the 5 Year Wastewater Capital Improvement Plan are:

- Plant – Headworks
- Sanitary Sewer Collection System Rehabilitation
  - South and West Interceptor Rehabilitation
  - 4<sup>th</sup> and 5<sup>th</sup> Eddy to Vine Rehabilitation
  - North Interceptor Phase I

- North Interceptor Phase II
- Growth – 281 Sanitary Sewer Improvements (District 530T)

Public Works representatives met with Nebraska Department of Environmental Quality (NDEQ) representatives in December 2013 and explored the possibility of obtaining a loan from the Clean Water State Revolving Loan Fund Program (CWSRF) administered by the NDEQ in lieu of Revenue Bonds to pay for the remaining wastewater projects. The NDEQ subsequently approved up to \$40,000,000 in CWSRF funds at 2 ¼% -2 1/2% for distribution over multiple years. Projects classified as “Green” receive a ¼% lower interest rate.

## **Discussion**

With the more favorable interest rates it is possible to advance the project schedule to complete more projects sooner. Lift stations are high cost items that increase the creation of damaging chemicals such as hydrogen sulfide (the chemical primarily responsible for shortening the life of the Northeast Interceptor by more than 30%). The new headworks and Phases 1 and 2 of the North Interceptor allow 8 lift stations to be abandoned. Accelerating construction will allow an additional 3 lift stations to be abandoned, saving operating costs and extending the life of the new infrastructure.

The council declared its intention to issue bonds for \$60 million on May 14, 2013. A Revenue Bond was issued on September 17, 2013 for \$35,430,000. This is the only outstanding wastewater debt. We will need an estimated \$38,844,700, in addition to the Revenue Bond issued last year, to finance the remaining portion of the ongoing Wastewater Infrastructure Plan. Most of the remaining costs will occur when the North Interceptor Phase 2 Project is bid later this year. We are asking the council to raise its intention to issue debt from \$60 million to \$74,275,000 and recognize that up to \$40,000,000 of such borrowing is expected to be in the form of a loan from the CWSRF Program administered by NDEQ. After the hearing held on June 10<sup>th</sup> and NDEQ’s 30 day comment period, it is expected that an ordinance will be presented to the City Council at its July 22<sup>nd</sup> meeting to give formal approval to the NDEQ borrowing in a principal amount of up to \$40,000,000. With the new interest rates this will be within the constraints of the rate study approved last year.

## **Alternatives**

Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve
2. Refer the issue to a Committee
3. Postpone the issue to future date
4. Take no action on the issue

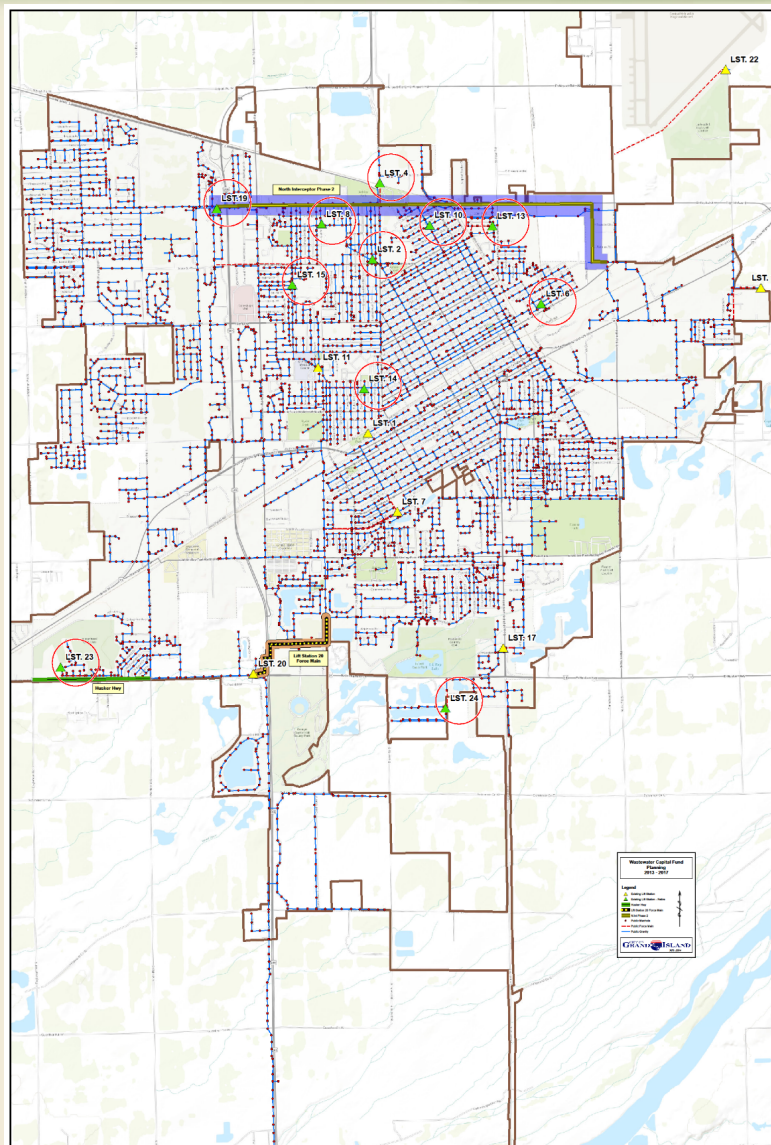
## **Recommendation**

City Administration recommends that the Council adopt the resolution to raise the declaration of intent to issue debt from \$60,000,000 to \$74,275,000 and recognize that up to \$40,000,000 of such debt is expected to be borrowed from the Clean Water State Revolving Loan Fund Program administered by the Nebraska Department of Environmental Quality.

## **Sample Motion**

Move to adopt the resolution raising the declaration of intent to issue debt from \$60,000,000 to \$74,275,000 with up to \$40,000,000 expected to be borrowed from the Clean Water State Revolving Loan Fund Program administered by the Nebraska Department of Environmental Quality.

# **Grand Island Wastewater Infrastructure Improvement Plan**



## 2010 Capital Project Report

- 🌊 The CH2MHill Report listed wastewater infrastructure projects totaling \$115.17 Million, most of it before 2020
- 🌊 We completed some of the projects, are working on some of the projects, eliminated some of the projects, postponed some of the projects and added new projects

TABLE 1  
Grand Island Prioritized CIP

	Costs (\$M)			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 or Beyond
	Design	Construction	Total											
<b>WWTP</b>														
Sludge Storage and Hydrogen Sulfide Facility	-	\$0.52	\$0.52	\$ 0.52										
Replace Primary Clarifier Mechanisms	-	\$0.99	\$0.99	\$ 0.99										
Upgrade SCADA system	-	\$0.61	\$0.61	\$ 0.61										
Aeration Basin Improvements	\$0.69	\$3.91	\$4.60	\$1.10	\$1.20	\$2.30								
JBS Slipstream (costs may be incurred by others)	\$0.08	\$0.28	\$0.36		\$0.38									
Replace Screens	\$0.60	\$2.14	\$2.74			\$2.74								
Third Primary Clarifier	\$0.68	\$2.41	\$3.09			\$3.09								
Repair Final Clarifiers	-	\$0.50	\$0.50											
Replace Parshall Flume	\$0.15	\$1.50	\$1.65				\$ 0.60							
Replace Grit Basins	\$0.90	\$3.22	\$4.12				\$1.65							
Fourth Secondary Clarifier	\$0.98	\$3.50	\$4.48				\$4.12							
Anaerobic Digestion Facility	-	\$19.58	\$19.58				\$4.48							
Expand Influent Pump Station Capacity	\$0.10	\$0.35	\$0.45					\$6.30		\$9.73	\$3.54			
Ferric Chloride Feed Facility	\$0.34	\$1.21	\$1.54					\$0.45						
Aerated Static Compost	-	\$4.53	\$4.53									\$0.34	\$1.21	
Fifth Secondary Clarifier	\$0.98	\$3.50	\$4.48											\$4.53
<b>WWTP Subtotal</b>			<b>\$54.33</b>											<b>\$4.48</b>
<b>Sanitary Collection System</b>														
Unknown Sewer Districts	-	\$2.75	\$2.75	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
15" Sewer Replacement between 4th & 5th Streets, Eddy St. to Vine St.	-	\$1.10	\$1.10	\$1.10										
Lift Station 7 Improvements	-	\$0.15	\$0.15	\$0.15										
Sanitary Sewer Rehabilitation	-	\$0.35	\$0.35	\$0.35										
North Concrete Interceptor Replacement (7th & Sky Park to WWTP)	\$1.27	\$11.43	\$12.70	\$1.27	\$6.86	\$4.57								
Concrete Vault at WWTP	\$0.03	\$0.23	\$0.26	\$0.03	\$0.23									
South Concrete Interceptor - Rehabilitation/Replacement-4850 feet	-	\$2.98	\$2.98		\$2.98									
West Interceptor - Rehabilitation/Replacement - 850 feet	-	\$0.91	\$0.91		\$0.91									
Capital Avenue Forcemain	-	\$1.09	\$1.09					\$1.09						
Gravity Sewer (Capital Avenue)	-	\$8.36	\$8.36					\$8.36						
Lift Station 21 Construction	-	\$3.40	\$3.40						\$3.40					
Lift Station 21 Pump Replacement	-	\$0.43	\$0.43						\$0.43					
36" x 8540' from WWTP to Vine Street	-	\$2.99	\$2.99								\$2.99			
36" x 1910' from Vine Street to Bismark Road	-	\$0.65	\$0.65									\$0.65		
36" x 5850' from Bismark Road to L.S. 7	-	\$1.82	\$1.82									\$1.82		
Remove L.S. 7	-	\$0.05	\$0.05									\$0.05		
36" x 3660' from L.S. 7 to Ada Street	-	\$1.23	\$1.23									\$1.23		
12" x 4400' forcemain extension from L.S. 20	-	\$1.66	\$1.66											\$1.66
Upgrade L.S. 20 Pumps	-	\$0.02	\$0.02											\$0.02
8" x 5550' forcemain from L.S. 2 to Capital Avenue	-	\$1.41	\$1.41											\$1.41
Upgrade L.S. 2 Pumps	-	\$0.02	\$0.02											\$0.02
Upgrade L.S. 15 pumps	-	\$0.01	\$0.01											\$0.01
Cornhusker Army Ammunition Plant	-	\$6.13	\$6.13											\$6.13
East Lakes Service	-	\$7.26	\$7.26											\$7.26
West Park Plaza - Englemann from Husker Hwy to north of Hwy 30	-	\$0.92	\$0.92											\$0.92
West Park Plaza - Husker Hwy from North Rd to Englemann	-	\$1.70	\$1.70											\$1.70
<b>Sanitary Collection System Subtotal</b>			<b>\$60.35</b>											
<b>Other</b>														
WWTP and Sanitary Collection System Comprehensive Plan Update	\$0.50	-	\$0.50							\$0.50				
<b>TOTAL</b>			<b>\$115.17</b>	<b>\$6.37</b>	<b>\$12.79</b>	<b>\$12.94</b>	<b>\$11.10</b>	<b>\$9.71</b>	<b>\$10.82</b>	<b>\$9.98</b>	<b>\$6.79</b>	<b>\$4.34</b>	<b>\$1.46</b>	<b>\$28.38</b>

## Rate Study

- Black and Veatch added to the information in the CH2MHill report to develop a rate study to pay for the Capital Improvements
- They also developed a Wastewater Master Plan through the year 2062

# Rate Study

## Capital Improvements Plan (CIP) Adjustments 4/1/2012

### CIP Used in March 2011 Rate Study

Project	2011	2012	2013	2014	2015	2016	Total
Aeration Basin Improvements	\$1,768,500	\$1,768,500					\$3,537,000
Methanol Feed System Improvements	\$50,000	\$50,000					\$100,000
Internal Recycle for Aeration Basins					\$1,262,000		\$1,262,000
Final Clarifier Repair			\$600,000				\$600,000
PVIP East 2011 Only	\$320,000						\$320,000
New Assessment Districts	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000		\$1,250,000
Annual Sewer Rehab	\$190,000	\$350,000	\$350,000	\$350,000	\$350,000		\$1,590,000
Misc. Items	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		\$500,000
<b>Projects Below in Current Contracts</b>							
North Interceptor	\$420,000	\$3,000,000	\$4,640,000	\$4,640,000	\$3,000,000		\$15,700,000
North Interceptor (Capital Ave)				\$8,360,000			\$8,360,000
Capital Avenue Force Main		\$490,000	\$600,000				\$1,090,000
Lift Station 21 Replacement					\$430,000		\$430,000
Lift Station 21 Construction			\$600,000	\$2,800,000			\$3,400,000
Collection System Rehabilitation							
Lift Station #7	\$160,000						\$160,000
4th-5th/Eddy-Vine	\$100,000	\$1,000,000					\$1,100,000
South and West Interceptor			\$400,000	\$910,000	\$2,580,000		\$3,890,000
WWTP	\$1,300,000	\$2,420,000	\$3,000,000	\$2,500,000	\$0		\$9,220,000
	\$4,658,500	\$9,428,500	\$10,540,000	\$19,910,000	\$7,972,000	\$0	\$52,509,000
Master Planning							

### Suggested CIP Adjustments-Current 2011-2015 Schedule

Project	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Total
Aeration Basin Improvements	\$1,768,500	\$1,768,500					\$3,537,000
Methanol Feed System Improvements	\$50,000	\$50,000					\$100,000
Internal Recycle for Aeration Basins						\$1,262,000	\$1,262,000
Final Clarifier Repair			\$600,000				\$600,000
PVIP East 2011 Only	\$320,000						\$320,000
New Assessment Districts	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,500,000
Annual Sewer Rehab	\$190,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$1,940,000
Misc. Items	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$600,000
							\$9,859,000

# Rate Study

Projects Below In Current Contracts									
Master Planning	\$407,004								\$407,004
Project Management (WWTP & Collection System Rehab)	\$103,385								\$103,385
North Interceptor									
Phase 1A - Seedling Mile Road to WWTP									
Conceptual Design	\$44,190								\$44,190
Prelim, Final Design, and Bidding	\$211,940								\$211,940
Construction Phase Services		\$216,000							\$216,000
Construction		\$2,160,000							\$2,160,000
									\$2,632,130
Phase 1B - 7th St to Seedling Mile Road									
Conceptual Design	\$125,773								\$125,773
Prelim, Final Design, and Bidding	\$174,641	\$12,087							\$186,728
Construction Phase Services		\$301,000			\$300,000				\$601,000
Construction		\$2,010,000			\$4,000,000				\$6,010,000
									\$6,923,501
Phase 2 - Capital Avenue (LS #19 to Geddes)									
Conceptual Design	\$107,677								\$107,677
Prelim, Final Design, and Bidding		\$300,000	\$624,000						\$924,000
Construction Phase Services					\$500,000	\$424,000			\$924,000
Construction					\$6,000,000	\$9,000,000			\$15,000,000
									\$16,955,677
Collection System Rehabilitation									
Lift Station #7									
Conceptual and Prelim Design	\$39,758								\$39,758
Final Design and Bidding	\$57,806								\$57,806
Construction Phase Services		\$53,600							\$53,600
Construction		\$575,000							\$575,000
									\$726,164
4th-5th/Eddy-Vine									
Conceptual and Prelim Design	\$62,476								\$62,476
Final Design and Bidding	\$65,903								\$65,903
Construction Phase Services		\$118,400							\$118,400
Construction		\$1,315,000							\$1,315,000
									\$1,561,779
South and West Interceptor									
Conceptual And Prelim Design	\$60,798								\$60,798
Prelim, Final Design, and Bidding	\$48,247					\$160,000			\$208,247
Construction Phase Services		\$85,000				\$140,000			\$225,000
Construction		\$850,000				\$2,795,000			\$3,645,000
									\$4,139,045
WWTP									
Conceptual and Prelim Design	\$274,807								\$274,807
Final Design and Bidding	\$735,491	\$603,960							\$1,339,451
Construction Phase Services		\$281,400			\$562,800	\$562,800			\$1,407,000
Construction (including interceptors on site)		\$3,086,000			\$7,000,000	\$5,000,000			\$15,086,000
									\$18,107,258
									\$61,414,943

## 5 Year Wastewater Infrastructure Plan

🌊 The current 5 Year Wastewater Infrastructure Plan was developed using information in the CH2MHill and Black and Veatch Reports and incorporating input from the field. Black and Veatch used it to update the earlier rate study.

## City of Grand Island Nebraska - 5 Year Wastewater Infrastructure Plan

						Year 1	Year 2	Year 3	Year 4	Year 5
	Estimated Total Project Cost FY 2013 - FY 2017	Grant	SRF Loan	Bonds	Cash	FY 2013 (2012 - 2013) Actual	FY 2014 (2013- 2014)	FY 2015 (2014 - 2015)	FY 2016 (2015 - 2016)	FY 2017 (2016 - 2017)
<b>General</b>										
Rate Study	\$ 29,964				\$ 29,964	\$ 18,031	\$ 11,932			
Automation/Asset Management	\$ 308,156				\$ 308,156	\$ 8,156	\$ 100,000	\$ 100,000	\$ 100,000	
Utility Billing Software Allocation	\$ 283,308				\$ 283,308	\$ 118,377	\$ 164,931			
General Total	\$ 621,428				\$ 621,428	\$ 144,564	\$ 276,863	\$ 100,000	\$ 100,000	
<b>Vehicle</b>										
Sanitary Sewer Collection Sysem Truck	\$ 38,181				\$ 38,181	\$ 38,181				
Lift Station Truck	\$ 30,384				\$ 30,384		\$ 30,384			
Plant Utility Vehicle(s)	\$ 28,960				\$ 28,960		\$ 13,960	\$ 15,000		
Sanitary Sewer Collection Sysem Truck	\$ 90,000				\$ 90,000				\$ 45,000	\$ 45,000
Sanitary Sewer Collection System Jetter	\$ 150,000				\$ 150,000				\$ 150,000	
Vehicle Total	\$ 337,525				\$ 337,525	\$ 38,181	\$ 44,344	\$ 15,000	\$ 195,000	\$ 45,000
<b>Lab</b>										
Oil & Grease Extractor	\$ 39,000				\$ 39,000		\$ 39,000			
E-Coli Testing Apparatus	\$ 15,000				\$ 15,000			\$ 15,000		
Thermo Scientific Gallery	\$ 35,000				\$ 35,000				\$ 35,000	
Lab Total	\$ 89,000				\$ 89,000	\$ -	\$ 39,000	\$ 15,000	\$ 35,000	
<b>Wastewater Treatment Plant</b>										
Aeration Basin Improvements	\$ 290,866				\$ 290,866	\$ 290,866				
Headworks	\$ 21,500,000			\$ 21,500,000		\$ 2,467,459	\$ 15,054,000	\$ 3,978,541		
Final Clarifier Rehabilitation										
Final Clarifier #1 & #2 RAS Pumps	\$ 300,000				\$ 300,000			\$ 300,000		
Internal ReCycle Pumps	\$ 300,000				\$ -					\$ 300,000
Expand Admin Bldg/Lab	\$ 500,000				\$ 500,000					\$ 500,000
Wastewater Treatment Plant Total	\$ 22,890,866			\$ 21,500,000	\$ 1,090,866	\$ 2,758,325	\$ 15,054,000	\$ 4,278,541	\$ -	\$ 800,000

# City of Grand Island Nebraska - 5 Year Wastewater Infrastructure Plan

						Year 1	Year 2	Year 3	Year 4	Year 5	
	Estimated Total Project Cost FY 2013 - FY 2017	Grant	SRF Loan	Bonds	Cash	FY 2013 (2012 - 2013)	Actual	FY 2014 (2013 - 2014)	FY 2015 (2014 - 2015)	FY 2016 (2015 - 2016)	FY 2017 (2016 - 2017)
Sanitary Sewer Collection System Rehabilitation											
Sanitary Sewer Collection System TV Camera	\$ 52,560				\$ 52,560	\$ 52,560					
GIS Survey Equipment	\$ 31,780				\$ 31,780		\$ 31,780				
Sanitary Sewer Collection System Flow Meters	\$ 50,000				\$ 50,000		\$ 50,000				
Sanitary Sewer Collection System By-Pass Pumps	\$ 90,000				\$ 90,000		\$ 90,000				
North Interceptor Phase II	\$ 19,200,000		\$ 18,270,000	\$ 930,000			\$ 1,015,501	\$ 9,585,000	\$ 8,599,499		
Abandon LS #2/Route to North Interceptor	\$ 2,178,268		\$ 2,178,268					\$ 730,268	\$ 1,448,000		
Abandon LS#4/Route to North Interceptor	\$ 375,008		\$ 375,008						\$ 375,008		
Abandon LS#6	\$ 1,624,158		\$ 1,624,158								\$ 1,624,158
Lift Station #7 Repairs/Improvements	\$ 780,648	\$ 654,318			\$ 126,330	\$ 768,817	\$ 11,831				
Abandon LS #8/ Route to North Interceptor	\$ 710,604		\$ 710,604						\$ 78,604	\$ 632,000	
Abandon LS#10/Route to North Interceptor	\$ 901,456		\$ 901,456						\$ 136,456	\$ 765,000	
Abandon LS#13/Route to North Interceptor	\$ 407,026		\$ 407,026					\$ 50,026	\$ 357,000		
Abandon LS#14	\$ 69,000		\$ 69,000							\$ 69,000	
Abandon LS#15/Route to North Interceptor	\$ 1,978,000		\$ 1,978,000						\$ 200,000	\$ 1,778,000	
Lift Station #20 Pumps	\$ 26,215				\$ 26,215				\$ 26,215		
Replace LS #20 Forcemain	\$ 2,727,656		\$ 2,727,656								\$ 2,727,656
Husker Highway	\$ 2,946,250		\$ 2,846,250	\$ 100,000				\$ 783,250	\$ 2,163,000		
Rainbow Lakes Gravity Sewer	\$ 586,135		\$ 571,135	\$ 15,000							\$ 586,135
Airport Interlocal Agreement	\$ 165,688				\$ 165,688			\$ 165,688			
4th & 5th Eddy to Vine	\$ 1,694,840	\$ 337,633		\$ 1,357,206		\$ 1,520,877	\$ 173,963				
5th Street Improvements	\$ 28,551				\$ 28,551	\$ 28,551					
North Interceptor Phase I	\$ 10,600,000			\$ 10,600,000		\$ 1,769,490	\$ 8,830,510				
WWTP Collections System Rehab	\$ 239,739				\$ 239,739	\$ 239,739					
South & West Interceptor	\$ 805,001			\$ 805,001		\$ 798,000	\$ 7,001				
Sewer Rehabilitation - Various Locations	\$ 900,000				\$ 900,000	\$ -	\$ 100,000	\$ 100,000	\$ 350,000	\$ 350,000	
Sanitary Sewer Collection System Rehabilitation Total	\$ 49,168,583	\$ 991,951	\$ 32,658,561	\$ 13,807,208	\$ 1,710,863	\$ 5,178,033	\$ 10,310,587	\$ 11,414,232	\$ 13,733,782	\$ 8,531,949	
Growth/New Customers											
South 281/Tap District	\$ 2,132,230		\$ 2,032,230	\$ 100,000			\$ 900,230	\$ 1,232,000			
South 281 Sewer Assessment District	\$ 2,432,035	\$ 350,000	\$ 2,007,035	\$ 75,000			\$ 597,035	\$ 1,835,000			
Wildwood Industrial Subdivision 528	\$ 1,872,600		\$ 1,772,600	\$ 100,000			\$ 627,600	\$ 1,245,000			
Westwood Park Subdivision											
Platte Valley Industrial Park	\$ 373,126				\$ 373,126	\$ 324,726	\$ 48,400				
Unknown Sewer Districts	\$ 850,000				\$ 850,000	\$ -	\$ 100,000	\$ 250,000	\$ 250,000	\$ 250,000	
Growth/New Customers Total	\$ 7,659,991	\$ 350,000	\$ 5,811,865	\$ 275,000	\$ 1,223,126	\$ 324,726	\$ 2,273,265	\$ 4,562,000	\$ 250,000	\$ 250,000	
Total Total	\$ 80,767,392	\$ 1,341,981	\$ 38,470,426	\$ 35,582,208	\$ 5,072,807	\$ 8,443,829	\$ 27,998,059	\$ 30,384,773	\$ 14,313,782	\$ 9,626,949	

## North Interceptor Phase 2

- The North Interceptor Phase 2 project (current construction estimate is \$17,215,000) should generate Regional Contractor interest and favorable pricing. Favorable pricing is likely to be extended to any additional projects that were bid around the same time.

## Lift Station Abandonments

- 🌊 The Headworks and North Interceptor Phase 1 and North Interceptor Phase 2 projects make it physically possible to abandon 8 Lift Stations including LS #19.
- 🌊 A total of 11 Lift Stations are planned to be abandoned.

## Lift Station Abandonments

- The estimated Lift Station O & M savings for the 11 lift stations is \$162,000 per year
- The estimated Lift Station and Forcemain straight line depreciation cost is \$284,000 per year
- Lift Stations are a potential source of Hydrogen Sulfide, which is the primary reason we are replacing the North Interceptor prematurely

## NDEQ CWSRF Loan

- ☞ The NDEQ approved our CWSRF Loan application up to \$40,000,000 at interest rates between 2.25% and 2.50%
- ☞ NDEQ assess a 1% Administration Fee on the loan balance
- ☞ “Green” wastewater projects are charged 1.25%
- ☞ Non Green Wastewater Projects are charged 1.50%
- ☞ Most of the projects we submitted are classified as “Green”

## NDEQ CWSRF Loan

- 🌐 The Black and Veatch Rate Study conducted last year assumed 4.3% Bond Interest Rates
- 🌐 We asked Black and Veatch to re-visit the Rate Study done last year to determine how much additional work could be done within the constraints of that Rate Study using the lower interest rates.



TABLE 1

Grand Island Prioritized CIP

WWTP	Costs (\$M)														2020 or Beyond
	Design	Construction	Total	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Sludge Storage and Hydrogen Sulfide Facility	-	\$0.52	\$0.52	\$ 0.52											
Replace Primary Clarifier Mechanisms	-	\$0.99	\$0.99	\$ 0.99											
Upgrade SCADA system	-	\$0.61	\$0.61	\$ 0.61											
Aeration Basin Improvements	\$0.69	\$3.91	\$4.60	\$1.10	\$1.20	\$2.30									
JBS Slipstream (costs may be incurred by others)	\$0.08	\$0.28	\$0.36		\$0.36										
Replace Screens	\$0.60	\$2.14	\$2.74			\$2.74									
Third Primary Clarifier	\$0.68	\$2.41	\$3.09			\$3.09									
Repair Final Clarifiers	-	\$0.60	\$0.60				\$ 0.60								
Replace Parshall Flume	\$0.15	\$1.50	\$1.65				\$1.65								
Replace Grit Basins	\$0.90	\$3.22	\$4.12				\$4.12								
Fourth Secondary Clarifier	\$0.98	\$3.50	\$4.48				\$4.48								
Anaerobic Digestion Facility	-	\$19.58	\$19.58						\$6.30	\$9.73	\$3.54				
Expand Influent Pump Station Capacity	\$0.10	\$0.35	\$0.45						\$0.45						
Ferri Chloride Feed Facility	\$0.34	\$1.21	\$1.54									\$0.34	\$1.21		
Aerated Static Compost	-	\$4.53	\$4.53												\$4.53
Fifth Secondary Clarifier	\$0.98	\$3.50	\$4.48												\$4.48
<b>WWTP Subtotal</b>			<b>\$54.33</b>												
<b>Sanitary Collection System</b>															
Unknown Sewer Districts	-	\$2.75	\$2.75	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25		\$0.25
15" Sewer Replacement between 4th & 5th Streets, Eddy St. to Vine St.	-	\$1.10	\$1.10	\$1.10											
Lift Station 7 Improvements	-	\$0.15	\$0.15	\$0.15											
Sanitary Sewer Rehabilitation	-	\$0.35	\$0.35	\$0.35											
North Concrete Interceptor Replacement (7th & Sky Park to WWTP)	\$1.27	\$11.43	\$12.70	\$1.27	\$6.66	\$4.57									
Concrete Vault at WWTP	\$0.03	\$0.23	\$0.26	\$0.03	\$0.23										
South Concrete Interceptor - Rehabilitation/Replacement - 4850 feet	-	\$2.98	\$2.98		\$2.98										
West Interceptor - Rehabilitation/Replacement - 850 feet	-	\$0.91	\$0.91		\$0.91										
Capital Avenue Force Main	-	\$1.09	\$1.09					\$1.09							
Gravity Sewer (Capital Avenue)	-	\$8.36	\$8.36					\$8.36							
Lift Station 21 Construction	-	\$3.40	\$3.40						\$3.40						
Lift Station 21 Pump Replacement	-	\$0.43	\$0.43						\$0.43						
36" x 8540' from WWTP to Vine Street	-	\$2.99	\$2.99						\$2.99						
36" x 1910' from Vine Street to Bismark Road	-	\$0.65	\$0.65						\$0.65						
36" x 5850' from Bismark Road to L.S. 7	-	\$1.82	\$1.82							\$2.99					
Remove L.S. 7	-	\$0.05	\$0.05								\$0.65				
36" x 3660' from L.S. 7 to Ada Street	-	\$1.23	\$1.23								\$1.82				
12" x 4400' force main extension from L.S. 20	-	\$1.66	\$1.66								\$0.05				
Upgrade L.S. 20 Pumps	-	\$0.02	\$0.02								\$1.23				\$1.66
8" x 5550' force main from L.S. 2 to Capital Avenue	-	\$1.41	\$1.41												\$0.02
Upgrade L.S. 2 Pumps	-	\$0.02	\$0.02												\$1.41
Upgrade L.S. 15 pumps	-	\$0.01	\$0.01												\$0.02
Cornhusker Army Ammunition Plant	-	\$6.13	\$6.13												\$0.01
East Lakes Service	-	\$7.26	\$7.26												\$6.13
West Park Plaza - Englemann from Husker Hwy to north of Hwy 30	-	\$0.92	\$0.92												\$7.26
West Park Plaza - Husker Hwy from North Rd to Englemann	-	\$1.70	\$1.70												\$0.92
<b>Sanitary Collection System Subtotal</b>			<b>\$60.35</b>							\$0.50					\$1.70
<b>Other</b>															
WWTP and Sanitary Collection System Comprehensive Plan Update	\$0.50	-	\$0.50												
<b>TOTAL</b>			<b>\$115.17</b>	<b>\$6.37</b>	<b>\$12.79</b>	<b>\$12.94</b>	<b>\$11.10</b>	<b>\$9.71</b>	<b>\$10.82</b>	<b>\$9.98</b>	<b>\$6.79</b>	<b>\$4.34</b>	<b>\$1.46</b>		<b>\$28.98</b>

Capital Improvements Plan (CIP) Adjustments  
4/1/2012

7

CIP Used in March 2011 Rate Study

Project	2011	2012	2013	2014	2015	2016	Total
Aeration Basin Improvements	\$1,768,500	\$1,768,500					\$3,537,000
Methanol Feed System Improvements	\$50,000	\$50,000					\$100,000
Internal Recycle for Aeration Basins					\$1,262,000		\$1,262,000
Final Clarifier Repair			\$600,000				\$600,000
PVIP East 2011 Only	\$320,000						\$320,000
New Assessment Districts	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000		\$1,250,000
Annual Sewer Rehab	\$190,000	\$350,000	\$350,000	\$350,000	\$350,000		\$1,590,000
Misc. Items	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		\$500,000
<b>Projects Below in Current Contracts</b>							
North Interceptor	\$420,000	\$3,000,000	\$4,640,000	\$4,640,000	\$3,000,000		\$15,700,000
North Interceptor (Capital Ave)				\$8,360,000			\$8,360,000
Capital Avenue Force Main		\$490,000	\$600,000				\$1,090,000
Lift Station 21 Replacement					\$430,000		\$430,000
Lift Station 21 Construction			\$600,000	\$2,800,000			\$3,400,000
Collection System Rehabilitation							
Lift Station #7	\$160,000						\$160,000
4th-5th/Eddy-Vine	\$100,000	\$1,000,000					\$1,100,000
South and West Interceptor			\$400,000	\$910,000	\$2,580,000		\$3,890,000
WWTP	\$1,300,000	\$2,420,000	\$3,000,000	\$2,500,000	\$0		\$9,220,000
	\$4,658,500	\$9,428,500	\$10,540,000	\$19,910,000	\$7,972,000	\$0	\$52,509,000
Master Planning							

Not in 5 yr CIP, but in Hill Report

Includes \$8.36 Million for Capital Ave.

Suggested CIP Adjustments-Current 2011-2015 Schedule

Project	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Total	% of Construction
Aeration Basin Improvements	\$1,768,500	\$1,768,500					\$3,537,000	
Methanol Feed System Improvements	\$50,000	\$50,000					\$100,000	
Internal Recycle for Aeration Basins						\$1,262,000	\$1,262,000	
Final Clarifier Repair			\$600,000				\$600,000	
PVIP East 2011 Only	\$320,000						\$320,000	
New Assessment Districts	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,500,000	
Annual Sewer Rehab	\$190,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$1,940,000	
Misc. Items	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$600,000	
<b>Projects Below in Current Contracts</b>								
Master Planning		\$407,004					\$407,004	
Project Management (WWTP & Collection System Rehab)		\$103,385					\$103,385	
North Interceptor								
Phase 1A - Seeding Mile Road to WWTP								
Conceptual Design		\$44,190					\$44,190	2.0%
Prelim, Final Design, and Bidding		\$211,940					\$211,940	9.8%
Construction Phase Services			\$216,000				\$216,000	10.0%
Construction			\$2,160,000				\$2,160,000	
							\$2,632,130	
Phase 1B - 7th St to Seeding Mile Road								
Conceptual Design		\$125,773					\$125,773	2.1%
Prelim, Final Design, and Bidding		\$174,641	\$12,087				\$186,728	3.1%
Construction Phase Services			\$301,000	\$300,000			\$601,000	10.0%
Construction			\$2,010,000	\$4,000,000			\$6,010,000	
							\$6,923,501	
Phase 2 - Capital Avenue (LS #19 to Geddes)								
Conceptual Design		\$107,677					\$107,677	0.7%
Prelim, Final Design, and Bidding			\$300,000	\$624,000			\$924,000	6.2%
Construction Phase Services					\$500,000	\$424,000	\$924,000	6.2%
Construction					\$6,000,000	\$9,000,000	\$15,000,000	
							\$16,955,677	
Collection System Rehabilitation								
Lift Station #7								
Conceptual and Prelim Design		\$39,758					\$39,758	6.9%
Final Design and Bidding		\$57,806					\$57,806	10.1%
Construction Phase Services			\$53,600				\$53,600	9.3%
Construction			\$575,000				\$575,000	
							\$726,164	
4th-5th/Eddy-Vine								
Conceptual and Prelim Design		\$62,476					\$62,476	4.8%
Final Design and Bidding		\$65,903					\$65,903	5.0%
Construction Phase Services			\$118,400				\$118,400	9.0%
Construction			\$1,315,000				\$1,315,000	
							\$1,561,779	
South and West Interceptor								
Conceptual And Prelim Design		\$60,798					\$60,798	1.7%
Prelim, Final Design, and Bidding		\$48,247			\$160,000		\$208,247	5.7%
Construction Phase Services			\$85,000				\$140,000	6.2%
Construction			\$850,000		\$2,795,000		\$3,645,000	
							\$4,139,045	
WWTP								
Conceptual and Prelim Design		\$274,807					\$274,807	1.8%
Final Design and Bidding		\$735,491	\$609,960				\$1,339,451	8.9%
Construction Phase Services			\$281,400	\$562,800	\$562,800		\$1,407,000	9.3%
Construction (including interceptors on site)			\$3,086,000	\$7,000,000	\$5,000,000		\$15,086,000	
							\$18,107,258	
	\$2,678,500	\$5,038,396	\$13,267,447	\$13,186,800	\$12,762,800	\$14,481,000	\$61,414,943	

Amendment No. 1

\$1,910,075

Council Session - 6/10/2014

Estimated Total Engineering Costs Including Master Planning

Total Construction Costs \$7,764,943 17.73%  
\$43,791,000

City of Grand Island Nebraska - 5 Year Wastewater Infrastructure Improvement Plan														
										Year 1	Year 2	Year 3	Year 4	Year 5
				Estimated Total Project Cost FY 2013 - FY 2017	Grant	SRF Loan	Bonds	Cash	FY 2013 (2012 - 2013) Actual	FY 2014 (2013-2014)	FY 2015 (2014 - 2015)	FY 2016 (2015 - 2016)	FY 2017 (2016 - 2017)	
General														
Rate Study				\$ 29,964				\$ 29,964	\$ 18,031	\$ 11,932				
Automation/Asset Management				\$ 308,156				\$ 308,156	\$ 8,156	\$ 100,000	\$ 100,000	\$ 100,000		
Utility Billing Software Allocation				\$ 283,308				\$ 283,308	\$ 118,377	\$ 164,931				
General Total				\$ 621,428				\$ 621,428	\$ 144,564	\$ 276,863	\$ 100,000	\$ 100,000		
Vehicle														
Sanitary Sewer Collection Syssem Truck				\$ 38,181				\$ 38,181	\$ 38,181					
Lift Station Truck				\$ 30,384				\$ 30,384		\$ 30,384				
Plant Utility Vehicle(s)				\$ 28,960				\$ 28,960		\$ 13,960	\$ 15,000			
Sanitary Sewer Collection Syssem Truck				\$ 90,000				\$ 90,000				\$ 45,000	\$ 45,000	
Sanitary Sewer Collection System Jetter				\$ 150,000				\$ 150,000				\$ 150,000		
Vehicle Total				\$ 337,525				\$ 337,525	\$ 38,181	\$ 44,344	\$ 15,000	\$ 195,000	\$ 45,000	
Lab														
Oil & Grease Extractor				\$ 39,000				\$ 39,000		\$ 39,000				
E-Coli Testing Apparatus				\$ 15,000				\$ 15,000			\$ 15,000			
Thermo Scientific Gallery				\$ 35,000				\$ 35,000				\$ 35,000		
Lab Total				\$ 89,000				\$ 89,000	\$ -	\$ 39,000	\$ 15,000	\$ 35,000		
Wastewater Treatment Plant														
Aeration Basin Improvements				\$ 290,866				\$ 290,866	\$ 290,866					
Headworks				\$ 21,500,000		\$ 21,500,000			\$ 2,467,459	\$ 15,054,000	\$ 3,978,541			
Final Clarifier Rehabilitation														
Final Clarifier #1 & #2 RAS Pumps				\$ 300,000				\$ 300,000			\$ 300,000			
Internal ReCycle Pumps				\$ 300,000				\$ -						\$ 300,000
Expand Admin Bldg/Lab				\$ 500,000				\$ 500,000						\$ 500,000
Wastewater Treatment Plant Total				\$ 22,890,866		\$ 21,500,000		\$ 1,090,866	\$ 2,758,325	\$ 15,054,000	\$ 4,278,541	\$ -	\$ 800,000	
Sanitary Sewer Collection System Rehabilitation														
Sanitary Sewer Collection System TV Camera				\$ 52,560				\$ 52,560	\$ 52,560					
GIS Survey Equipment				\$ 31,780				\$ 31,780		\$ 31,780				
Sanitary Sewer Collection System Flow Meters				\$ 50,000				\$ 50,000		\$ 50,000				
Sanitary Sewer Collection System By-Pass				\$ 90,000				\$ 90,000		\$ 90,000				
North Interceptor Phase II				\$ 19,200,000		\$ 18,270,000	\$ 930,000			\$ 1,015,501	\$ 9,585,000	\$ 8,599,499		
Abandon LS #2/Route to North Interceptor				\$ 2,178,268		\$ 2,178,268					\$ 730,268	\$ 1,448,000		
Abandon LS#4/Route to North Interceptor				\$ 375,008		\$ 375,008						\$ 375,008		
Abandon LS#6				\$ 1,624,158		\$ 1,624,158							\$ 1,624,158	
Lift Station #7 Repairs/Improvements				\$ 780,648	\$ 654,318			\$ 126,330	\$ 768,817	\$ 11,831				
Abandon LS #8/ Route to North Interceptor				\$ 710,604		\$ 710,604						\$ 78,604	\$ 632,000	
Abandon LS#10/Route to North Interceptor				\$ 901,456		\$ 901,456						\$ 136,456	\$ 765,000	
Abandon LS#13/Route to North Interceptor				\$ 407,026		\$ 407,026					\$ 50,026	\$ 357,000		
Abandon LS#14				\$ 69,000		\$ 69,000							\$ 69,000	
Abandon LS#15/Route to North Interceptor				\$ 1,978,000		\$ 1,978,000						\$ 200,000	\$ 1,778,000	
Lift Station #20 Pumps				\$ 26,215				\$ 26,215				\$ 26,215		
Replace LS #20 Forcemain				\$ 2,727,656		\$ 2,727,656							\$ 2,727,656	
Husker Highway				\$ 2,946,250		\$ 2,846,250	\$ 100,000				\$ 783,250	\$ 2,163,000		
Rainbow Lakes Gravity Sewer				\$ 586,135		\$ 571,135	\$ 15,000						\$ 586,135	
Airport Interlocal Agreement				\$ 165,688				\$ 165,688			\$ 165,688			
4th & 5th Eddy to Vine				\$ 1,694,840	\$ 337,633		\$ 1,357,206		\$ 1,520,877	\$ 173,963				
5th Street Improvements				\$ 28,551				\$ 28,551	\$ 28,551					
North Interceptor Phase I				\$ 10,600,000			\$ 10,600,000		\$ 1,769,490	\$ 8,830,510				
WWTP Collections System Rehab				\$ 239,739				\$ 239,739	\$ 239,739					
South & West Interceptor				\$ 805,001			\$ 805,001		\$ 798,000	\$ 7,001				
Sewer Rehabilitation - Various Locations				\$ 900,000				\$ 900,000	\$ -	\$ 100,000	\$ 100,000	\$ 350,000	\$ 350,000	
Sanitary Sewer Collection System Rehabilitation Total				\$ 49,168,583	\$ 991,951	\$ 32,658,561	\$ 13,807,208	\$ 1,710,863	\$ 5,178,033	\$ 10,310,587	\$ 11,414,232	\$ 13,733,782	\$ 8,531,949	
Growth/New Customers														
South 281/ Tap District				\$ 2,132,230		\$ 2,032,230	\$ 100,000			\$ 900,230	\$ 1,232,000			
South 281 Sewer Assessment District				\$ 2,432,035	\$ 350,000	\$ 2,007,035	\$ 75,000			\$ 597,035	\$ 1,835,000			
Wildwood Industrial Subdivision 528				\$ 1,872,600		\$ 1,772,600	\$ 100,000			\$ 627,600	\$ 1,245,000			
Westwood Park Subdivision														
Platte Valley Industrial Park				\$ 373,126				\$ 373,126	\$ 324,726	\$ 48,400				
Unknown Sewer Districts				\$ 850,000				\$ 850,000	\$ -	\$ 100,000	\$ 250,000	\$ 250,000	\$ 250,000	
Growth/New Customers Total				\$ 7,659,991	\$ 350,000	\$ 5,811,865	\$ 275,000	\$ 1,223,126	\$ 324,726	\$ 2,273,265	\$ 4,562,000	\$ 250,000	\$ 250,000	
Total Total				\$ 80,767,392	\$ 1,341,951	\$ 38,470,426	\$ 35,582,208	\$ 5,072,807	\$ 8,443,829	\$ 27,998,059	\$ 20,384,773	\$ 14,313,782	\$ 9,626,949	
													JMS 05/21/2014	
Green Infrastructure														

# BUILDING A WORLD OF DIFFERENCE

## Capital Financing Plan

**Anna White**

Principal Consultant  
Management Consulting Division



**BLACK & VEATCH**  
Building a world of difference.

# Overview

- **Comprehensive Wastewater Rate Study completed in October 2013**
  - Council approved 4 revenue increases (12%, 12%, 6%, 5%) from FY 2014 – FY 2017
- **What's changing?**
  - 2014 – 2017 CIP – Increasing \$9,432,100
  - Revenue Bond financing will be replaced with SRF Loans
    - Lower interest rates
    - Lower annual debt service

**What's not changing? The approved revenue increases will not increase.**



# Capital Improvement Program Changes

- **2014 - 2017**
  - Rate Report - \$65,267,600
  - Now - \$74,699,700
- **Major Differences:**
  - The Headworks and North Interceptor Phase 1 and North Interceptor Phase 2 projects make it physically possible to abandon 8 Lift Stations

# SRF Loan Terms

- **Repayment of Principal and Interest begins either 3-year following award of the loan or at Initiation of Operation (IOO) whichever is sooner**
- **3-year construction period**
  - 1<sup>st</sup> year – 0.5% interest rate
  - 2<sup>nd</sup> and 3<sup>rd</sup> year – 0.5% interest plus administrative fee
    - Administrative fee based on loan amount, 1%
- **20-year repayment period**
  - Interest rate based on green/non-green projects
    - Ranges from 1.32% to 1.47%
  - Administrative fee

# SRF Capital Projects

## • Green

- North Interceptor Phase II
- Abandon LS #2
- Abandon LS #4
- Abandon LS #6
- Abandon LS #8
- Abandon LS #10
- Abandon LS #13
- Abandon LS #14
- Abandon LS #15
- Husker Highway
- Rainbow Lakes Gravity Sewer

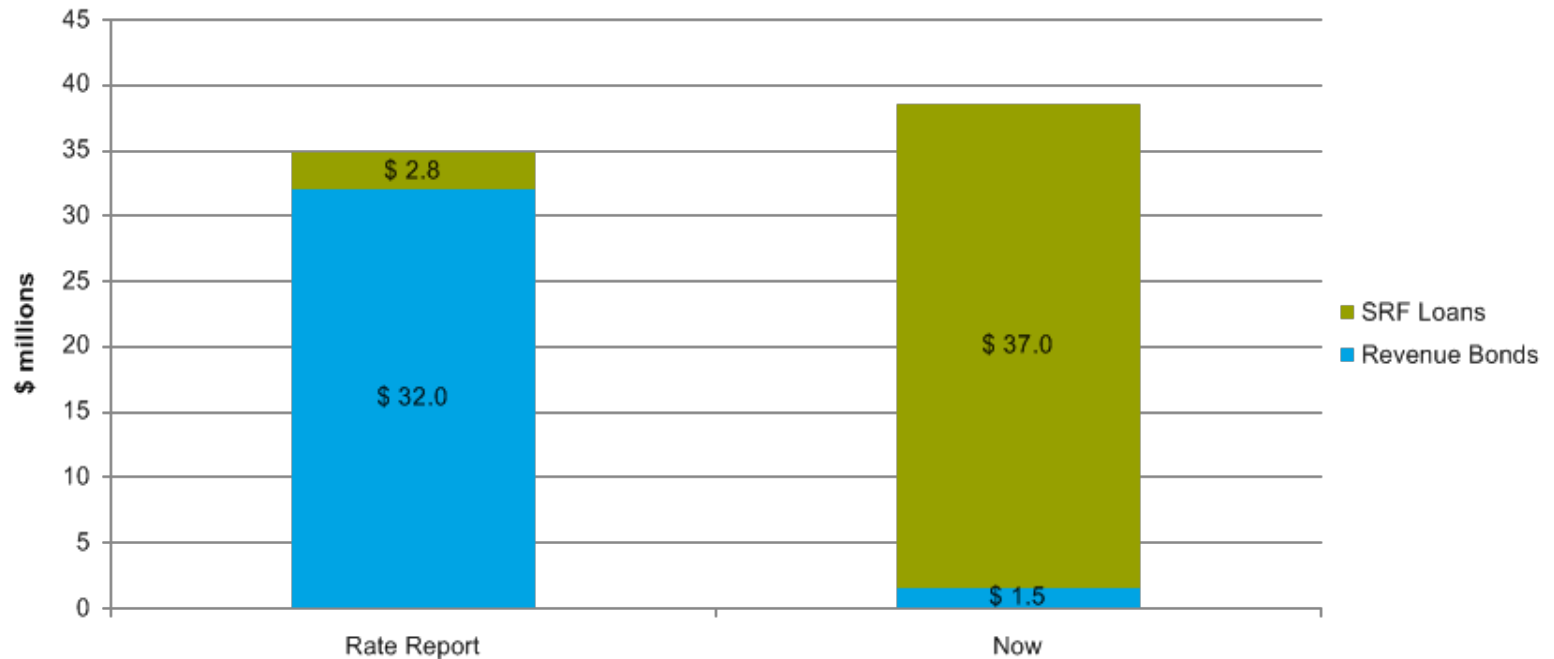
## • Non Green

- Replace LS #20 Forcemain
- South 281/Tap District
- South 281 Sewer Assessment District
- Wildwood Industrial Subdivision 528

**Approximately 82% of project costs are green projects**

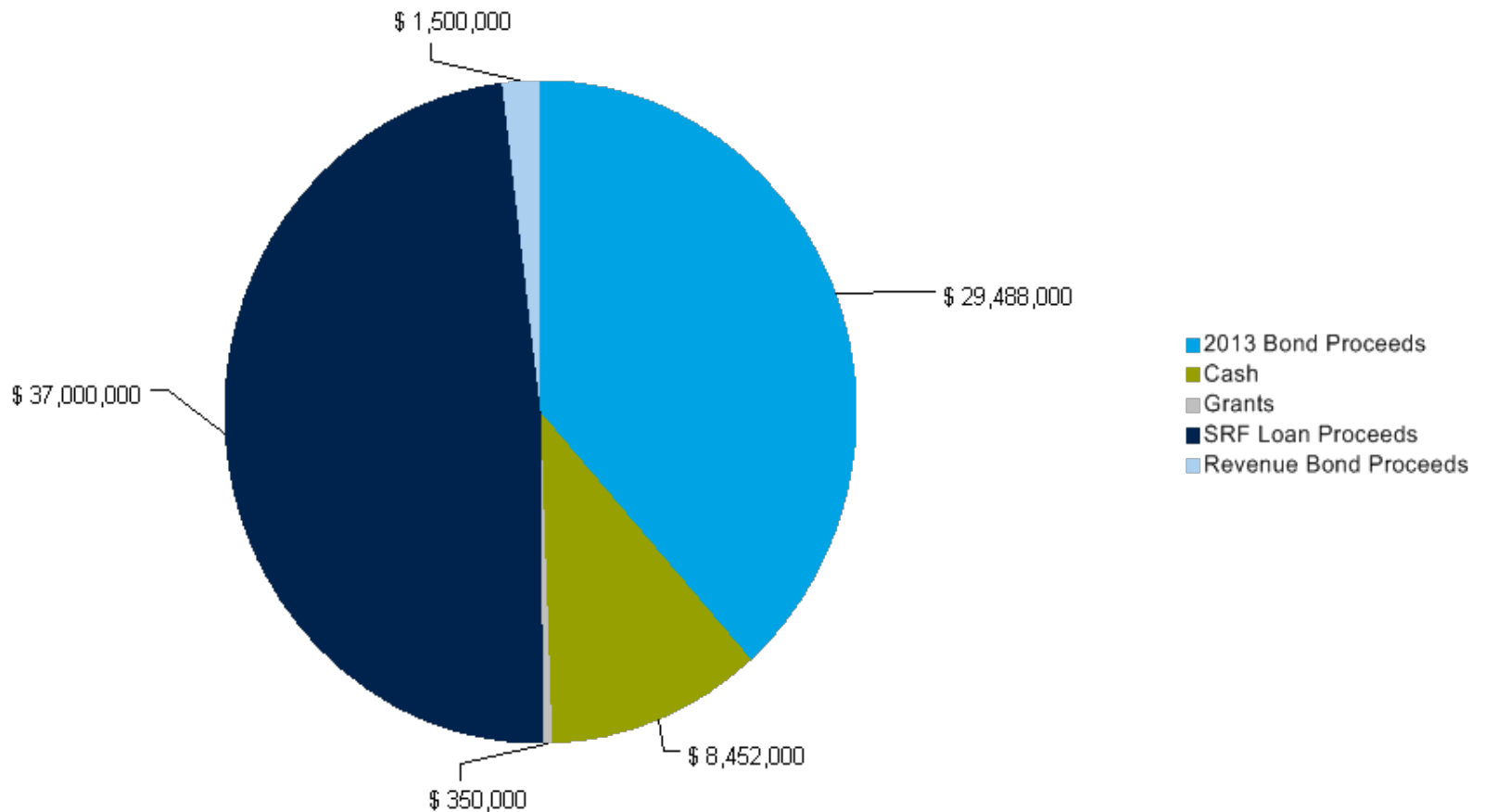


# Revenue Bond and SRF Loan Proceeds

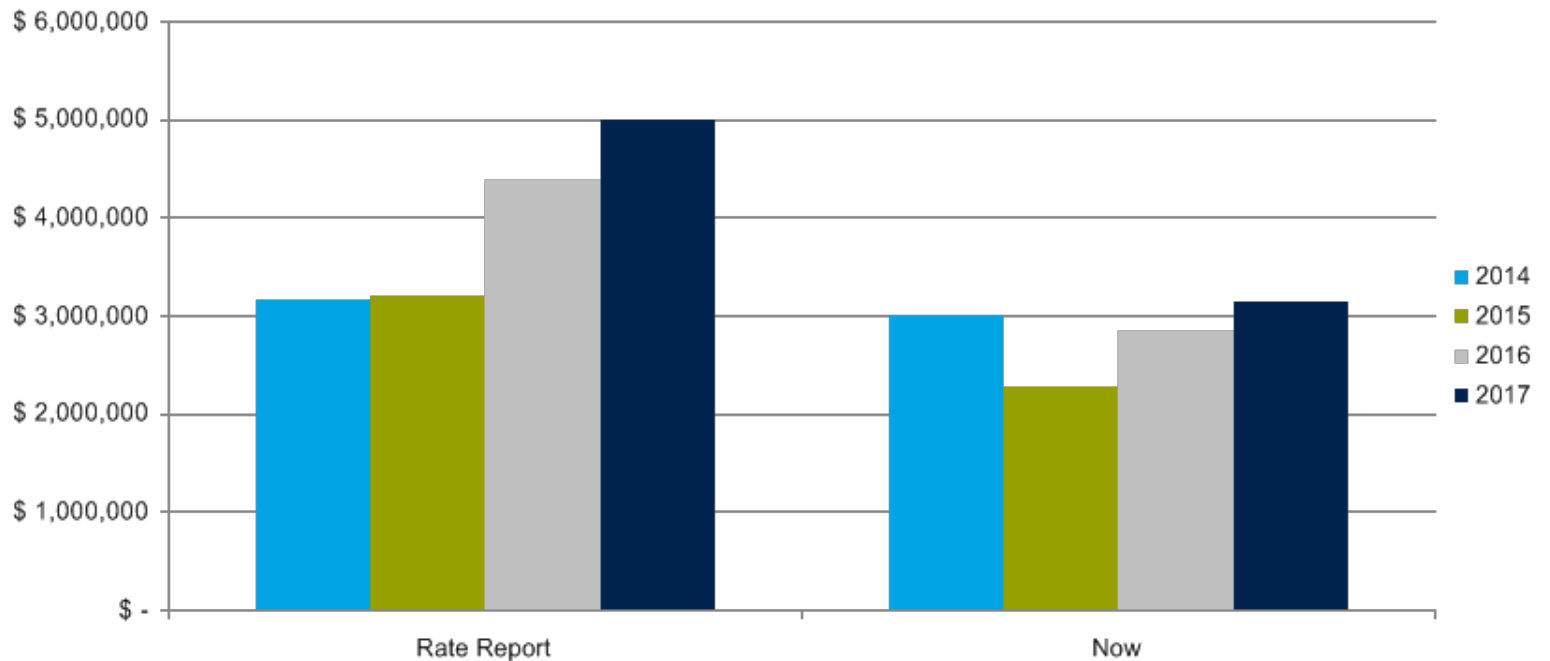


**Total amount of debt financing increasing from \$34,800,000 to \$38,500,000**

# Proposed 2014 – 2017 Capital Improvement Program Financing



# Annual Debt Service



**Annual debt service increases from \$3,015,900 in 2014 to \$3,757,900 in 2017**

# Other Changes

- **Revenue from Proposed Rate Increases**
  - Number of months effective during the first year was reduced from 12 to 10 to reflect 2 month lag until revenue from increase is received
    - Rates effective October 1
    - Bill sent to customer reflecting new rates – November 1
    - Revenue from new rates received December 1

# Other Changes

- **Other Operating Revenue**

- 2014 budget reduced to reflect 2013 actual which was lower than projected
- Projected revenue is approximately \$150,000 less per year

- **Interest Income**

- Projected interest income reduced to reflect 2013 actual and 2014 year-to-date
- Projected interest income is approximately \$250,000 less per year

# Summary

- **Revenue reductions**
  - Revenue from revenue increases
  - Other operating revenue
  - Interest income
- **Offset by reduction in debt service**
- **Results in ability to fund more capital projects**

**Table 6**  
**City of Grand Island, NE**  
**Wastewater Utility**  
**Proposed Capital Improvement Program**

Line No.		2013	2014	2015	2016	2017	Total
		\$	\$	\$	\$	\$	\$
1	Sewer Mains	4,733,900	12,572,000	15,652,000	12,054,400	4,276,800	49,289,100
2	Lift Stations	768,800	11,800	803,700	2,780,900	5,319,600	9,684,800
	Wastewater Treatment						
3	Raw Water Pumping	1,135,000	6,924,800	1,885,000	0	0	9,944,800
4	Preliminary Treatment	1,332,400	8,168,200	2,212,900	0	0	11,713,500
5	Primary Sedimentation/Clarifiers	0	0	309,000	0	0	309,000
6	Aeration Basins	290,900	0	0	0	327,800	618,700
7	Aeration Equipment	0	0	0	0	0	0
8	Corrosion/Odor Control Facilities	0	0	0	0	0	0
9	Final Clarifiers	0	0	0	0	0	0
10	Disinfection	0	0	0	0	0	0
11	Sludge Handling	0	0	0	0	0	0
12	General Plant	8,200	100,000	103,000	106,100	0	317,300
13	Lab	0	0	15,500	37,100	0	52,600
14	Vehicles	38,200	44,400	15,500	206,800	49,200	354,100
15	Administration & General	136,400	176,800	0	0	546,400	859,600
16	Land	0	0	0	0	0	0
17	Total	8,443,800	27,998,000	20,996,600	15,185,300	10,519,800	83,143,500

**Table 7**  
**City of Grand Island, NE**  
**Wastewater Utility**  
**Capital Improvement Program Financing**

Line No.	Description	Year Ending September 30,					Total
		2013	2014	2015	2016	2017	
		\$	\$	\$	\$	\$	\$
<b>Sources of Funds</b>							
1	Beginning of Year Balance	3,168,800	31,545,000	5,619,200	1,142,400	1,047,200	3,168,800
2	Revenue Bond Proceeds	37,344,700	0	0	0	1,500,000	38,844,700
3	CWSRF Loan Proceeds	0	1,470,000	14,674,000	13,144,000	7,712,000	37,000,000
4	Cash Financing of Construction	0	300,000	2,000,000	2,100,000	1,900,000	6,300,000
5	Grants/Developer Contributions	992,000	350,000	0	0	0	1,342,000
6	Interest Income (a)	20,300	57,200	18,300	11,100	8,400	115,300
7	Total Funds Available	41,525,800	33,722,200	22,311,500	16,397,500	12,167,600	86,770,800
<b>Application of Funds</b>							
8	Major Capital Improvements	8,443,800	27,998,000	20,996,600	15,185,300	10,519,800	83,143,500
9	Refunding Escrow Deposits	0	0	0	0	0	0
10	Issuance Costs	567,300	105,000	172,500	165,000	135,000	1,144,800
11	Bond Reserve Funds (b)	969,700	0	0	0	106,400	1,076,100
12	Total Application of Funds	9,980,800	28,103,000	21,169,100	15,350,300	10,761,200	85,364,400
13	End of Year Fund Balance	31,545,000	5,619,200	1,142,400	1,047,200	1,406,400	1,406,400
14	Capital Reserve Balance	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	

- (a) Includes interest earnings on the capital reserve.  
(b) Reflects use of Bond Reserve Fund from Series 2003.

**Table 8**  
**City of Grand Island, NE**  
**Wastewater Utility**  
**Comparison of Projected Revenue Under Existing**  
**Rates With Projected Revenue Requirements**

Line No.	Description	Year Ending September 30,				
		2013	2014	2015	2016	2017
		\$	\$	\$	\$	\$
1	Revenue Under Existing Rates	8,442,300	8,113,300	8,134,400	8,155,300	8,176,300
	Additional Revenue Required					
	Fiscal Year	Revenue Increase	Months Effective			
2	2013	0.00%	10	0	0	0
3	2014	12.00%	10	811,300	976,100	981,200
4	2015	12.00%	10	911,100	1,096,100	1,098,900
5	2016	6.00%	10		511,500	615,400
6	2017	5.00%	10			453,000
7	Total Additional Revenue	0	811,300	1,887,200	2,586,200	3,148,500
8	Total Service Charge Revenue	8,442,300	8,924,600	10,021,600	10,741,500	11,324,800
9	Other Operating Revenue	347,800	343,200	343,200	749,100	749,100
10	Interest Income - Operations	500	800	800	700	900
11	Interest Income - Reserve Funds (a)	18,600	17,400	16,700	17,200	17,700
12	Total Revenue	8,809,200	9,286,000	10,382,300	11,508,500	12,092,500
13	Operation and Maintenance Expense	6,698,900	5,543,300	5,859,800	6,231,000	6,632,400
14	Net Revenue	2,110,300	3,742,700	4,522,500	5,277,500	5,460,100
	Debt Service					
15	Existing Revenue Bonds	1,705,900	0	0	0	0
16	Proposed Revenue Bonds	0	3,008,500	2,125,500	2,515,400	2,532,200
17	Total Revenue Bonds	1,705,900	3,008,500	2,125,500	2,515,400	2,532,200
18	Proposed CWSRF Loan	0	7,400	150,700	331,400	609,700
19	Total Debt Service	1,705,900	3,015,900	2,276,200	2,846,800	3,141,900
20	Routine Capital Additions (b)	317,000	317,000	317,000	317,000	317,000
21	Cash Financing of Major Improvements	0	300,000	2,000,000	2,100,000	1,900,000
22	Additions to Operating Reserve	0	0	0	0	90,800
23	Net Annual Balance	87,400	109,800	(70,700)	13,700	10,400
24	Beginning of Year Balance	0	87,400	197,200	126,500	140,200
25	End of Year Balance	87,400	197,200	126,500	140,200	150,600
26	Operating Reserve Balance	1,651,800	1,651,800	1,651,800	1,651,800	1,742,600

(a) Includes interest earnings on the Principal and Interest Account, Bond Reserve Fund, and operating reserve.

(b) Cash financing of Machinery & Equipment and Vehicles.

**Table 9**  
**City of Grand Island, NE**  
**Wastewater Utility**  
**Coverage Requirements**

Line		Year Ending September 30,							
No.		2013	2014	2015	2016	2017	2018	2019	2020
		\$	\$	\$	\$	\$	\$	\$	\$
<b>Rate Covenant Coverage</b>									
1	Projected Net Revenues	2,110,300	3,742,700	4,522,500	5,277,500	5,460,100	5,623,400	6,252,700	6,913,900
2	Annual Debt Service (a)	1,705,900	3,015,900	2,276,200	2,846,800	3,141,900	3,757,900	4,338,500	4,835,300
3	Projected Actual Net Revenue as a Percent of Debt Service (b)	1.24 x	1.24 x	1.99 x	1.85 x	1.74 x	1.50 x	1.44 x	1.43 x
<b>Additional Bond Coverage (c)</b>									
4	<u>Preceding Year Projected Net Revenues</u>	3,488,191	2,110,300	3,742,700	4,522,500	5,277,500	5,460,100	5,623,400	6,252,700
5	Average Annual Debt Service	2,586,400	2,876,300	3,485,300	3,981,600	4,201,400	4,245,500	4,266,700	4,263,500
6	Projected Actual Net Revenue as a Percent of Debt Service (d)	1.35 x	0.73 x	1.07 x	1.14 x	1.26 x	1.29 x	1.32 x	1.47 x
7	<u>Ensuing Year Projected Net Revenues</u>	2,110,300	3,742,700	4,522,500	5,277,500	5,460,100	5,623,400	6,252,700	6,913,900
8	Average Annual Debt Service	2,586,400	2,876,300	3,485,300	3,981,600	4,201,400	4,245,500	4,266,700	4,263,500
9	Projected Actual Net Revenue as a Percent of Debt Service (e)	0.82 x	1.30 x	1.30 x	1.33 x	1.30 x	1.32 x	1.47 x	1.62 x

(a) Includes Revenue Bonds and CWSRF Loans.

(b) The Bond Ordinance requires net revenue to equal or exceed 1.10x actual debt service.

(c) The City shall comply with one or the other of the two additional bonds tests.

(d) The Bond Ordinance requires net revenue to equal or exceed 1.25x average annual debt service.

(e) The Bond Ordinance requires net revenue to equal or exceed 1.25x average annual debt service in each of the three full fiscal years after the issuance of the proposed Additional Bonds.