

**BOONE COUNTY REGIONAL SEWER DISTRICT  
BOONE COUNTY, MO**

**ASSUMPTIONS FOR RATE STUDY**

**Prepared by Stephen M. Connelly, CPA, PC**

**November 10, 2015**

**1 CUSTOMERS**

We will assume an annual growth rate of customers at 0.5%, plus any additional NID acquisitions. Our customer base will be billed customers from the 2015 billing report.

**2 USAGE**

We used a calculated 5 year average monthly usage from the billing reports as our base. This generally reflects less average usage as more conservation is realized.

**3 RATES**

Rates will be derived based on the necessary levels to meet the state mandated 1.10 debt service coverage ratio, cash requirements and other various assumptions regarding expenses.

**4 DEBT**

Debt is a function of the Capital Improvement Plan funding list for projects on the AOC. Additional capital purchases are factored into the fixed asset schedule as required. Debt is also fully recognized on the financial statements in the year of draw down.

**5 INCOME STATEMENT ITEMS**

Items on the income statement are evaluated on an individual basis, based on known data. Absent specific additional information, expenses are assumed to increase at the historical inflation rate from 1914-2014 of 3.30%.

**BOONE COUNTY REGIONAL SEWER DISTRICT**  
**BOONE COUNTY, MO**  
**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION**  
**ACTUAL AND PROJECTED YEARS ENDED DECEMBER 31, 2011-2019**  
**Prepared by Stephen M. Connelly, CPA, PC**  
**November 10, 2015**

	ACTUAL					PROJECTED			
	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>OPERATING REVENUES:</b>									
Customer fees (user fees, penalties, etc)	\$ 2,988,923	3,411,189	3,429,509	3,556,642	3,765,237	4,122,242	4,439,494	4,686,423	4,935,739
Grants									
Miscellaneous	34,840	12,260	5,443	21,841	57,474	38,626	39,398	40,186	40,990
<b>Total Operating Revenue</b>	<b>3,023,763</b>	<b>3,423,449</b>	<b>3,434,952</b>	<b>3,578,483</b>	<b>3,822,711</b>	<b>4,160,868</b>	<b>4,478,892</b>	<b>4,726,609</b>	<b>4,976,729</b>
<b>OPERATING EXPENSES:</b>									
Personnel expenses	\$ 823,952	849,337	881,797	932,330	981,332	1,054,453	1,104,757	1,157,553	1,212,971
Materials and supplies	6,186	8,227	8,188	6,833	5,249	5,422	5,601	5,786	5,977
Dues, training and seminars	4,777	5,850	2,666	3,449	11,695	12,081	12,479	12,891	13,317
Utilities	158,544	168,643	153,206	183,378	192,124	198,465	205,014	211,779	218,768
Equipment costs	56,999	62,840	67,519	68,480	54,581	56,382	58,242	60,164	62,150
Maintenance	138,613	182,053	230,572	167,153	269,398	298,493	330,730	366,449	406,026
Wholesale treatment	541,011	640,723	713,183	767,257	858,407	900,000	909,000	913,545	914,002
Contract services	214,450	286,666	249,879	234,700	202,903	209,599	216,513	223,656	231,034
Miscellaneous	15,845	13,261	20,067	17,293	16,156	16,689	17,240	17,809	18,397
Bad debts	22,357	27,151	24,567	16,897	18,944	19,569	20,215	20,882	21,571
Depreciation	611,552	670,119	666,881	691,978	775,252	891,245	1,006,660	1,047,263	1,168,819
<b>Total Operating Expenses</b>	<b>2,594,285</b>	<b>2,914,870</b>	<b>3,018,525</b>	<b>3,089,748</b>	<b>3,386,041</b>	<b>3,662,397</b>	<b>3,886,452</b>	<b>4,037,778</b>	<b>4,273,031</b>
<b>INCOME FROM OPERATIONS</b>	<b>\$ 429,478</b>	<b>508,579</b>	<b>416,427</b>	<b>488,735</b>	<b>436,670</b>	<b>498,471</b>	<b>592,440</b>	<b>688,831</b>	<b>703,698</b>
<b>NON-OPERATING REVENUES/(EXPENSES):</b>									
Interest income	106,979	161,194	159,216	140,129	143,874	116,071	111,563	107,235	103,081
Interest expense	(236,674)	(242,675)	(231,865)	(303,981)	(409,438)	(415,028)	(386,021)	(419,166)	(409,232)
Bond Issuance costs	(55,369)	(35,895)	(128,265)	(44,107)	(133,540)	(180,431)	(226,782)	(191,203)	(158,197)
Gain/(loss) on disposal of assets	(157,577)	(33,800)	(279,814)	(195,186)	(226,963)	(169,600)	(175,197)	(180,978)	(186,951)
Contributed collection systems	306,387	92,197	127,695	31,717	31,277	86,277	64,277	189,277	191,170
Grants	285,042	87,303	-	-	-	-	-	-	-
Misc./Contr collection system closure	-	-	-	-	-	-	-	-	-
<b>Total Non-Operating Rev/(Exp)</b>	<b>\$ 248,788</b>	<b>28,324</b>	<b>(353,033)</b>	<b>(371,428)</b>	<b>(594,790)</b>	<b>(562,710)</b>	<b>(612,160)</b>	<b>(494,835)</b>	<b>(460,129)</b>
<b>NET INCOME/(LOSS)</b>	<b>678,266</b>	<b>536,903</b>	<b>63,394</b>	<b>117,307</b>	<b>(158,120)</b>	<b>(64,240)</b>	<b>(19,720)</b>	<b>193,996</b>	<b>243,570</b>
<b>INCREASE/(DECREASE) IN NET POSITION</b>	<b>678,266</b>	<b>536,903</b>	<b>63,394</b>	<b>117,307</b>	<b>(158,120)</b>	<b>(64,240)</b>	<b>(19,720)</b>	<b>193,996</b>	<b>243,570</b>
<b>NET POSITION, BEGINNING</b>	<b>\$ 12,276,827</b>	<b>12,955,093</b>	<b>13,491,996</b>	<b>13,555,390</b>	<b>13,672,697</b>	<b>13,514,577</b>	<b>13,450,337</b>	<b>13,430,617</b>	<b>13,624,613</b>
<b>NET POSITION, ENDING</b>	<b>\$ 12,955,093</b>	<b>13,491,996</b>	<b>13,555,390</b>	<b>13,672,697</b>	<b>13,514,577</b>	<b>13,450,337</b>	<b>13,430,617</b>	<b>13,624,613</b>	<b>13,868,182</b>
	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Funds available for DS	\$ 1,220,104	1,339,892	1,242,524	1,320,842	1,355,796	1,505,786	1,710,663	1,843,330	1,975,598
Debt Service	\$ 569,021	608,478	654,402	855,653	1,107,485	1,484,428	1,484,521	1,541,666	1,706,532
DSCR	2.14	2.20	1.90	1.54	1.22	1.01	1.15	1.20	1.16
Benchmark	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Incremental Debt Service	540,165	609,606	475,165	345,112	125,057	(115,531)	70,627	134,088	89,466

BOONE COUNTY REGIONAL SEWER DISTRICT  
BOONE COUNTY, MO  
Actual and Projected Rate Structure 2011-2019  
Prepared by Stephen M. Connelly, CPA, P  
November 10, 2015

		RATE A PROJECTION								
		2011	2012	2013	2014	2015	2016	2017	2018	2019
	(change)	\$ 2.00	\$ -	\$ -	\$ 1.20	\$ 1.00	\$ 1.20	\$ 1.75	\$ 1.40	\$ 1.40
Base service fee		\$ 18.45	\$ 18.45	\$ 18.45	\$ 19.65	\$ 20.65	\$ 21.85	\$ 23.60	\$ 25.00	\$ 26.40
Usage charge		\$ 4.54	\$ 5.45	\$ 5.45	\$ 5.75	\$ 6.00	\$ 6.50	\$ 6.90	\$ 7.25	\$ 7.60
	(change)	\$ 0.59	\$ 0.91	\$ -	\$ 0.30	\$ 0.25	\$ 0.50	\$ 0.40	\$ 0.35	\$ 0.35
Total Charge (bsf + usage charge)		\$ 22.99	\$ 23.90	\$ 23.90	\$ 25.40	\$ 26.65	\$ 28.35	\$ 30.50	\$ 32.25	\$ 34.00
Prior Year Total Charge (bsf + usage charge)		\$ 20.40	\$ 22.99	\$ 23.90	\$ 23.90	\$ 25.40	\$ 26.65	\$ 28.35	\$ 30.50	\$ 32.25
Difference YoY		\$ 2.59	\$ 0.91	\$ -	\$ 1.50	\$ 1.25	\$ 1.70	\$ 2.15	\$ 1.75	\$ 1.75
Percentage change		13%	4%	0%	6%	4.9%	6.4%	8%	6%	5%
Funds available for DS		1,220,104	1,339,892	1,242,524	1,320,842	1,355,796	1,505,786	1,710,663	1,843,330	1,975,598
Debt Service		569,021	608,478	654,402	855,653	1,107,485	1,484,428	1,484,521	1,541,666	1,706,532
DSCR		2.14	2.20	1.90	1.54	1.22	1.01	1.15	1.20	1.16
Benchmark		1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	2.10
Incremental Debt Service		540,165	609,606	475,165	345,112	125,057	(115,531)	70,627	134,088	89,466

**BOONE COUNTY REGIONAL SEWER DISTRICT**  
**BOONE COUNTY, MO**  
**Actual and Projected Number of Customers 2011-2019**  
**Prepared by Stephen M. Connelly, CPA, PC**  
**November 10, 2015**

	<i>Number of BILLED Customers by Rate Class for 2011-2019</i>								
	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>Rate Class</b>									
A	5,554	5,734	5,756	5,779	5,806	5,875	5,954	5,984	6,014
B	183	185	186	201	202	203	204	205	206
C	43	44	44	52	52	53	53	53	53
D	17	17	17	16	16	16	16	16	16
E	46	46	46	47	47	47	48	48	48
F & Others	412	413	277	257	258	258	259	260	261
<b>TOTAL</b>	6,255	6,439	6,326	6,352	6,381	6,453	6,534	6,566	6,599

**BOONE COUNTY REGIONAL SEWER DISTRICT**  
**BOONE COUNTY, MO**  
**Actual and Projected Capital Assets 2013-2019**  
**Prepared by Stephen M. Connelly, CPA, PC**

31-Dec-13	Beg Bal	Additions	Contributed Capital	Disposals	Transfer	Ending Bal	Beg Bal	Expense	Disposals	Ending Bal	
Land	42,888					42,888					
Building	173,907					173,907					
Vehicles & equipment	760,183	134,738				894,921					
Treatment & Collection Systems	21,649,361	10,000	127,695	(486,067)	785,661	22,086,650					
Work-In-Progress - CIP	2,919,867	3,267,315		(95,965)	(785,661)	5,305,556					
Accumulated Deprec							7,748,386	666,881	(248,270)	8,166,997	
	25,546,205.95	3,412,053	127,695	(582,032)	-	28,503,922	7,748,386	666,881	(248,270)	8,166,997	20,336,925

31-Dec-14	Beg Bal	Additions	Contributed Capital	Disposals	Transfer	Ending Bal	Beg Bal	Expense	Disposals	Ending Bal	
Land	42,888					42,888					
Building	173,907					173,907					
Vehicles & equipment	894,921	158,353		(82,456)	36,000	1,006,818					
Treatment & Collection Systems	22,086,650		31,717	(30,000)	569,071	22,657,438					
Work-In-Progress - CIP	5,305,556	6,534,091		(220,489)	(605,071)	11,014,087					
Accumulated Deprec							8,166,997	691,978	(103,330)	8,755,645	
	28,503,921.95	6,692,444	31,717	(332,945)	-	34,895,138	8,166,997	691,978	(103,330)	8,755,645	26,139,493

31-Dec-15	Beg Bal	Additions	Contributed Capital	Disposals	Transfer	Ending Bal	Beg Bal	Expense	Disposals	Ending Bal	
Land	42,888					42,888					
Building	173,907					173,907					
Vehicles & equipment	1,006,818	55,000				1,061,818					
Treatment & Collection Systems	22,657,438	79,310	31,277		5,507,044	28,275,069					
Work-In-Progress - CIP	11,014,087	3,064,000			(5,507,044)	8,571,044					
Accumulated Deprec							8,755,645	775,252		9,530,897	
	34,895,138	3,198,310	31,277	-	-	38,124,725	8,755,645	775,252	0	9,530,897	28,593,828

31-Dec-16

	Beg Bal	Additions	Contributed Capital	Disposals	Transfer	Ending Bal	Beg Bal	Expense	Disposals	Ending Bal	
Land	42,888					42,888					
Building	173,907					173,907					
Vehicles & equipment	1,061,818	50,000				1,111,818					
Treatment & Collection Systems	28,275,069		86,277		4,285,522	32,646,867					
Work-In-Progress - CIP	8,571,044	-			(4,285,522)	4,285,522					
Accumulated Deprec							9,530,897	891,245		10,422,142	
	38,124,725	50,000	86,277	-	-	38,261,002	9,530,897	891,245	0	10,422,142	27,838,860

31-Dec-17

	Beg Bal	Additions	Contributed Capital	Disposals	Transfer	Ending Bal	Beg Bal	Expense	Disposals	Ending Bal	
Land	42,888					42,888					
Building	173,907					173,907					
Vehicles & equipment	1,111,818	50,000				1,161,818					
Treatment & Collection Systems	32,646,867		64,277		4,285,522	36,996,666					
Work-In-Progress - CIP	4,285,522	1,228,650			(4,285,522)	1,228,650					
Accumulated Deprec							10,422,142	1,006,660		11,428,802	
	38,261,002	1,278,650	64,277	-	-	39,603,929	10,422,142	1,006,660	0	11,428,802	28,175,127

31-Dec-18

	Beg Bal	Additions	Contributed Capital	Disposals	Transfer	Ending Bal	Beg Bal	Expense	Disposals	Ending Bal	
Land	42,888					42,888					
Building	173,907					173,907					
Vehicles & equipment	1,161,818	50,000				1,211,818					
Treatment & Collection Systems	36,996,666	79,911	189,277		1,228,650	38,494,504					
Work-In-Progress - CIP	1,228,650	4,248,960			(1,228,650)	4,248,960					
Accumulated Deprec							11,428,802	1,047,263		12,476,066	
	39,603,929	4,378,871	189,277	-	-	44,172,077	11,428,802	1,047,263	0	12,476,066	31,696,011

31-Dec-19

	Beg Bal	Additions	Contributed Capital	Disposals	Transfer	Ending Bal	Beg Bal	Expense	Disposals	Ending Bal	
Land	42,888					42,888					
Building	173,907					173,907					
Vehicles & equipment	1,211,818	50,000				1,261,818					
Treatment & Collection Systems	38,494,504	143,750	191,170		4,248,960	43,078,384					
Work-In-Progress - CIP	4,248,960	-			(4,248,960)	-					
Accumulated Deprec							12,476,066	1,168,819		13,644,885	
	44,172,077	193,750	191,170	-	-	44,556,997	12,476,066	1,168,819	0	13,644,885	30,912,112

## CIP FUNDING LIST with ANNUAL INFLATION ADJUSTMENT (Financed)

<u>Description</u>	<u>Budget</u>	
<u>2013 DEBT FUNDING</u>		
<u>TOTAL</u>	<u>12,198,000</u>	
<u>2014 DEBT FUNDING</u>		
<u>TOTAL</u>	<u>0</u>	
<u>2015 DEBT FUNDING</u>		
<u>TOTAL</u>	<u>3,064,000</u>	100%
<u>2016 DEBT FUNDING</u>		
<u>TOTAL</u>	<u>0</u>	103%
<u>2017 DEBT FUNDING</u>		
<u>TOTAL</u>	<u>1,228,650</u>	106%
<u>2018 DEBT FUNDING</u>		
<u>TOTAL</u>	<u>4,248,960</u>	109%
<u>2019 DEBT FUNDING</u>		
<u>TOTAL</u>	<u>0</u>	112%
<u>OTHERS PROJECTS AFTER 2019</u>		
<u>TOTAL</u>	<u>18,437,750</u>	115%
<u>COMBINED TOTAL FOR ALL PROJECTS</u>	<u>\$39,177,360</u>	

BOONE COUNTY REGIONAL SEWER DISTRICT  
BOONE COUNTY, MO  
Actual and Projected Debt Levels 2013-2019  
Prepared by Stephen M. Connolly, CPA, PC

2013						
	Beg Bal	Advances	Payments	Ending Bal	Gross Interest	Gross DS
Series 1998B	235,000		30,000	205,000	10,938	40,938
Series 2000A	430,000		55,000	375,000	22,765	77,765
Series 2002B	265,000		20,000	245,000	11,200	31,200
Series 2004B	720,000		50,000	670,000	35,450	85,450
Series 2006B	505,000		30,000	475,000	22,600	52,600
Series 2007B	2,340,000		105,000	2,235,000	102,444	207,444
SRF Direct Loan - 09, 11	1,257,570		55,070	1,202,500	23,023	78,093
City of Columbia	44,241		14,747	29,494	0	14,747
SRF Direct Loan 2012	1,360,000		27,000	1,333,000	22,413	49,413
City of Rocheport	30,500		15,533	14,967	1,220	16,753
Direct Loan 2013		12,198,000		12,198,000		
Calculated	7,187,311	12,198,000	402,350	18,982,961	252,052	654,402

2014						
	Beg Bal	Advances	Payments	Ending Bal	Gross Interest	Gross DS
Series 1998B	205,000		30,000	175,000	9,363	39,363
Series 2000A	375,000		60,000	315,000	20,153	80,153
Series 2002B	245,000		20,000	225,000	10,100	30,100
Series 2004B	670,000		55,000	615,000	32,694	87,694
Series 2006B	475,000		30,000	445,000	21,400	51,400
Series 2007B	2,235,000		110,000	2,125,000	98,144	208,144
SRF Direct Loan - 09, 11	1,202,500		59,400	1,143,100	21,968	81,368
City of Columbia	29,494		14,747	14,747	0	14,747
Direct Loan 2012	1,333,000		56,000	1,277,000	18,994	74,994
City of Rocheport	14,967		14,967	0	218	15,185
Direct Loan 2013	12,198,000			12,198,000	172,507	172,507
Calculated	18,982,961	0	450,114	18,532,847	405,539	855,653

2015						
	Beg Bal	Advances	Payments	Ending Bal	Gross Interest	Gross DS
Series 1998B	175,000		35,000	140,000	7,656	42,656
Series 2000A	315,000		60,000	255,000	18,153	78,153
Series 2002B	225,000		20,000	205,000	9,000	29,000
Series 2004B	615,000		55,000	560,000	29,806	84,806
Series 2006B	445,000		35,000	410,000	20,200	55,200
Series 2007B	2,125,000		115,000	2,010,000	93,644	208,644
SRF Direct Loan - 09, 11	1,143,100		59,300	1,083,800	20,894	80,194
City of Columbia	14,747		14,747	0	0	14,747
Direct Loan 2012	1,277,000		57,000	1,220,000	18,187	75,187
Direct Loan 2013	12,198,000		247,000	11,951,000	180,530	427,530
Direct Loan 2015		3,064,000		3,064,000	11,367	11,367
Calculated	18,532,847	3,064,000	698,047	20,898,800	409,438	1,107,485



## 2016

	Beg Bal	Advances	Payments	Ending Bal	Gross Interest	Gross DS
Series 1998B	140,000		35,000	105,000	5,819	40,819
Series 2000A	255,000		60,000	195,000	16,153	76,153
Series 2002B	205,000		20,000	185,000	7,900	27,900
Series 2004B	560,000		55,000	505,000	26,919	81,919
Series 2006B	410,000		35,000	375,000	18,800	53,800
Series 2007B	2,010,000		115,000	1,895,000	89,044	204,044
SRF Direct Loan - 09, 11	1,083,800		61,400	1,022,400	19,800	81,200
Direct Loan 2012	1,220,000		58,000	1,162,000	17,359	75,359
Direct Loan 2013	11,951,000		503,000	11,448,000	175,025	678,025
Direct Loan 2015	3,064,000		127,000	2,937,000	38,210	165,210
Calculated	20,898,800	0	1,069,400	19,829,400	415,028	1,484,428

## 2017

	Beg Bal	Advances	Payments	Ending Bal	Gross Interest	Gross DS
Series 1998B	105,000		35,000	70,000	4,113	39,113
Series 2000A	195,000		60,000	135,000	10,153	70,153
Series 2002B	185,000		20,000	165,000	6,800	26,800
Series 2004B	505,000		60,000	445,000	23,900	83,900
Series 2006B	375,000		35,000	340,000	17,400	52,400
Series 2007B	1,895,000		120,000	1,775,000	84,344	204,344
SRF Direct Loan - 09, 11	1,022,400		63,500	958,900	18,663	82,163
Direct Loan 2012	1,162,000		60,000	1,102,000	16,517	76,517
Direct Loan 2013	11,448,000		515,000	10,933,000	167,536	682,536
Direct Loan 2015	2,937,000		130,000	2,807,000	36,597	166,597
Direct Loan 2017		1,228,650		1,228,650		0
Calculated	19,829,400	1,228,650	1,098,500	19,959,550	386,021	1,484,521

## 2018

	Beg Bal	Advances	Payments	Ending Bal	Gross Interest	Gross DS
Series 1998B	70,000		35,000	35,000	2,538	37,538
Series 2000A	135,000		60,000	75,000	4,153	64,153
Series 2002B	165,000		20,000	145,000	5,700	25,700
Series 2004B	445,000		60,000	385,000	20,750	80,750
Series 2006B	340,000		35,000	305,000	15,650	50,650
Series 2007B	1,775,000		125,000	1,650,000	79,288	204,288
SRF Direct Loan - 09, 11	958,900		64,500	894,400	17,497	81,997
Direct Loan 2012	1,102,000		62,000	1,040,000	15,646	77,646
Direct Loan 2013	10,933,000		528,000	10,405,000	159,870	687,870
Direct Loan 2015	2,807,000		133,000	2,674,000	34,952	167,952
Direct Loan 2017	1,228,650		0	1,228,650	63,124	63,124
Direct Loan 2018		4,248,960		4,248,960		0
Calculated	19,959,550	4,248,960	1,122,500	23,086,010	419,166	1,541,666

## 2019

	Beg Bal	Advances	Payments	Ending Bal	Gross Interest	Gross DS
Series 1998B	35,000			35,000	875	875
Series 2000A	75,000		60,000	15,000	2,153	62,153
Series 2002B	145,000		20,000	125,000	4,600	24,600
Series 2004B	385,000		60,000	325,000	17,600	77,600
Series 2006B	305,000		35,000	270,000	14,250	49,250
Series 2007B	1,650,000		135,000	1,515,000	73,256	208,256
SRF Direct Loan - 09, 11	894,400		65,600	828,800	16,300	81,900
Direct Loan 2012	1,040,000		63,000	977,000	14,753	77,753
Direct Loan 2013	10,405,000		541,000	9,864,000	152,003	693,003
Direct Loan 2015	2,674,000		136,000	2,538,000	33,264	169,264
Direct Loan 2017	1,228,650		181,700	1,046,950	67,987	249,687
Direct Loan 2018	4,248,960			4,248,960	12,191	12,191
Calculated	23,086,010	0	1,297,300	21,788,710	409,232	1,706,532