

OWRB Clean Water State Revolving Fund FY 2013 Intended Use Plan Appendices

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STATE OF OKLAHOMA
Appendix A. FY 2013-2017 Clean Water SRF DRAFT Project Priority List
Prepared for the EPA - Effective July 1, 2012 - June 30, 2013

OPDES Permit #	Loan Type	Name	Disadvantaged Community Y/N	Project No.	Target B.C. Date	Priority List Amount	GPR*	GPR Type	Subsidy**	Project Description
FY 2013 Fundable Projects (July 2012 - June 2013)										
1	OK0030201	LC Hennessey UA	Y	ORF-13-0009-CW	09/18/12	\$1,800,000	\$720,000	NA	\$270,000	Convert 4 cell flow-through lagoon treatment system to total retention lagoon system with land application (Cat. I)
2	OK0028185	LC Hydro DA	Y	ORF-12-0001-CW	08/21/12	\$2,530,000	\$0	NA	\$0	New mechanical WWTP with land application system (Cat. I)
3	OK0034266	LC Lone Grove W&STA	Y	ORF-04-0011-CW	08/21/12	\$12,000,000	\$3,164,668	EE/BC	\$364,627	New extended air WWTP, and collection system rehabilitation and replacement (Cat. II, IIIB, IVB)
4	OK0022764	LC Chouteau PWA	Y	ORF-13-0001-CW	07/17/12	\$4,100,000	\$0	NA	\$0	Refinance of new SBR WWTP (Cat. I)
5	OK0028339	LC Ramona PWA	Y	ORF-13-0007-CW	02/19/13	\$1,225,000	\$1,225,000	WE/CAT	\$0	New land application system to correct for discharge violations (Cat. I & IIIB)
6	OK0027111	LC El Reno MA	Y	ORF-13-0003-CW	06/18/13	\$16,000,000	\$2,000,000	EE/CAT	\$0	New 2 MGD mechanical WWTP with solar or wind for partial energy for operation of plant. Project will correct for total retention and land application unpermitted discharges and address ODEQ CO# 07-380(A) (B) (Cat. II)
7	OK0020320	LC Commerce DA	Y	ORF-13-0002-CW	12/18/12	\$900,000	\$900,000	WE/CAT	\$0	Secondary Lagoon Expansion with New Land Application System to Meet Discharge Requirements as outlined in ODEQ CO#08-299 (Cat. II)
8	NS-OK0026221 SS-OK0026239	LC Tulsa MUA	Y	ORF-13-0006-CW	09/18/12	\$58,115,000	\$0	NA	\$0	Sanitary sewer and WWTP rehabilitation and improvements and new interceptor (Cat. I, II, IIIA, IIIB, IVA, & IVB)
9	OK0038440	LC Ardmore PWA	Y	ORF-13-0004-CW	10/16/12	\$16,000,000	\$0	NA	\$0	Sanitary sewer rehabilitation and replacement in multiple subbasins based on SSES findings to address ODEQ CO# 09-202A (Cat. IIIA & IIIB)
10	OK0020303	LC Owasso PWA	N	ORF-13-0005-CW	01/15/13	\$5,000,000	\$0	NA	\$0	Ranch creek interceptor relief line replacement to accommodate for inflow and infiltration (Cat. IIIA & IIIB)
11	OK0034517	LC Ochelata UA	Y	ORF-13-0008-CW	02/19/13	\$1,100,000	\$0	NA	\$0	New extended aeration WWTP to address ODEQ CO# 05-024 for deficiencies at the existing partial-mix aeration lagoon treatment facility due to more stringent permit limits(Cat. II)
12	OK0040053	LC Broken Arrow MA	N	ORF-12-0012-CW	09/18/12	\$4,000,000	\$0	NA	\$0	Replacement of existing 27" sanitary sewer interceptor with 36" inch PVC including manholes and appurtenances (Cat. IIIA & IIIB)
FY 2014 Planning/Contingency Projects (July 2013 - June 2014)										
1	OK0020303	LC Owasso PWA	N	ORF-14-0001-CW	05/20/14	\$6,000,000	\$0	NA	N	WWTP Improvements to meet 2015 Wastewater Master Plan (Cat. II)
2	NS-OK0026221 SS-OK0026240	LC Tulsa MUA	Y	ORF-14-0002-CW	10/22/13	\$41,950,000	\$0	NA	N	Sanitary sewer and WWTP rehabilitation and improvements and new interceptor (Cat. I, II, IIIA, IIIB, IVA, & IVB)
3	OK0026913	LC Bixby PWA	N	ORF-14-0003-CW	04/15/14	\$21,000,000	\$0	NA	N	Construction of new mechanical WWTP (Cat. 1)
4	OK0037834	LC Choctaw UA	Y	ORF-14-0004-CW	04/15/14	\$1,500,000	\$0	NA	N	Sanitary sewer collection system extension to serve Pointon addition area and removal of Pointon addition total retention lagoons (Cat. IVA)
FY 2015 Planning/Contingency Projects (July 2014 - June 2015)										
1	NS-OK0026221 SS-OK0026239	LC Tulsa MUA	Y	ORF-15-0001-CW	10/21/14	\$29,115,000	\$0	NA	N	Sanitary sewer and WWTP rehabilitation and improvements and new interceptor (Cat. I, II, IIIA, IIIB, IVA, & IVB)
FY 2016 Planning/Contingency Projects (July 2015 - June 2016)										
1	NS-OK0026221 SS-OK0026239	LC Tulsa MUA	Y	ORF-16-0001-CW	10/20/15	\$24,330,000	\$0	NA	N	Sanitary sewer and WWTP rehabilitation and improvements and new interceptor (Cat. I, II, IIIA, IIIB, IVA, & IVB)
FY 2017 Planning/Contingency Projects (July 2016 - June 2017)										
1	NS-OK0026221 SS-OK0026239	LC Tulsa MUA	Y	ORF-17-0001-CW	10/18/16	\$20,465,000	\$0	NA	N	Sanitary sewer and WWTP rehabilitation and improvements and new interceptor (Cat. I, II, IIIA, IIIB, IVA, & IVB)

GPR = Green Reserve Project
GI=Green Infrastructure
WE=Water Efficiency
EE= Energy Efficiency
EI = Environmental Innovative
BC=Business Case
CAT=Categorical

Loan Totals (All Loans)
FY 13 \$122,770,000
FY 14 \$70,450,000
FY 15 \$29,115,000
FY 16 \$24,330,000
FY 17 \$20,465,000
TOTALS \$267,130,000

Potential GPR for FY 2013 \$8,009,668
Potential Subsidy for FY 2013:\$634,627

*The GPR Amount may change based on the completion of appropriate planning documents and business cases. The numbers reflected here are OWRB's best guess based on preliminary information. Final numbers will be available on OWRB's website, subsequent amendments, and the CWSRF Annual Report.

**Subsidy is provided on Readiness to Proceed for Board Approval. The subsidy amounts may change based on a project movement thru the funding process. Final numbers will be available on OWRB's website, subsequent amendments, and the CWSRF Annual Report.

CHART 1. FY 2013 Oklahoma CWSRF Intended Use Projects and Administrative Costs
(Beginning July 1, 2012)

PART 1. Section 212 Publicly Owned Treatment Works Projects

	TYPE ¹	PROJECT NAME/ COMMUNITY	PROJECT NUMBER	ASSISTANCE AMOUNT (\$)	2000 CENSUS POPULATION	DISCHARGE PERMIT REQUIREMENTS ² NEEDS CATEGORIES ³														BINDING COMMIT- MENT DATE ⁴	CONSTRUCT START DATE ⁵	INITIATION OF OPERATIO N DATE ⁶	
						CBOD	BOD	TSS	NH3-N	P	Min. DO	Fecal	I	II	IIIA	IIIB	IVA	IVB	VI				VII
1	LC	Lone Grove W&STA	ORF-04-0011	12,000,000	4,631	10.0		15.0	4.0		5.0			X		X					08/21/12	10/20/12	10/20/14
2	LC	Chouteau PWA	ORF-13-0001	4,100,000	1,931		30.0	90.0					X								07/17/12	09/15/12	09/15/13
3	LC	Ramona PWA	ORF-13-0007	1,225,000	564		25.0	90.0					X			X					02/19/13	04/20/13	04/20/14
4	LC	El Reno MA	ORF-13-0003	16,000,000	16,212	20.0		30.0	4.1	5.0			X								06/18/13	08/17/13	08/17/15
5	LC	Commerce DA	ORF-13-0002	900,000	2,645	18.0		60.0	6.0	4.0			X								12/18/12	02/16/13	02/16/14
6	LC	Tulsa MUA	ORF-13-0006	58,115,000	393,049	10.0	15.0	30.0	3.0	6.0			X	X	X		X				09/18/12	11/17/12	11/17/14
7	LC	Ardmore PWA	ORF-13-0004	16,000,000	23,711									X	X						10/16/12	12/15/12	12/15/14
8	LC	Owasso PWA	ORF-13-0005	5,000,000	18,502	15.0		30.0	3.0	5.0				X	X						01/15/13	03/16/13	03/16/14
9	LC	Ochelata UA	ORF-13-0008	1,100,000	494	10.0	25.0	15.0	3.0	3.0			X								02/19/13	04/20/13	04/20/14
10	LC	Broken Arrow MA	ORF-12-0012	4,000,000	74,859		30.0	30.0						X	X						09/18/12	11/17/12	11/17/13
Total--212				\$118,440,000																			

PART 2. Section 319 Nonpoint Source Mgmt. Projects

Total-- NPS Cat. VII	\$0
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PART 3. Section 320 Estuary Program Projects

Total-- No Estuaries	\$0
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PART 4. CWSRF Program Administrative Costs

Total-- 4% Program Admin. Fees Banked	\$800,000
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TOTAL PARTS 1 through 4	\$119,240,000
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¹ R = Refinancing LC = Long-term Construction Loan HG = Hardship Grant NC = Non-construction GPR = Green Project Reserve

² ND = No Discharge NA = Not Applicable A = Administrative Cost

³ I = Secondary Treatment, II = Advanced Treatment, IIIA = Inflow/Infiltration Correction, IIIB = Major Sewer System Rehab.,
IVA = New Collection System, IVB = New Interceptor, VI = Urban Stormwater, Nonpoint source pollution control activities,
X = Conveyance of Recycled Water

⁴ "Binding Commitment Date" is target date for OWRB board approval and commitment of funds (prior to loan closing).

⁵ Estimated based on assumption that construction start is 60 days following Binding Commitment Date.

⁶ Construction time estimated based on cost of project: <\$500,000 = 2 quarters or 183 days; \$500,000-\$3.5 million = 4 quarters or 365 days; >\$3.5 million = 8 quarters or 730 days.

Chart 2. Projected Environmental Benefits for Proposed FY 13 CWSRF Loans Page 1 of 1

PROJECT	Lone Grove W&ST	Chouteau PWA	Ramona PWA	El Reno MA	Commerce DA	Tulsa MUA	Ardmore PWA	Owasso PWA	Ochelata UA	Broken Arrow MA
Project Number	ORF-04-0011	ORF 13-0001	ORF-13-0007	ORF13-0003-CW	ORF-13-0002	ORF-13-0006	ORF-13-0004	ORF-13-0005	ORF-13-0008	ORF-12-0012
Binding Commitment Year	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013
Population	4,631	1,931	564	16,212	2,645	393,049	23,711	18,502	494	74,859
Assistance Amount Total	\$12,000,000	\$4,100,000	\$1,225,000	\$16,000,000	\$900,000	\$58,115,000	\$16,000,000	\$5,000,000	\$1,100,000	\$4,000,000
Category I		\$4,100,000				\$15,460,000				
Category II	\$4,000,000		\$918,750	\$16,000,000	\$900,000	\$3,350,000			\$1,100,000	
Category IIIA						\$30,850,000	\$8,000,000	\$2,500,000		\$2,000,000
Category IIIB	\$4,000,000		\$306,250			\$4,100,000	\$8,000,000	\$2,500,000		\$2,000,000
Category IVA						\$4,085,000				
Category IVB	\$4,000,000					\$270,000				
Category VI										
Category VII										
Category X										
Waterbody name	Untrib, Hickory Cr.	Chouteau Cr.	Double Cr.	N. Canadian R.	Tar Cr.	Arkansas R. & Bird Cr.	Sand Cr.	Trib to Owasso Cr. (trib of Bird Cr.)	East Keller Cr.	Arkansas R.
Affected Waterbody ID.	OK 311100020010_00	OK 121600010430_00	OK1214000140_00	OK 520530000010_10	OK 121600040060_00	OK 120420010010_00 OK 121300010010_00	OK 310800030020_00	OK 121300010010_00	OK121400010322_00	OK 1204410010080_00
PROJECT TYPE FACTOR										
Consent Order or Enforceable NPDES Permit Schedule	X	X	X	X	X	X	X		X	
Eliminate or reduce documented health threat or NPDES violation within watershed that is a water supply	X	X		X		X	X			
Eliminate or reduce documented health threat or NPDES violation			X		X				X	
All other projects sustaining or reducing current degree of treatment, increasing capacity, reliability, or efficiency, reclaim/reuse water, or reduce documented water quality threat						X		X		X
WATER QUALITY RESTORATION FACTOR										
Affects 303d listed stream		X		X	X	X		X		X
Top-ten NPS Priority Watershed				X	X	X		X		
Project implements water quality plan	X	X	X	X	X	X	X		X	
WATER QUALITY PROTECTION FACTOR										
Appendix A water										
Outstanding Resource Water										
High Quality Water										
Sensitive Water Supply										
Scenic River										
Cultural Significance										
Appendix B water										
Waters with recreational and/or ecological significance	X	X	X		X	X	X	X	X	X
Source water protection area				(NLW Watershed)						
Groundwater vulnerability										
Low	X	X	X		X	X	X		X	
Moderate										
High Quality Water										
Very High				X		X		X		X

* Approximated Cost Breakout

CHART 4. Federal Capitalization Grant Payment Schedule by State & Federal Fiscal Quarter

NOTE FROM AUDIT GUIDE: The payment schedule identifies the dates that capitalization grant funds will be available to the state. The state generally has one year after the payment to obligate the funds, which is known as making "binding commitments" to loan recipients. Binding commitments made must equal 120% of the payments received one year earlier, which accounts for both the federal and state shares of the SRF.

Actual & Projected Increases in SRF Federal Letter of Credit (\$000)

State Fiscal Year		LETTER OF CREDIT AWARD									
		FY89-01	FY 02	FY 05 ¹	FY 06	FY 07	FY 08	FY 09	FY 09	FY 10	FY 12
Federal Fiscal Year		QTR 4	QTR 1	QTR 1	QTR 1	QTR 1	QTR 1	QTR 1	QTR 4	QTR 4	QTR 2
		FY02	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 12	
		QTR 3	QTR 4	QTR 4	QTR 4	QTR 4	QTR 4	QTR 4	QTR 3	QTR 3	QTR 1
89	16,875.4	16,875.4									
90	7,862.0	7,862.0									
91	16,580.6	16,580.6									
92	15,697.7	15,697.7									
93-1	15,528.5	15,528.5									
94	9,632.6	9,632.6									
95	9,951.2	9,951.2									
96	16,300.4	16,300.4									
97	4,986.1	4,986.1									
98	10,879.1	10,879.1									
99	10,880.0	10,880.0									
00	10,996.7	10,996.7									
01	10,746.8	10,746.8									
02	10,770.7		10,770.7								
03	10,700.7			10,700.7							
04	10,720.4				10,720.4						
05	8,693.8					8,693.8					
06	7,046.3						7,046.3				
07	8,634.3							8,634.3			
08	5,453.1							5,453.1			
09	5,453.1									5,453.1	
ARRA	31,662.1								31,662.1		
10	16,461.0									16,461.0	
11	11,930.0										11,930.0
12	11,491.0										
Total	256,051.7	156,917.1	10,770.7	10,700.7	10,720.4	8,693.8	7,046.3	14,087.4	31,662.1	21,914.1	11,930.0
Cumulative Grant Awards		156,917.1	167,687.8	178,388.5	189,109.0	197,802.8	204,849.1	218,936.5	250,598.6	272,512.7	284,442.7

CHART 5 FY 2013 CWSRF Loan Fund Sources

(Beginning July 1, 2012)

SOURCES OF FUNDS	TOTALS
BEGINNING UNRESTRICTED BALANCE (FY 12 Carryover)	0.00
2012 CAPITALIZATION GRANT PAYMENTS	11,491,000.00
STATE MATCH DEPOSITS**	2,061,400.00
PROPOSED 2012 BOND ISSUE	100,000,000.00
RELEASE OF 2004 BOND RESERVE FUNDS	2,839,375.00
LOANS:	
Interest Earnings	8,692,624.86
Principal Repayments	22,424,889.59
INVESTMENT INCOME-TREASURY	
State Treasurer's Cash Management Program Interest (recycled funds)	532,894.24
Lawton Investment Principal/Interest	634,077.00
Investment Earnings 2004 Bond Proceeds *	1,714,781.76
Short-Term Investment Earnings-BancTrust	14,015.08
TOTAL SOURCES	150,405,057.53

FUND COMMITMENTS	TOTALS
LOAN OBLIGATIONS - ON FY 2013 PRIORITY LIST	\$ 122,770,000.00
LOAN OBLIGATIONS - PRIOR YEARS	168,876,868.02
OWRB ADMINISTRATIVE EXPENSES	800,000.00
BOND INTEREST for 2004 CWSRF Bonds:	4,320,312.50
BOND PRINCIPAL for 2004 CWSRF Bonds:	6,250,000.00
BOND INTEREST for 2011 CWSRF Bonds:	3,794,387.50
BOND PRINCIPAL for 2011 CWSRF Bonds:	4,510,000.00
TOTAL FUND COMMITMENTS	311,321,568.02

ADDITIONAL FUNDS NEEDED***	-160,916,510.49
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* Funds are restricted for 2004 Bond debt service and arbitrage rebate liability
 ** \$236,800 State matching funds for the 2012 Cap Grant provided by 2011 Bond Issue
 *** Will use future cap grants, state match and bond issues to fund future needs.

CHART 5A FY 2013 Sources and Uses of Administrative Fees ----- held outside of the CWSRF Loan Fund

Beginning Balance, 7/1/12*	\$	1,356,654.53
Projected Application Fees	\$	2,000.00
Projected Administrative Fee Revenue	\$	1,750,829.86
Total Sources	\$	3,109,484.39
Projected Expenses**:	\$	1,100,000.00
Projected Ending Balance, 6/30/13	\$	2,009,484.39

*Balance projected through 6/30/12

**Includes Personnel, Travel, Professional Services, Equipment, etc.

CHART 6. Actual & Projected CWSRF Disbursement Schedule by State Fiscal Year (\$000)

Beginning July 1, 2012

PROJECT NAME/ COMMUNITY SERVED	PROJECT NUMBER	CONST. START DATE ¹	ASSIST. AMOUNT	BINDING COMMIT. DATE	Actual (for State FY '09-'12)				Projected (State FY '13) ²				OUT YEARS	
					FY09	FY10	FY 11	FY 12	FY 13					
									QTR 1	QTR 2	QTR 3	QTR 4		
SELECT PROJECTS														
1	EL RENO	ORF-09-0025	01/09/10	205	11/10/09		204			0	0	0	0	0
2	GUYMON	ORF-08-0001	08/09/08	16,400	06/10/08	10,376	5,981	42		0	0	0	0	0
3	TULSA	ORF-04-0014	09/15/06	7,900	01/11/05	1,007	941	28		0	0	0	0	0
4	TULSA	ORF-05-0009	03/09/06	3,130	02/14/06	1,300	553	98	74	18	14	10	8	23
5	BROKEN ARROW	ORF-05-0006	06/01/07	15,000	06/20/06	5,353	2,609			167	146	128	112	782
6	TULSA	ORF-06-0006	12/09/06	17,825	10/10/06	10,474	2,248	1,402	214	57	50	44	38	268
7	PONCA CITY	ORF-07-0006	12/08/07	5,565	10/09/07	1,752	908	448	558	218	210	184	161	969
8	BETHANY	ORF-05-0001	03/08/08	5,069	01/08/08	3,420	1,419	231		0	0	0	0	0
9	TULSA NPS	ORF-08-0004	08/09/08	1,250	06/10/08	209		228	738	19	14	11	8	24
10	TULSA	ORF-09-0001	05/09/09	11,320	03/10/09		2,875	4,570	605	409	358	313	274	1,917
11	MOORE	ORF-08-0002	06/13/09	3,943	04/14/09	194	3,367		202	22	20	17	15	105
12	TULSA	ORF-09-0006	06/13/09	7,350	04/14/09			6,217	591	68	59	52	45	317
13	MUSTANG	ORF-08-0006	06/13/09	6,590	04/14/09	140	5,118	1,008		40	35	31	27	189
14	NORMAN	ORF-09-0017	08/08/09	7,640	06/09/09		2,021	3,047	749	228	199	175	153	1,069
15	OKLAHOMA CITY	ORF-09-0021	09/12/09	8,168	07/14/09		4,140	3,936	91	0	0	0	0	0
16	PONCA CITY	ORF-09-0011	09/12/09	567	07/14/09		386	120	62	0	0	0	0	0
17	OWASSO	ORF-09-0003	10/10/09	10,795	08/11/09		2,586	6,928	888	49	43	38	33	230
18	DEL CITY	ORF-09-0022	10/10/09	1,190	08/11/09		1,041	144	3	0	0	0	0	1
19	OWASSO	ORF-09-0007	10/10/09	4,307	08/11/09		1,352	2,451	505	0	0	0	0	0
20	MUSKOGEE	ORF-09-0020	10/10/09	1,435	08/11/09		1,234	201		0	0	0	0	0
21	STILLWATER	ORF-09-0024	10/10/09	1,875	08/11/09		888	866	32	22	17	13	9	28
22	OWASSO	ORF-09-0003A	10/10/09	1,785	08/11/09		753	775	104	38	29	22	16	49
23	DUNCAN	ORF-09-0016	11/07/09	320	09/08/09		106	214		0	0	0	0	0
24	LAWTON	ORF-09-0015	11/07/09	12,270	09/08/09		2,210	7,468	1,906	86	75	66	58	403
25	ARDMORE	ORF-09-0018	11/07/09	1,055	09/08/09		294	761		0	0	0	0	0
26	GUYMON	ORF-09-0013	12/12/09	1,335	10/13/09		804	499	28	1	1	1	0	1
27	TULSA	ORF-10-0001	06/12/10	27,757	04/13/10			2,274	7,299	2,273	1,989	1,740	1,523	10,659
28	MOORE	ORF-08-0002A	07/10/10	42,838	05/11/10			11,715	20,920	1,275	1,116	976	854	5,980
29	ENID	ORF-09-0019	07/10/10	39,900	05/11/10			20,815	10,111	1,122	981	859	751	5,260
30	OKMULGEE	ORF-09-0012	08/07/10	5,100	06/08/10			1,978	2,060	133	116	102	89	622
31	BARTLESVILLE	ORF-10-0004	09/11/10	(1,700)	07/13/10					0	0	0	0	0
32	BROKEN ARROW	ORF-09-0033	09/11/10	5,735	07/13/10				1,706	504	441	386	337	2,361

PROJECT NAME/ COMMUNITY SERVED	PROJECT NUMBER	CONST. START DATE ¹	ASSIST. AMOUNT	BINDING COMMIT. DATE	Actual (for State FY '09-'12)				Projected (State FY '13) ²				OUT YEARS	
					FY09	FY10	FY 11	FY 12	FY 13					
									QTR 1	QTR 2	QTR 3	QTR 4		
33	MOORE	ORF-10-0012	12/11/10	6,637	10/12/10					830	726	635	556	3,890
34	OKLAHOMA CITY	ORF-10-0011	12/11/10	24,927	10/12/10			3,434	10,618	1,359	1,189	1,041	911	6,375
35	OKMULGEE	ORF-10-0013	02/12/11	617	12/14/10			520	96	0	0	0	0	0
36	BIXBY	ORF-10-0006	03/12/11	2,860	01/11/11				2,127	183	137	103	39	270
37	TULSA	ORF-11-0003	06/11/11	23,480	04/12/11					2,935	2,568	2,247	1,966	13,764
38	MUSKOGEE	ORF-11-0008	10/08/11	12,775	08/09/11				673	1,513	1,324	1,158	1,013	7,094
39	OWASSO	ORF-10-0014	11/12/11	2,940	09/13/11				1,128	453	340	255	191	573
40	TULSA	ORF-11-0005	02/11/12	16,700	12/13/11					2,088	1,827	1,598	1,398	9,789
41	TULSA	ORF-12-0003	05/12/11	26,472	03/13/11					3,309	2,895	2,533	2,217	15,517
42	EL RENO	ORF-13-0003	08/17/13	16,000	06/18/13					2,000	1,750	1,531	1,340	9,379
43	ARDMORE	ORF-13-0004	12/15/12	16,000	10/16/12					2,000	1,750	1,531	1,340	9,379
44	OWASSO	ORF-13-0005	03/16/13	5,000	01/15/13					625	547	479	419	2,931
45	TULSA	ORF-13-0006	11/17/12	58,115	09/18/12					7,264	6,356	5,562	4,867	34,066
46	BROKEN ARROW	ORF-12-0012	11/17/12	4,000	09/18/12					500	438	383	335	2,345
NON-SELECT PROJECTS														
1	GLENCOE	ORF-05-0003	06/30/06	170	12/13/05	36				0	0	0	0	0
2	MCCLOUD	ORF-04-0008	04/14/07	5,315	02/13/07	219				0	0	0	0	0
3	TONKAWA	ORF-97-0007	11/14/02	1,070	09/10/02	42				0	0	0	0	0
4	TISHOMINGO	ORF-04-0003	07/18/06	1,114	10/11/05	4				0	0	0	0	0
5	COLLINSVILLE	ORF-06-0009	04/14/07	1,317	02/13/07	83				0	0	0	0	0
6	CALERA	ORF-10-0010	12/11/10	4,985	10/12/10			4,985		0	0	0	0	0
7	COMCD	ORF-09-0027	03/13/10	370	01/12/10			370		0	0	0	0	0
8	ROLAND	ORF-08-0003	08/09/08	3,825	06/10/08	1,314		2,094	417	0	0	0	0	0
9	PAULS VALLEY	ORF-04-0013	09/22/05	892	09/13/05	72		131		0	0	0	0	0
10	BEGGS	ORF-05-0005	05/12/07	4,204	03/13/07	1,470		1,491	648	595	0	0	0	0
11	HOBART	ORF-06-0005	05/12/07	1,040	03/13/07	387				12	9	7	5	15
12	HARRAH	ORF-08-0008	06/13/09	1,930	04/14/09			1,693	187	50	0	0	0	0
13	PAWNEE	ORF-08-0005	06/13/09	1,275	04/14/09	50		1,196		7	6	4	3	9
14	ADAIR	ORF-08-0007	07/11/09	1,400	05/12/09			516	512	49	81	61	46	34
15	PERKINS	ORF-09-0002	07/11/09	7,225	05/12/09	495		3,097	2,554	775	38	33	29	25
16	GROVE	ORF-07-0008	09/12/09	1,900	07/14/09			1,871	29		0	0	0	0
17	COLLINSVILLE	ORF-09-0009	09/12/09	550	07/14/09			258	243	50	0	0	0	0
18	PVIA	ORF-09-0026	11/07/09	(839)	09/08/09						0	0	0	0
19	WALTERS	ORF-09-0005	12/12/09	1,251	10/13/09			572	679		0	0	0	0
20	PIEDMONT	ORF-09-0014	10/10/09	2,418	08/11/09			1,156	1,253	8	0	0	0	0
21	GRAND LAKE	ORF-09-0004	11/07/09	992	09/08/09			310	682		0	0	0	0
22	SAPULPA	ORF-09-0010	12/12/09	(3,969)	10/13/09						0	0	0	0
23	SULPHUR	ORF-09-0030	02/06/10	10,200	12/08/09			2,029	6,092	1,618	58	50	44	39
24	HENRYETTA	ORF-09-0029	12/12/09	3,650	10/13/09			965	1,653	564	59	51	45	39

PROJECT NAME/ COMMUNITY SERVED	PROJECT NUMBER	CONST. START DATE ¹	ASSIST. AMOUNT	BINDING COMMIT. DATE	Actual (for State FY '09-'12)				Projected (State FY '13) ²				OUT YEARS	
					FY09	FY10	FY 11	FY 12	FY 13					
									QTR 1	QTR 2	QTR 3	QTR 4		
25	OCC	ORF-09-0028	11/07/09	2,000	09/08/09		4	3	153	460	345	259	194	582
26	TULSA CITY-CO	ORF-09-0034	12/12/09	279	10/13/09			192		43	22	11	5	5
27	COMCD	ORF-09-0027A	01/09/10	1,132	11/10/09		462	363	142	41	31	23	17	52
28	University of Oklahoma	ORF-09-0031	12/12/09	86.5	10/13/09			60	13	7	4	2	1	1
29	OK State University	ORF-09-0032	12/12/09	2,000	10/13/09			325	631	261	196	147	110	330
30	HOBART	ORF-07-0007	08/07/10	570	06/08/10			527		11	8	6	5	14
31	OKEMAH	ORF-10-0007	01/08/11	2,905	11/09/10				1,602	326	244	183	137	412
32	STROUD	ORF-10-0015	02/12/11	660	12/14/10				331	82	62	46	35	104
33	GUTHRIE	ORF-10-0008	02/12/11	4,925	12/14/10			1,136	2,116	209	183	160	140	981
34	FAIRVIEW	ORF-10-0009	02/12/11	2,040	12/14/10			1,229	589	56	42	31	23	70
35	INOLA	ORF-06-0011	03/12/11	2,000	01/11/11			203	1,686	28	21	16	12	35
36	FT GIBSON	ORF-11-0004	06/11/11	1,075	04/12/11				705	92	69	52	39	117
37	PAWNEE	ORF-10-0003	06/11/11	6,995	04/12/11			583	3,629	348	304	266	233	1,631
38	YALE	ORF-11-0001	06/11/11	2,990	04/12/11			215	982	448	336	252	189	567
39	NICOMA PARK	ORF-09-0035	09/10/11	160	07/12/11				116	22	11	3	4	4
40	MULDROW	ORF-11-0001	11/12/11	3,705	09/13/11				723	746	559	839	210	629
41	GLENPOOL	ORF-11-0002	11/12/11	3,741	09/13/11				1,077	333	291	255	223	1,561
42	ELGIN	ORF-10-0005	12/16/11	3,364	10/17/11				99	816	612	459	344	1,033
43	VIAN	ORF-11-0006	04/13/12	1,555	02/13/12					389	292	219	164	492
44	EUFULA	ORF-11-0009	04/13/12	4,035	02/13/12				341	462	404	354	309	2,165
45	CHANDLER	ORF-12-0016	06/09/12	1,300	04/10/12					325	244	183	137	411
46	CHOUTEAU	ORF-13-0001	09/15/12	4,100	07/17/12					513	448	392	343	2,403
47	COMMERCE	ORF-13-0002	02/16/13	900	12/18/12					225	169	127	95	285
48	LONE GROVE	ORF-04-0011	10/20/12	12,000	08/21/12					1,500	1,313	1,148	1,005	7,034
49	RAMONA	ORF-13-0007	04/20/13	1,225	02/19/13					306	230	172	129	388
50	OCHELATA	ORF-13-0008	04/20/13	1,600	02/19/13					400	300	225	169	506
PROGRAM ADMINISTRATION FEES (Capitalization Grant 4% Set-Aside)														
Program Admin. (4%)	88-89 GRT.	N/A	675	N/A										
Program Admin. (4%)	90 GRANT	N/A	314	N/A										
Program Admin. (4%)	91 GRANT	N/A	663	N/A										
Program Admin. (4%)	92 GRANT	N/A	628	N/A										
Program Admin. (4%)	93 GRANT	N/A	621	N/A										
Program Admin. (4%)	94 GRANT	N/A	385	N/A										
Program Admin. (4%)	95 GRANT	N/A	398	N/A										
Program Admin. (4%)	96 GRANT	N/A	652	N/A										
Program Admin. (4%)	97 GRANT	N/A	199	N/A										
Program Admin. (4%)	98 GRANT	N/A	435	N/A										
Program Admin. (4%)	99 GRANT	N/A	435	N/A										
Program Admin. (4%)	00 GRANT	N/A	439	N/A										
Program Admin. (4%)	01 GRANT	N/A	429	N/A										
Program Admin. (4%)	02 GRANT	N/A	430	N/A										
Program Admin. (4%)	03 GRANT	N/A	428	N/A										

PROJECT NAME/ COMMUNITY SERVED	PROJECT NUMBER	CONST. START DATE ¹	ASSIST. AMOUNT	BINDING COMMIT. DATE	Actual (for State FY '09-'12)				Projected (State FY '13) ²				OUT YEARS
					FY09	FY10	FY 11	FY 12	FY 13				
									QTR 1	QTR 2	QTR 3	QTR 4	
Program Admin. (4%)	04 GRANT	N/A	428	N/A									
Program Admin. (4%)	05 GRANT	N/A	348	N/A									
Program Admin. (4%)	06 GRANT	N/A	281	N/A									
Program Admin. (4%)	07 GRANT	N/A	345	N/A	127								
Program Admin. (4%)	08 GRANT	N/A	218	N/A		150	68						
Program Admin (4%)	ARRA	N/A	1,266	N/A		1,000	266						
Program Admin. (4%)	09 GRANT	N/A	218	N/A			13	100	105				
Program Admin. (4%)	10 GRANT	N/A	658	N/A						200	200	195	63
Program Admin. (4%)	11 GRANT	N/A	477	N/A									477
Program Admin. (4%)	12 GRANT	N/A	459	N/A									459
TOTALS			798,508	N/A	28,149	57,214	107,492	82,832	40,616	34,908	30,425	25,717	170,295
PAYMENTS TO SELECT PROJECTS			980,384	N/A	34,226	44,037	82,419	64,090	31,808	27,760	24,221	21,103	146,631
PAYMENTS TO NON-SELECT PROJECTS			312,843	N/A	4,172	18,213	24,769	18,643	8,703	6,949	6,004	4,419	22,666
PAYMENTS TO ADMIN.			11,829	N/A	127	1,150	347	100	105	200	200	195	999

**FOR ALL PROJECTS RECEIVING ASSISTANCE FROM THE 1990 THROUGH 2013
(INCLUDES BOTH FIRST AND SECOND ROUND FUNDS)**

	FY	FY	FY	FY	FY 2013				OUT YEARS
	2009	2010	2011	2012	QTR 1	QTR 2	QTR 3	QTR 4	
CWSRF PROGRAM TOTALS	28,149	57,214	107,492	82,832	40,616	34,908	30,425	25,717	
CUMULATIVE TOTALS	995,472	1,052,686	1,160,178	1,243,011	1,283,626	1,318,535	1,348,959	1,374,677	1,544,971

1 Estimated projecting loan closing 2 months following board approval date

2 Estimated assuming loan amount: < \$500,000 = 2 quarters; \$500,001 - \$3,500,000 = 4 quarters; and > \$3,500,000 = 8 quarters

Appendix C

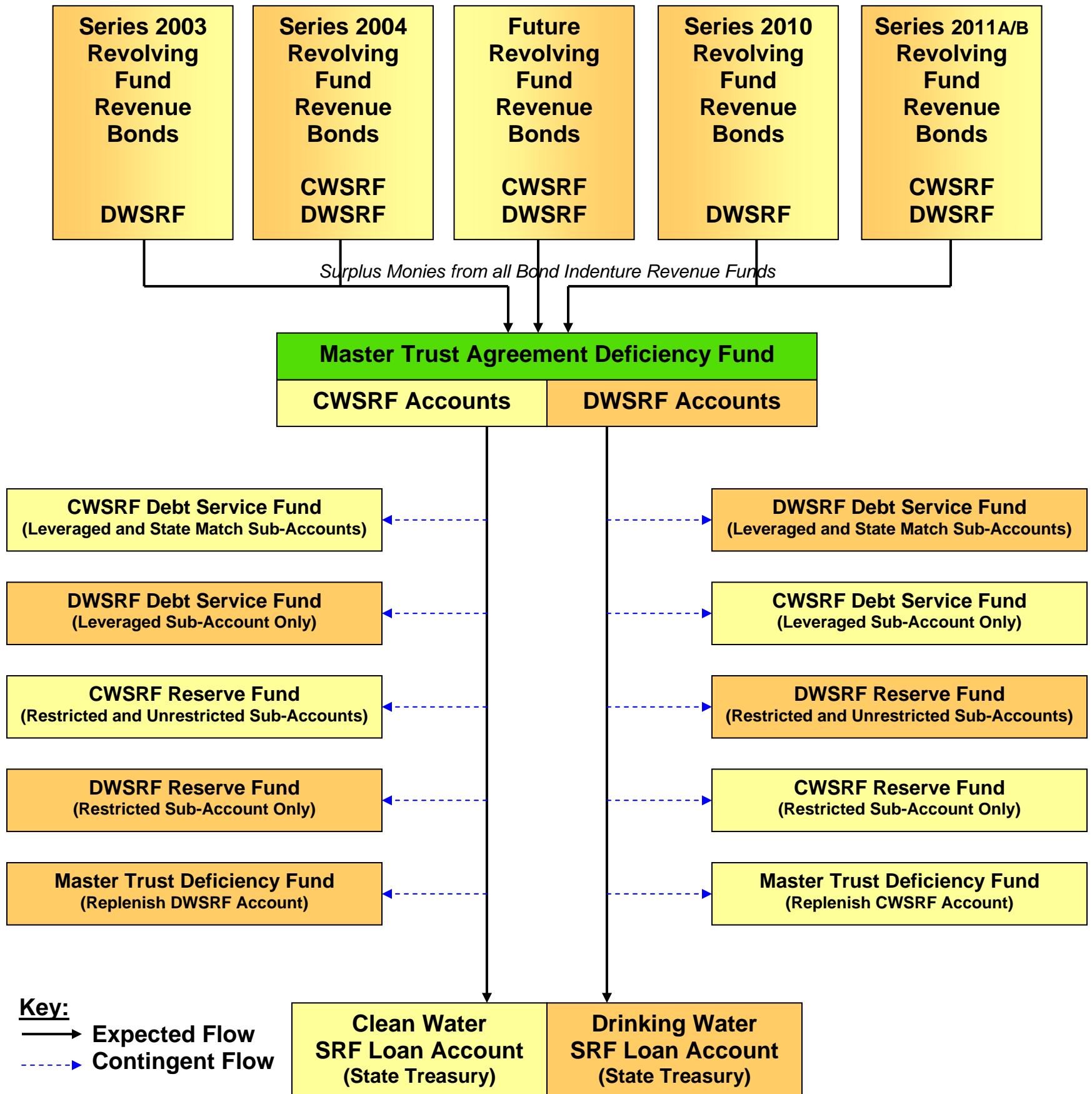
Cross-Collateralization

under the

Master Trust Agreement

Oklahoma Water Resources Board

Clean Water and Drinking Water State Revolving Funds



2012 Clean Water State Revolving Fund 10% Green Project Reserve: Guidance for Determining Project Eligibility

I. Introduction: The Fiscal Year (FY) 2012 Appropriation Act (P.L. 112-74) included additional requirements affecting the Clean Water State Revolving Fund (SRF) program. This attachment is included in the *Procedures for Implementing Certain Provisions of EPA's Fiscal Year 2012 Appropriation Affecting the Clean Water and Drinking Water State Revolving Fund Programs*. This attachment includes the details for determining green project reserve (GPR) eligibility for the Clean Water SRF program.

Public Law 112-74 states: “*Provided, That for fiscal year 2012, to the extent there are sufficient eligible project applications, not less than 10 percent of the funds made available under this title to each State for Clean Water State Revolving Fund capitalization grants shall be used by the State for projects to address green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities.*” These four categories of projects are the components of the Green Project Reserve (GPR).

II. GPR Goals: Congress’ intent in enacting the GPR is to direct State investment practices in the water sector to guide funding toward projects that utilize green or soft-path practices to complement and augment hard or gray infrastructure, adopt practices that reduce the environmental footprint of water and wastewater treatment, collection, and distribution, help utilities adapt to climate change, enhance water and energy conservation, adopt more sustainable solutions to wet weather flows, and promote innovative approaches to water management problems. Over time, GPR projects could enable utilities to take savings derived from reducing water losses and energy consumption, and use them for public health and environmental enhancement projects. Additionally, EPA expects that green projects will help the water sector improve the quality of water services without putting additional strain on the energy grid, and by reducing the volume of water lost every year.

III. Background: For the FY 2010 GPR Guidance, EPA used an inclusive approach to determine what is and is not a ‘green’ water project. Wherever possible, this guidance references existing consensus-based industry practices to provide assistance in developing green projects. Input was solicited from State-EPA and EPA-Regional workgroups and the water sector. EPA staff also reviewed approaches promoted by green practice advocacy groups and water associations, and green infrastructure implemented by engineers and managers in the water sector. EPA also assessed existing ‘green’ policies within EPA and received input from staff in those programs to determine how EPA funds could be used to achieve shared goals.

The FY 2012 SRF GPR Guidance provides States with information needed to determine which projects count toward the GPR requirement. The intent of the GPR Guidance is to describe projects and activities that fit within the four specific categories listed in the FY 2012

Appropriations Act. This guidance defines each category of GPR projects and lists projects that are clearly eligible for GPR, heretofore known as categorically eligible projects. For projects that do not appear on the list of categorically projects, they may be evaluated for their eligibility within one of the four targeted types of GPR eligible projects based upon a business case that provides clear documentation (see the *Business Case Development* sections in Parts A & B below).

GPR may be used for planning, design, and/or building activities. Entire projects, or the appropriate discrete components of projects, may be eligible for GPR. Projects do not have to be part of a larger capital project to be eligible. All projects or project components counted toward the GPR requirement must clearly advance one or more of the objectives articulated in the four categories of GPR discussed below.

The Green Project Reserve sets a new precedent for the SRFs by targeting funding towards projects that States may not have funded in prior years. Water quality benefits from GPR projects rely on proper operation and maintenance to achieve the intended benefits of the projects and to achieve optimal performance of the project. EPA encourages states and funding recipients to thoroughly plan for proper operation and maintenance of the projects funded by the SRFs, including training in proper operation of the project. It is noted, however, that the SRFs cannot provide funding for operation and maintenance costs, including training, in the SRF assistance agreements.

CWSRF Eligibility Principles

State SRF programs are responsible for identifying projects that count toward GPR. The following overarching principles, or decision criteria, apply to all projects that count toward GPR and will help states identify projects.

- 0.1 All GPR projects must otherwise be eligible for CWSRF funding. The GPR requirement does not create new funding authority beyond that described in Title VI of the CWA. Consequently, a subset of 212, 319 and 320 projects will count towards the GPR. The principles guiding CWSRF funding eligibility include:
- 0.2 All Sec 212 projects must be consistent with the definition of “treatment works” as set forth in section 212 of the Clean Water Act (CWA).
- 0.2-1 All section 212 projects must be publicly owned, as required by CWA section 603(c)(1).
- 0.2-2 All section 212 projects must serve a public purpose.
- 0.2-3 POTWs as a whole are utilized to protect or restore water quality. Not all portions of the POTW have a direct water quality impact in and of themselves (i.e. security fencing). Consequently, POTW projects are not required to have a direct water quality benefit, though most of them will.
- 0.3 Eligible nonpoint source projects implement a nonpoint source management program under an approved section 319 plan or the nine element watershed plans required by the 319 program.
- 0.3-1 Projects prevent or remediate nonpoint source pollution.
- 0.3-2 Projects can be either publicly or privately owned and can serve either public or private purposes. For instance, it is acceptable to fund land conservation activities that preserve the water quality of a drinking water source, which represents a public purpose project. It is also acceptable to fund agricultural BMPs that reduce nonpoint source pollution, but also improve the profitability of the agricultural operation. Profitability is an example of a private purpose.
- 0.3-3 Eligible costs are limited to planning, design and building of capital water quality projects. The CWSRF considers planting trees and shrubs, purchasing equipment, environmental cleanups and the development and initial delivery of education programs as capital water quality projects. Daily maintenance and operations, such as expenses and salaries are not considered capital costs.
- 0.3-4 Projects must have a direct water quality benefit. Implementation of a water quality project should, in itself, protect or improve water quality. States should be able to estimate the quantitative and/or qualitative water quality benefit of a nonpoint source project.
- 0.3-5 Only the portions of a project that remediate, mitigate the impacts of, or prevent water pollution or aquatic or riparian habitat degradation should be funded. Where water quantity projects improve water quality (e.g. reduction of flows from impervious surfaces that adversely affect stream health, or the modification of irrigation systems to reduce runoff and leachate from irrigated lands), they would

be considered to have a water quality benefit. In many cases, water quality protection is combined with other elements of an overall project. For instance, brownfield revitalization projects include not only water quality assessment and cleanup elements, but often a redevelopment element as well. Where the water quality portion of a project is clearly distinct from other portions of the project, only the water quality portion can be funded by the CWSRF.

- 0.3-6 Point source solutions to nonpoint source problems are eligible as CWSRF nonpoint source projects. Section 319 Nonpoint Source Management Plans identify sources of nonpoint source pollution. In some cases, the most environmentally and financially desirable solution has point source characteristics and requires an NPDES discharge permit. For instance, a septage treatment facility may be crucial to the proper maintenance and subsequent functioning of decentralized wastewater systems. Without the septage treatment facility, decentralized systems are less likely to be pumped, resulting in malfunctioning septic tanks.

- 0.4 Eligible projects under section 320 implement an approved section 320 Comprehensive Conservation Management Plan (CCMP).
 - 0.4-1 Section 320 projects can be either publicly or privately owned.
 - 0.4-2 Eligible costs are limited to capital costs.
 - 0.4-3 Projects must have a direct benefit to the water quality of an estuary. This includes protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife, and allows recreational activities, in and on water, and requires the control of point and nonpoint sources of pollution to supplement existing controls of pollution.
 - 0.4-4 Only the portions of a project that remediate, mitigate the impacts of, or prevent water pollution in the estuary watershed should be funded.

- 0.5 GPR projects must meet the definition of one of the four GPR categories. The Individual GPR categories do not create new eligibility for the CWSRF. The projects that count toward GPR must otherwise be eligible for CWSRF funding.

- 0.6 GPR projects must further the goals of the Clean Water Act.¹

¹ Drinking Water Utilities can apply for CWSRF funding

CWSRF Technical Guidance

The following sections outline the technical aspects for the CWSRF Green Project Reserve. It is organized by the four categories of green projects: green infrastructure, water efficiency, energy efficiency, and environmentally innovative activities. Categorically green projects are listed, as well as projects that are ineligible. Design criteria for business cases and example projects that would require a business case are also provided.

1.0 GREEN INFRASTRUCTURE

- 1.1 Definition: Green stormwater infrastructure includes a wide array of practices at multiple scales that manage wet weather and that maintain and restore natural hydrology by infiltrating, evapotranspiring and harvesting and using stormwater. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed. On the local scale green infrastructure consists of site- and neighborhood-specific practices, such as bioretention, trees, green roofs, permeable pavements and cisterns.
- 1.2 Categorical Projects
 - 1.2-1 Implementation of green streets (combinations of green infrastructure practices in transportation rights-of-ways), for either new development, redevelopment or retrofits including: permeable pavement², bioretention, trees, green roofs, and other practices such as constructed wetlands that can be designed to mimic natural hydrology and reduce effective imperviousness at one or more scales. Vactor trucks and other capital equipment necessary to maintain green infrastructure projects.
 - 1.2-2 Wet weather management systems for parking areas including: permeable pavement², bioretention, trees, green roofs, and other practices such as constructed wetlands that can be designed to mimic natural hydrology and reduce effective imperviousness at one or more scales. Vactor trucks and other capital equipment necessary to maintain green infrastructure projects.
 - 1.2-3 Implementation of comprehensive street tree or urban forestry programs, including expansion of tree boxes to manage additional stormwater and enhance tree health.
 - 1.2-4 Stormwater harvesting and reuse projects, such as cisterns and the systems that allow for utilization of harvested stormwater, including pipes to distribute stormwater for reuse.
 - 1.2-5 Downspout disconnection to remove stormwater from sanitary, combined sewers and separate storm sewers and manage runoff onsite.
 - 1.2-6 Comprehensive retrofit programs designed to keep wet weather discharges out of all types of sewer systems using green infrastructure technologies and approaches such as green roofs, green walls, trees and urban reforestation, permeable

² The total capital cost of permeable pavement is eligible, not just the incremental additional cost when compared to impervious pavement.

pavements and bioretention cells, and turf removal and replacement with native vegetation or trees that improve permeability.

- 1.2-7 Establishment or restoration of permanent riparian buffers, floodplains, wetlands and other natural features, including vegetated buffers or soft bioengineered stream banks. This includes stream day lighting that removes natural streams from artificial pipes and restores a natural stream morphology that is capable of accommodating a range of hydrologic conditions while also providing biological integrity. In highly urbanized watersheds this may not be the original hydrology.
 - 1.2-8 Projects that involve the management of wetlands to improve water quality and/or support green infrastructure efforts (e.g., flood attenuation).³
 - 1.2-8a Includes constructed wetlands.
 - 1.2-8b May include natural or restored wetlands if the wetland and its multiple functions are not degraded and all permit requirements are met.
 - 1.2-9 The water quality portion of projects that employ development and redevelopment practices that preserve or restore site hydrologic processes through sustainable landscaping and site design.
 - 1.2-10 Fee simple purchase of land or easements on land that has a direct benefit to water quality, such as riparian and wetland protection or restoration.
- 1.3 Projects That Do Not Meet the Definition of Green Infrastructure
- 1.3-1 Stormwater controls that have impervious or semi-impervious liners and provide no compensatory evapotranspirative or harvesting function for stormwater retention.
 - 1.3-2 Stormwater ponds that serve an extended detention function and/or extended filtration. This includes dirt lined detention basins.
 - 1.3-3 In-line and end-of-pipe treatment systems that only filter or detain stormwater.
 - 1.3-4 Underground stormwater control and treatment devices such as swirl concentrators, hydrodynamic separators, baffle systems for grit, trash removal/floatables, oil and grease, inflatable booms and dams for in-line underground storage and diversion of flows.
 - 1.3-5 Stormwater conveyance systems that are not soil/vegetation based (swales) such as pipes and concrete channels. Green infrastructure projects that include pipes to collect stormwater may be justified as innovative environmental projects pursuant to Section 4.4 of this guidance.
 - 1.3-6 Hardening, channelizing or straightening streams and/or stream banks.
 - 1.3-7 Street sweepers, sewer cleaners, and vactor trucks unless they support green infrastructure projects.

1.4 Decision Criteria for Business Cases

³ Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, vernal pools, and similar areas.

- 1.4-1 Green infrastructure projects are designed to mimic the natural hydrologic conditions of the site or watershed.
 - 1.4-2 Projects that capture, treat, infiltrate, or evapotranspire water on the parcels where it falls and does not result in interbasin transfers of water.
 - 1.4-3 GPR project is in lieu of or to supplement municipal hard/gray infrastructure.
 - 1.4-4 Projects considering both landscape and site scale will be most successful at protecting water quality.
 - 1.4-5 Design criteria are available at:
<http://cfpub.epa.gov/npdes/greeninfrastructure/munichandbook.cfm> and
<http://cfpub.epa.gov/npdes/greeninfrastructure/technology.cfm>
- 1.5 Examples of Projects Requiring A Business Case
- 1.5-1 Fencing to keep livestock out of streams and stream buffers. Fencing must allow buffer vegetation to grow undisturbed and be placed a sufficient distance from the riparian edge for the buffer to function as a filter for sediment, nutrients and other pollutants.

2.0 WATER EFFICIENCY

- 2.1 Definition: EPA's WaterSense program defines water efficiency as the use of improved technologies and practices to deliver equal or better services with less water. Water efficiency encompasses conservation and reuse efforts, as well as water loss reduction and prevention, to protect water resources for the future.
- 2.2 Categorical Projects
 - 2.2-1 Installing or retrofitting water efficient devices, such as plumbing fixtures and appliances
 - 2.2-1a For example -- shower heads, toilets, urinals and other plumbing devices
 - 2.2-1b Where specifications exist, WaterSense labeled products should be the preferred choice (<http://www.epa.gov/watersense/index.html>).
 - 2.2-1c Implementation of incentive programs to conserve water such as rebates.
 - 2.2-2 Installing any type of water meter in previously unmetered areas
 - 2.2-2a If rate structures are based on metered use
 - 2.2-2b Can include backflow prevention devices if installed in conjunction with water meter
 - 2.2-3 Replacing existing broken/malfunctioning water meters, or upgrading existing meters, with:
 - 2.2-3a Automatic meter reading systems (AMR), for example:
 - 2.2-3a(i) Advanced metering infrastructure (AMI)
 - 2.2-3a(ii) Smart meters
 - 2.2-3b Meters with built in leak detection
 - 2.2-3c Can include backflow prevention devices if installed in conjunction with water meter replacement
 - 2.2-4 Retrofitting/adding AMR capabilities or leak detection equipment to existing meters (not replacing the meter itself).

- 2.2-5 Water audit and water conservation plans, which are reasonably expected to result in a capital project.
 - 2.2-6 Recycling and water reuse projects that replace potable sources with non-potable sources,
 - 2.2-6a Gray water, condensate and wastewater effluent reuse systems (where local codes allow the practice)
 - 2.2-6b Extra treatment costs and distribution pipes associated with water reuse.
 - 2.2-7 Retrofit or replacement of existing landscape irrigation systems with more efficient landscape irrigation systems, including moisture and rain sensing equipment.
 - 2.2-8 Retrofit or replacement of existing agricultural irrigation systems with more efficient agricultural irrigation systems.
- 2.3 Projects That Do Not Meet the Definition of Water Efficiency
- 2.3-1 Agricultural flood irrigation.
 - 2.3-2 Lining of canals to reduce water loss.
 - 2.3-3 Replacing drinking water distribution lines. This activity extends beyond CWSRF eligibility and is more appropriately funded by the DWSRF.
 - 2.3-4 Leak detection equipment for drinking water distribution systems, unless used for reuse distribution pipes.
- 2.4 Decision Criteria for Business Cases
- 2.4-1 Water efficiency can be accomplished through water saving elements or reducing water consumption. This will reduce the amount of water taken out of rivers, lakes, streams, groundwater, or from other sources.
 - 2.4-2 Water efficiency projects should deliver equal or better services with less net water use as compared to traditional or standard technologies and practices
 - 2.4-3 Efficient water use often has the added benefit of reducing the amount of energy required by a POTW, since less water would need to be collected and treated; therefore, there are also energy and financial savings.
- 2.5 Examples of Projects Requiring a Business Case.
- 2.5-1 Water meter replacement with traditional water meters (see AWWA M6 *Water Meters – Selection Installation, Testing, and Maintenance*).
 - 2.5-2 Projects that result from a water audit or water conservation plan
 - 2.5-3 Storage tank replacement/rehabilitation to reduce loss of reclaimed water.
 - 2.5-4 New water efficient landscape irrigation system (where there currently is not one).
 - 2.5-5 New water efficient agricultural irrigation system (where there currently is not one).

3.0 ENERGY EFFICIENCY

- 3.1 Definition: Energy efficiency is the use of improved technologies and practices to reduce the energy consumption of water quality projects, use energy in a more efficient way, and/or produce/utilize renewable energy.

3.2 Categorical Projects

- 3.2-1 Renewable energy projects such as wind, solar, geothermal, micro-hydroelectric, and biogas combined heat and power systems (CHP) that provide power to a POTW. (<http://www.epa.gov/cleanenergy>). Micro-hydroelectric projects involve capturing the energy from pipe flow.
 - 3.2-1a POTW owned renewable energy projects can be located onsite or offsite.
 - 3.2-1b Includes the portion of a publicly owned renewable energy project that serves POTW's energy needs.
 - 3.2-1c Must feed into the grid that the utility draws from and/or there is a direct connection.
- 3.2-2 Projects that achieve a 20% reduction in energy consumption are categorically eligible for GPR⁴. Retrofit projects should compare energy used by the existing system or unit process⁵ to the proposed project. The energy used by the existing system should be based on name plate data when the system was first installed, recognizing that the old system is currently operating at a lower overall efficiency than at the time of installation. New POTW projects or capacity expansion projects should be designed to maximize energy efficiency and should select high efficiency premium motors and equipment where cost effective. Estimation of the energy efficiency is necessary for the project to be counted toward GPR. If a project achieves less than a 20% reduction in energy efficiency, then it may be justified using a business case.
- 3.2-3 Collection system Infiltration/Inflow (I/I) detection equipment
- 3.2-4 POTW energy management planning, including energy assessments, energy audits, optimization studies, and sub-metering of individual processes to determine high energy use areas, which are reasonably expected to result in a capital project are eligible. Guidance to help POTWs develop energy management programs, including assessments and audits is available at http://www.epa.gov/waterinfrastructure/pdfs/guidebook_si_energymanagement.pdf.

3.3 Projects That Do Not Meet the Definition of Energy Efficiency

- 3.3-1 Renewable energy generation that is *privately* owned or the portion of a publicly owned renewable energy facility that does not provide power to a POTW, either through a connection to the grid that the utility draws from and/or a direct connection to the POTW.
- 3.3-2 Simply replacing a pump, or other piece of equipment, because it is at the end of its useful life, with something of average efficiency.
- 3.3-3 Facultative lagoons, even if integral to an innovative treatment process.

⁴ The 20% threshold for categorically eligible CWSRF energy efficiency projects was derived from a 2002 Department of Energy study entitled *United States Industrial Electric Motor Systems Market Opportunities Assessment, December 2002* and adopted by the Consortium for Energy Efficiency. Further field studies conducted by Wisconsin Focus on Energy and other State programs support the threshold.

⁵ A unit process is a portion of the wastewater system such as the collection system, pumping stations, aeration system, or solids handling, etc.

- 3.3-4 Hydroelectric facilities, except micro-hydroelectric projects. Micro-hydroelectric projects involve capturing the energy from pipe flow.
- 3.4 Decision Criteria for Business Cases
 - 3.4-1 Project must be cost effective. An evaluation must identify energy savings and payback on capital and operation and maintenance costs that does not exceed the useful life of the asset.
http://www.epa.gov/waterinfrastructure/pdfs/guidebook_si_energymangement.pdf
 - 3.4-2 The business case must describe how the project maximizes energy saving opportunities for the POTW or unit process.
 - 3.4-3 Using existing tools such as Energy Star’s Portfolio Manager (http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager) or Check Up Program for Small Systems (CUPSS) (<http://www.epa/cupss>) to document current energy usage and track anticipated savings.
- 3.5 Examples of Projects Requiring a Business Case
 - 3.5-1 POTW projects or unit process projects that achieve less than a 20% energy efficiency improvement.
 - 3.5-2 Projects implementing recommendations from an energy audit that are not otherwise designated as categorical.
 - 3.5-3 Projects that cost effectively eliminate pumps or pumping stations.
 - 3.5-4 Infiltration/Inflow (I/I) correction projects that save energy from pumping and reduced treatment costs and are cost effective.
 - 3.5-4a Projects that count toward GPR cannot build new structural capacity. These projects may, however, recover existing capacity by reducing flow from I/I.
 - 3.5-5 I/I correction projects where excessive groundwater infiltration is contaminating the influent requiring otherwise unnecessary treatment processes (i.e. arsenic laden groundwater) and I/I correction is cost effective.
 - 3.5-6 Replacing pre-Energy Policy Act of 1992 motors with National Electric Manufacturers Association (NEMA) premium energy efficiency motors.
 - 3.5-6a NEMA is a standards setting association for the electrical manufacturing industry (<http://www.nema.org/gov/energy/efficiency/premium/>).
 - 3.5-7 Upgrade of POTW lighting to energy efficient sources such as metal halide pulse start technologies, compact fluorescent, light emitting diode (LED).
 - 3.5-8 SCADA systems can be justified based upon substantial energy savings.
 - 3.5-9 Variable Frequency Drive can be justified based upon substantial energy savings.

4.0 ENVIRONMENTALLY INNOVATIVE

- 4.1 Definition: Environmentally innovative projects include those that demonstrate new and/or innovative approaches to delivering services or managing water resources in a more sustainable way.

- 4.2 Categorical Projects
- 4.2-1 Total/integrated water resources management planning likely to result in a capital project.
 - 4.2-2 Utility Sustainability Plan consistent with EPA SRF's sustainability policy.
 - 4.2-3 Greenhouse gas (GHG) inventory or mitigation plan and submission of a GHG inventory to a registry (such as Climate Leaders or Climate Registry)
 - 4.3-3a Note: GHG Inventory and mitigation plan is eligible for CWSRF funding.
 - 4.2-3b EPA Climate Leaders:
 - <http://www.epa.gov/climateleaders/basic/index.html>
 - Climate Registry: <http://www.theclimateregistry.org/>
 - 4.2-4 Planning activities by a POTW to prepare for adaptation to the long-term effects of climate change and/or extreme weather.
 - 4.2-4a Office of Water – Climate Change and Water website:
 - <http://www.epa.gov/water/climatechange/>
 - 4.2.5 Construction of US Building Council LEED certified buildings or renovation of an existing building on POTW facilities.
 - 4.2-5a Any level of certification (Platinum, Gold, Silver, Certified).
 - 4.2-5b All building costs are eligible, not just stormwater, water efficiency and energy efficiency related costs. Costs are not limited to the incremental additional costs associated with LEED certified buildings.
 - 4.2-5c U.S. Green Building Council website:
 - <http://www.usgbc.org/displaypage.aspx?CategoryID=19>
 - 4.2-6 Decentralized wastewater treatment solutions to existing deficient or failing onsite wastewater systems.
 - 4.2-6a Decentralized wastewater systems include individual onsite and/or cluster wastewater systems used to collect, treat and disperse relatively small volumes of wastewater. An individual onsite wastewater treatment system is a system relying on natural processes and/or mechanical components, that is used to collect, treat and disperse or reclaim wastewater from a single dwelling or building. A cluster system is a wastewater collection and treatment system under some form of common ownership that collects wastewater from two or more dwellings or buildings and conveys it to a treatment and dispersal system located on a suitable site near the dwellings or buildings. Decentralized projects may include a combination of these systems. EPA recommends that decentralized systems be managed under a central management entity with enforceable program requirements, as stated in the *EPA Voluntary Management Guidelines*.
 - http://www.epa.gov/owm/septic/pubs/septic_guidelines.pdf
 - 4.2-6b Treatment and Collection Options: A variety of treatment and collection options are available when implementing decentralized wastewater systems. They typically include a septic tank, although many configurations include additional treatment components following or in place of the septic tank, which provide for advanced treatment solutions. Most disperse treated effluent to the soil where further treatment occurs, utilizing either conventional soil absorption fields or alternative soil dispersal methods which provide advanced treatment. Those that

discharge to streams, lakes, tributaries, and other water bodies require federal or state discharge permits (see below). Some systems promote water reuse/recycling, evaporation or wastewater uptake by plants. Some decentralized systems, particularly cluster or community systems, often utilize alternative methods of collection with small diameter pipes which can flow via gravity, pump, or siphon, including pressure sewers, vacuum sewers and small diameter gravity sewers. Alternative collection systems generally utilize piping that is less than 8 inches in diameter, or the minimum diameter allowed by the state if greater than 8 inches, with shallow burial and do not require manholes or lift stations. Septic tanks are typically installed at each building served or another location upstream of the final treatment and dispersal site. Collection systems can transport raw sewage or septic tank effluent. Another popular dispersal option used today is subsurface drip infiltration. Package plants that discharge to the soil are generally considered decentralized, depending on the situation in which they are used. While not entirely inclusive, information on treatment and collection processes is described, in detail, in the “*Onsite Wastewater Treatment Technology Fact Sheets*” section of the EPA Onsite Manual http://www.epa.gov/owm/septic/pubs/septic_2002_osdm_all.pdf and on EPA’s septic system website under Technology Fact Sheets. http://cfpub.epa.gov/owm/septic/septic.cfm?page_id=283

4.2-6c For the purposes of the CWSRF, decentralized systems are considered to be section 319 projects and Davis-Bacon does not apply.

4.3 Projects That Do Not Meet the Definition of Environmentally Innovative

- 4.3-1 Air scrubbers to prevent nonpoint source deposition.
- 4.3-2 Facultative lagoons, even if integral to an innovative treatment processes.
- 4.3-3 Surface discharging decentralized wastewater systems where there are cost effective soil-based alternatives.
- 4.3-4 Higher sea walls to protect POTW from sea level rise.
- 4.3-5 Reflective roofs at POTW to combat heat island effect.

4.4 Decision Criteria for Business Cases

- 4.4-1 State programs are allowed flexibility in determining what projects qualify as innovative in their state based on unique geographical or climatological conditions.
 - 4.4-1a Technology or approach whose performance is expected to address water quality but the actual performance has not been demonstrated in the state;
 - 4.4-1b Technology or approach that is not widely used in the State, but does perform as well or better than conventional technology/approaches at lower cost; or
 - 4.4-1c Conventional technology or approaches that are used in a new application in the State.

4.5 Examples of Projects Requiring a Business Case

- 4.5-1 Constructed wetlands projects used for municipal wastewater treatment, polishing, and/or effluent disposal.
 - 4.5-1a Natural wetlands, as well as the restoration/enhancement of degraded wetlands, may not be used for wastewater treatment purposes and must comply with all regulatory/permitting requirements.
 - 4.5-1b Projects may not (further) degrade natural wetlands.
- 4.5-2 Projects or components of projects that result from total/integrated water resource management planning consistent with the decision criteria for environmentally innovative projects and that are Clean Water SRF eligible.
- 4.5-3 Projects that facilitate adaptation of POTWs to climate change identified by a carbon footprint assessment or climate adaptation study.
- 4.5-4 POTW upgrades or retrofits that remove phosphorus for beneficial use, such as biofuel production with algae.
- 4.5-5 Application of innovative treatment technologies or systems that improve environmental conditions and are consistent with the Decision Criteria for environmentally innovative projects such as:
 - 4.5-5a Projects that significantly reduce or eliminate the use of chemicals in wastewater treatment;
 - 4.5-5b Treatment technologies or approaches that significantly reduce the volume of residuals, minimize the generation of residuals, or lower the amount of chemicals in the residuals. (National Biosolids Partnership, 2010; *Advances in Solids Reduction Processes at Wastewater Treatment Facilities Webinar*; http://www.e-wef.org/timssnet/meetings/tnt_meetings.cfm?primary_id=10CAP2&Action=LONG&subsystem=ORD%3cbr).
 - 4.5-5b(i) Includes composting, class A and other sustainable biosolids management approaches.
- 4.5-6 Educational activities and demonstration projects for water or energy efficiency.
- 4.5-7 Projects that achieve the goals/objectives of utility asset management plans (http://www.epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_assetmanagement_bestpractices.pdf; <http://www.epa.gov/owm/assetmanage/index.htm>).
- 4.5-8 Sub-surface land application of effluent and other means for ground water recharge, such as spray irrigation and overland flow.
 - 4.5-8a Spray irrigation and overland flow of effluent is not eligible for GPR where there is no other cost effective alternative.

Business Case Development

This guidance is intended to be comprehensive: however, EPA understands our examples projects requiring a business case may not be all inclusive. A business case is a due diligence document. For those projects, or portions of projects, which are not included in the categorical projects lists provided above, a business case will be required to demonstrate that an assistance recipient has thoroughly researched anticipated ‘green’ benefits of a project. Business cases will be approved by the State (see section IV.A.a. in the *Procedures for Implementing Certain Provisions of EPA’s Fiscal Year 2012 Appropriations Affecting the Clean Water and Drinking Water State Revolving Fund Programs*). An

approved business case must be included in the State’s project files and contain clear documentation that the project achieves identifiable and substantial benefits. The following sections provide guidelines for business case development.

- 5.0 Length of a Business Case
 - 5.0-1 Business cases must address the decision criteria for the category of project
 - 5.0-2 Business cases should be adequate, but not exhaustive.
 - 5.0-2a There are many formats and approaches. EPA does not require any specific one.
 - 5.0-2b Some projects will require detailed analysis and calculations, while others may not require more than one page.
 - 5.0-2c Limit the information contained in the business case to only the pertinent ‘green’ information needed to justify the project.
 - 5.0-3 A business case can simply summarize results from, and then cite, existing documentation – such as engineering reports, water or energy audits, results of water system tests, etc.
- 5.1 Content of a Business Case
 - 5.1-1 Quantifiable water and/or energy savings or water loss reduction for water and energy efficiency projects should be included.
 - 5.1-2 The cost and financial benefit of the project should be included, along with the payback time period where applicable. (NOTE: Clean Water SRF requires energy efficiency projects to be cost effective.)
- 5.2 Items Which Strengthen Business Case, but Are Not Required
 - 5.2-1 Showing that the project was designed to enable equipment to operate most efficiently.
 - 5.2-2 Demonstrating that equipment will meet or exceed standards set by professional associations.
 - 5.2-3 Including operator training or committing to utilizing existing tools such as Energy Star’s Portfolio Manager or CUPSS for energy efficiency projects.
- 5.3 Example Business Cases Are Available at <http://www.srfbusinesscases.net/>



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Oklahoma Clean Water State Revolving Fund Green Project Reserve (GPR) Checklist

Purpose

The Oklahoma Water Resources Board (OWRB) Clean Water State Revolving Fund (CWSRF) loan program's GPR checklist is a tool to aid loan applicants and consultants in determining the green components of any given project, identifying both green performance targets and submittal materials that will be used for the implementation of the green components. It is also a tool to aid OWRB staff in tracking the implementation of the GPR throughout Oklahoma.

How to Use the Checklist

The following checklist is provided as a resource for CWSRF loan program applicants and consultants. The CWSRF loan program may accept components and technologies other than those listed in the attachment EPA CWSRF GPR Specific Guidance upon OWRB staff review and approval. Applicants are encouraged to introduce additional innovative green technologies in the proposed projects. The Checklist should be provided to the consultants by Loan applicants' staff at the earliest possible stage of the project planning process, ideally during pre-application consultation.

How to Submit the Checklist

It is the applicant's responsibility to obtain the necessary approvals and permits, and to properly design, build and effectively operate and maintain the proposed facilities covered in the Engineering Report (ER) or planning document. Loan applicants should return a completed copy of the checklist with their ER. The completion of the Checklist is equally valuable for projects that do not meet the GPR, since it will help OWRB staff to track the implementation of the various features within the GPR.

Contact for more Information: Jennifer Wasinger, Assistant Chief, FAD or Your OWRB project engineer @405-530-8800

I. CWSRF Loan Applicant Information

Loan Number (if assigned): _____
Applicant Name: _____
Project Name/Location: _____
Latest date this list was last updated by the Applicant: _____

II. Categories

Please mark, from the categories below, all the GPR components that are proposed for the project.

1. Energy Efficiency Components:

Definition: Energy efficiency is the use of improved technologies and practices to reduce the energy consumption of water quality projects, use energy in a more efficient way, and/or produce/utilize renewable energy.

Projects that achieve a 20% reduction in energy consumption are categorically eligible for GPR, energy savings < 20% requires a business case. (Sample business cases are in attachment)

N/A Yes

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | a. Site plan for facilities includes sustainable building components. |
| <input type="checkbox"/> | <input type="checkbox"/> | b. The design includes an energy reduction plan with at least a 20% reduction goal |
| <input type="checkbox"/> | <input type="checkbox"/> | c. The Treatment Facility participates in EPA energy star program ¹ |
| <input type="checkbox"/> | <input type="checkbox"/> | d. Project utilizes high efficiency fixtures, energy star components in heating, ventilating, and air conditioning (HVAC) equipment, Power Smart technology |
| <input type="checkbox"/> | <input type="checkbox"/> | e. Project utilizes a SCADA system to reduce overall energy consumption by 20% and enhance process control. (Please show in business case the energy and cost saved in \$\$\$numbers) |
| <input type="checkbox"/> | <input type="checkbox"/> | f. Use of renewable energy alternatives (e.g., geothermal, solar, off grid, Hydro Wind) (Categorical) |
| <input type="checkbox"/> | <input type="checkbox"/> | g. Project proposes to use high efficiency pumps (achieve 20% reduction in energy consumption) (categorical-documentation required) |
| <input type="checkbox"/> | <input type="checkbox"/> | h. Infiltration/Inflow (I/I) correction projects that save energy from pumping and reduced treatment costs and are cost effective. Projects that count toward GPR cannot build new structural capacity. These projects may, however, recover existing capacity by reducing flow from I/I (business case required) |
| <input type="checkbox"/> | <input type="checkbox"/> | i. Collection system Infiltration/Inflow (I/I) detection equipment (Categorical) |

2. Water Efficiency Components:

Definition: EPA's WaterSense program defines water efficiency as the use of improved technologies and practices to deliver equal or better services with less water. Water efficiency encompasses conservation and reuse efforts, as well as water loss reduction and prevention, to protect water resources for the future.

N/A Yes

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | a. The project utilizes on site stormwater management/rain harvesting (e.g., green roof, permeable paving, on-site drainage, rain garden) (Categorical) |
| <input type="checkbox"/> | <input type="checkbox"/> | b. Recycling and water reuse projects that replace potable sources with non-potable sources, Extra treatment costs and distribution pipes associated with water (Categorical) |
| <input type="checkbox"/> | <input type="checkbox"/> | c. The project incorporates water use reduction measures (e.g., low consumption fixtures, grey water systems, and stormwater irrigation measures) (Categorical) |
| <input type="checkbox"/> | <input type="checkbox"/> | d. The Treatment Facility participates in EPA's Water sense Program. |
| <input type="checkbox"/> | <input type="checkbox"/> | e. Gray water, condensate and wastewater effluent reuse systems (where local codes allow the practice) (Categorical) |
| <input type="checkbox"/> | <input type="checkbox"/> | f. Installing any type of water meter in previously unmetered areas
(i) If rate structures are based on metered use
(ii)Can include backflow prevention devices if installed in conjunction with water meter (Categorical) |
| <input type="checkbox"/> | <input type="checkbox"/> | g. Replacing existing broken/malfunctioning water meters, or upgrading existing meters, (Categorical) with:
(i) Automatic meter reading systems (AMR), for example Advanced metering infrastructure (AMI), Smart meters
(ii) Meters with built in leak detection
(iii)Can include backflow prevention devices if installed in conjunction with water meter replacement |
| <input type="checkbox"/> | <input type="checkbox"/> | h. Water efficient landscaping (e.g., drought resistant and/or native plantings, use of non-potable water for irrigation, high efficiency irrigation |

3. Green Infrastructure Components:

Definition: Green stormwater infrastructure includes a wide array of practices at multiple scales that manage wet weather and that maintains and restores natural hydrology by infiltrating, evapotranspiring and harvesting and using stormwater. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed. On the local scale green infrastructure consists of site- and neighborhood-specific practices, such as bioretention, trees, green roofs, permeable pavements and cisterns.

N/A Yes

- a. Implementation of green streets (combinations of green infrastructure practices in transportation right-of-ways), for either new development, redevelopment or retrofits including: permeable pavement, bioretention, trees, green roofs, and other practices such as constructed wetlands that can be designed to mimic natural hydrology and reduce effective imperviousness at one or more scales. Vector trucks and other capital equipment necessary to maintain green infrastructure projects. (Categorical)
- b. Wet weather management systems for parking areas including: permeable pavement, bioretention, trees, green roofs, and other practices such as constructed wetlands that can be designed to mimic natural hydrology and reduce effective imperviousness at one or more scales. (Categorical)
- c. Offsite reuse of either treated wastewater or a bio solids treatment process
Significantly reduces residuals disposal.
- d. The project provides enhanced waste diversion facilities
(e.g., on-site recycling, on-site composting) (Categorical)
- e. Establishment or restoration of permanent riparian buffers, floodplains, wetlands and other natural features, including vegetated buffers or soft bioengineered stream banks (categorical)
- f. The project beneficially utilizes recycled materials. (Categorical)
- g. Low-impact development (LID).
- h. Downspout disconnection to remove stormwater from combined sewers and storm sewers (Categorical)

4. Environmentally Innovative Project (EIP) Component

Definition: Environmentally innovative projects include those that demonstrate new and/or innovative approaches to delivering services or managing water resources in a more sustainable way.

- a. Utility Sustainability Plan consistent with EPA's SRF sustainability policy.
- b. Greenhouse gas (GHG) inventory or mitigation plan and submission of a GHG inventory to a registry (such as Climate Leaders or Climate Registry)
 - (i). EPA Climate Leaders: <http://www.epa.gov/climateleaders/basic/index.html>
 - (ii). Registry: <http://www.theclimateregistry.org/>
- c. Construction of US Building Council LEED certified buildings or renovation of an existing building on POTW facilities.
- d. Decentralized wastewater treatment solutions to existing deficient or failing onsite wastewater systems

Total Present worth Cost Analysis Component:

To properly evaluate a project’s long-term costs, a Total Present Worth (TPW) cost analysis of feasible alternatives is strongly recommended. TPW cost for each alternative includes Construction Cost, Non construction Cost (e.g., Engineering, Inspection, Legal, Land, Easements, Soils/Foundation Testing, Permits, O& M Manual and Other cost), estimated annual operation and maintenance (O&M) costs during the service life (for example 20 years) discounted to its present value and added to the Construction & Non construction Cost together known as TPW*. The resulting TPW allows participants to assess the true cost of construction projects. **Prepare a comparison of the selected alternative for the project with and without the proposed GPR components.**

**SRF Loan Programs will provide the participant/applicant an estimated interest rate to be used in the life- cycle analysis.*

5. Cost Estimate for Green Project Components:

Provide a cost estimate for the green infrastructure project or components. (Add pages if necessary)

(Description)	(GPR Component)	(Cost \$\$)
i. _____	_____	_____
ii. _____	_____	_____
iii. _____	_____	_____
		Total: _____

6. Please describe the problems with the existing system and explain the technical and financial benefits of using green components included in the project. (Please add pages if necessary)

1. For more information on energy star see http://www.energystar.gov/index.cfm?c=government.wastewater_drinking_water
2. For more information on LEED (Leadership in Energy and Environmental Design) certification see http://www.usgbc.org/LEED/LEED_main.asp
3. For more information on green building see <http://www.epa.gov/greenbuilding/>

Sample calculation for energy and cost savings for SCADA control:

Project #	LS #	kWh Consumption for Current Run Times/yr	Energy Cost/yr	Excessive kWh Consumption/yr	kWh Consumption/yr after SCADA	Energy Cost/yr	Cost Savings	Energy Savings	Eligible Costs			
E1	20	111,521	\$ 104,829.74	7,806	103,715	\$ 97,491.66	\$ 7,338.08	7%	\$ 4,500.00	Efficiency Calc:		
E4	48	50,093	\$ 47,087.42	1,503	48,590	\$ 45,674.80	\$ 1,412.62	3%	\$ 4,500.00			
Sub 1	82	3,335	\$ 3,134.90	200	3,135	\$ 2,946.81	\$ 188.09	6%	\$ 4,500.00	(Total Run Hours - Excess Run Hours)/Total Run Hours		
	109	35,292	\$ 33,174.48	706	34,586	\$ 32,510.99	\$ 663.49	2%	\$ 4,500.00			
Sub 4	17	4,792	\$ 4,504.48	144	4,648	\$ 4,369.35	\$ 135.13	3%	\$ 4,500.00			
Sub 5	27	15,570	\$ 14,635.80	1,246	14,324	\$ 13,464.94	\$ 1,170.86	8%	\$ 4,500.00			
Sub 6	64	170,718	\$ 160,474.92	8,536	162,182	\$ 152,451.17	\$ 8,023.75	5%	\$ 4,500.00			
Sub 8	8	113,280	\$ 106,483.20	3,398	109,882	\$ 103,288.70	\$ 3,194.50	3%	\$ 4,500.00			
Sub 9	49	24,749	\$ 23,264.06	990	23,759	\$ 22,333.50	\$ 930.56	4%	\$ 4,500.00			
	61	27,594	\$ 25,938.36	1,656	25,938	\$ 24,382.06	\$ 1,556.30	6%	\$ 4,500.00			
	74	6,693	\$ 6,291.42	67	6,626	\$ 6,228.51	\$ 62.91	1%	\$ 4,500.00			
	76	27,213	\$ 25,580.22	816	26,397	\$ 24,812.81	\$ 767.41	3%	\$ 4,500.00			
Sub 9b	68	39,127	\$ 36,779.38	2,739	36,388	\$ 34,204.82	\$ 2,574.56	7%	\$ 4,500.00			
Sub 11	34	18,015	\$ 16,934.10	1,081	16,934	\$ 15,918.05	\$ 1,016.05	6%	\$ 4,500.00			
	36	19,590	\$ 18,414.60	1,763	17,827	\$ 16,757.29	\$ 1,657.31	9%	\$ 4,500.00			
	42	12,440	\$ 11,693.60	871	11,569	\$ 10,875.05	\$ 818.55	7%	\$ 4,500.00			

Guidance on Energy Efficiency Business Case for Wastewater Pumping Systems for Green Project Reserve

Modifications, retrofits or replacement of existing wastewater pumping systems that achieve a 20% increase in energy efficiency will categorically qualify for the Green Project Reserve (GPR). Projects that do not achieve a 20% increase in energy efficiency can also count towards the GPR if they have a business case showing how the project significantly improves energy efficiency. Information to be included in a business case for wastewater pumping stations is provided below.

Business cases for wastewater pumping systems must include information that demonstrates that energy efficiency is the primary goal of the project. They should clearly show that: 1) the most energy efficient equipment is being used in the project, 2) that energy efficient design and operational considerations and practices are followed, 3) the percent increase in energy efficiency and KWH saved, and 4) why further energy efficiency improvements cannot be achieved.

1) Energy Efficient Equipment : The business case shall demonstrate that selected equipment is of the highest efficiency suitable for the project. The following are examples of standards or guidelines to be met:

- Selection of new or replacement electrical equipment should meet or exceed energy efficiency standards set forth by professional engineering and manufacturers associations such as the National Electrical Manufacturers Association (NEMA).
- If it is not possible to select new electrical equipment that can meet or exceed energy efficiency standards then applicants must provide acceptable evidence of why this could not be achieved, with rationale for selecting alternate equipment if the goal of energy efficiency is to be achieved.

2) Energy Efficient Design Practices and Considerations: The business case shall demonstrate that all energy efficient design practices and considerations suitable for the project were used. The following are general examples of design considerations where energy efficiency could be demonstrated:

- Pumping systems should be designed to operate in their most efficient zone. Pumps should be selected to operate close to the Best Efficiency Point (BEP) on a pump curve defined as the point with maximum efficiency of the pump. Choose pumps that result in the lowest friction head loss and ensure that pumps are properly sized for the pumping system.
- Pumping systems should be designed to reduce flows to be pumped where possible.
- Reduce pipe friction and lower head losses to reduce the energy needed for pumping. Note that repair and replacement of the collection system piping does not qualify as “green” except in the most dramatic infiltration/inflow cases.

- Where appropriate for energy efficiency purposes, use distributed control systems to operate the most efficient combination of pumps, and at the proper pump speeds, for needed flow rates and pressures.

3) **Energy Savings:** Comparing the energy requirements of the existing system with the energy requirements of the proposed upgrades yields the increase in energy efficiency. Business cases for energy efficient wastewater pumping projects should calculate the increase in energy efficiency as follows:

$$\frac{\text{kWh/year used prior to the upgrade} - \text{kWh/year used after the upgrade}}{\text{kWh/year used prior to the upgrade}}$$

The answer is expressed as a percentage improvement. The business case should clearly report the kWh/year saved by the project.

4) **Energy Saving Justification:** Business cases that demonstrate significant energy efficiency improvements will utilize all practical opportunities to improve energy efficiency. Consequently, each business case should discuss why the project cannot achieve a higher level of energy efficiency. One possible answer is that prior energy efficiency improvements have elevated the operation to a point where the remaining gains represent a smaller improvement.

Sample Calculation for energy and cost savings for Pumps:

Demonstrating Energy and Cost Savings for Pumps		
Pump Parameter	Comparison Pump	New Pump (Proposed Pump, Spec)
Manufacturer	EPA Region 6 Criteria	
Voltage/ Phase	240/3	
Motor Efficiency, %	89	
Pump Efficiency	72.5	
Power usage, Kw-Hr/Yr	283,021	
Power Cost, \$/Yr	0.09	
Operational Cost, \$/Yr	25472	
Savings, \$/Yr	N/A	
Base Standard Efficiency, %	77	0

New Standard Grade Efficiency: Pumps -72.5%; Motors-89% : $0.725 \times 0.89 = 0.65$

Adding 20% efficiency to the standard grade Efficiency:

Base Std. Efficiency, %	77
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Appendix E

Oklahoma Water Resources Board to Hold Public Meeting on Clean Water State Revolving Fund FY 2013 Intended Use Plan

OKLAHOMA CITY - The Oklahoma Water Resources Board will hold a public meeting to receive comments on the Draft FY 2013 Clean Water State Revolving Fund (CWSRF) Intended Use Plan and Project Priority List on Thursday, May 31, 2012, at 10:30a.m. at 3800 North Classen Blvd, Oklahoma City, OK 73118. Eligible public systems may receive below market interest rate financing for construction and improvement of collection and treatment works, stormwater, abandoned site remediation, water/energy efficiency, green infrastructure, innovative green projects and nonpoint source pollution control activities which maintain Oklahoma's surface and groundwater resources.

A copy of the draft plan is available at the above address or www.owrb.ok.gov. To submit a project to be considered for funding or for further information contact: Jennifer Wasinger, Financial Assistance Division, (405)530-8800.



OFFICE OF ATTORNEY GENERAL
STATE OF OKLAHOMA

March 29, 2012

Dr. Al Armendariz
Regional Administrator, Region VI
United States Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733

Re: Certification of FY 2012 CWSRF Capitalization Grant

Dear Dr. Armendariz:

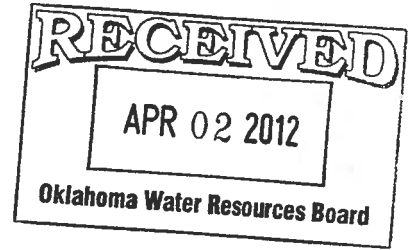
The Federal Water Pollution Control Act, 33 U.S.C §§1381, *et seq.*, as amended, provides authority to Congress to make capitalization grants available to the states for water pollution control revolving fund programs. In connection with the application of the state for the capitalization grant, 40 C.F. R §35.3110 requires that the state's Attorney General provide certification of the state's authority to enter into capitalization grant agreements.

This letter certifies that the Oklahoma Water Resources Board ("OWRB") has the authority to participate on behalf of the State of Oklahoma in this federal grant program. The statutes that specify the OWRB's authority includes the following language:

"...the Oklahoma Water resources Board shall have the following jurisdictional area of responsibility:...Administration of the federal State Revolving Fund Program including, but not limited to, making application for and receiving capitalization grant awards, wastewater prioritization for funding, technical project reviews, environmental review process, and financial review and administration."

27 O.S. § 1-3-101 (C)(6). Additional authority for the OWRB to apply for, receive and administer federal capitalization grant awards is specified in Oklahoma Const. Art. X §39 and 82 O.S. §§1085.53 *et seq.*

Eubanks - Armendariz
March 29, 2012
Page Two



If you have further questions or need additional information, please feel free to contact my office.

Sincerely,

A handwritten signature in black ink, appearing to be "E. Scott Pruitt". The signature is written over a horizontal line that extends across the page.

E. Scott Pruitt
Attorney General

ESP:clb

Oklahoma SAAP Grants (ACTIVE)

Grantee	Amount	EPA Grant Number	NEPA Type & Target/Actual Date	Project Description	Status
FY 2001					
OWRB 3%	\$49,500	XP-976165-01	N/A		
Norman, OK	\$1,597,000	XP-986829-01	EA/FNSI	WWTP Improvements	Project Complete
FY 2002					
OWRB 3%	\$87,000	XP-976298-01	N/A		
Lawton, OK	\$1,940,000	XP-976164-01	EA/FNSI	Sewerline Rehabilitation	Project Complete
Norman, OK	\$873,000	XP-976065-01	EA/FNSI	WWTP Improvements	Project Complete
FY 2003					
OWRB 3%	\$73,700	XP-976165-01	N/A		
Hulbert, OK	\$216,800	XP-976904-01	EPA issued CE in December 2005	Lift station and line improvement	Project Complete
Altus, OK	\$433,700		Multiple Meetings But No Info Yet	WWTP Improvements	Rescinded
Midwest City, OK	\$433,700		EPA CE issued July 2008	Water Infrastructure improvement	95 % Completion
Norman, OK	\$1,301,000	XP-976588-01	EPA CE issued	WWTP Improvements	Project Complete
FY 2004					
OWRB 3%(incr. FY 02)	\$82,100	XP-976298-01	N/A		
Lawton, OK	\$1,446,400	XP-976903-01	EA/FNSI	Water Infrastructure improvement	Project Complete
Norman, OK	\$192,900	XP-976588-01	EPA CE issued	Sludge management system improvements	Project complete
Midwest City, OK	\$192,900		EPA CE issued July 2008	Water Infrastructure improvement	95 % Completion
Arcadia, OK	\$313,400			New Wastewater line	Rescinded
Choctaw, OK	\$313,400		EPA issued CE 08/05/08	WWTP Improvements	Rescinded
Seminole, OK	\$192,900	XP-976855-01	EA/FNSI; 01/09/2007	Water Infrastructure improvement	Project Complete

Oklahoma SAAP Grants (ACTIVE)

Grantee	Amount	EPA Grant Number	NEPA Type & Target/Actual Date	Project Description	Status
<i>FY 2005</i>					
Seminole, OK	\$962,200	XP-966279-01	EA/FNSI; 01/09/2007	Water Infrastructure improvement	Project Complete
Skiatook, OK	\$96,200	XP-966099-01	EPA issued CE Feb. 9, 2006	WWTP Improvements	Project Complete
Marlow, OK	\$96,200	XP-966173-01	CE; 06/09/2006	Water Infrastructure improvement	Project Complete
Meeker, OK	\$77,000	XP-966385-01	EPA issued CE	Water Infrastructure improvement	Project Complete
Sulphur, OK	\$192,400	XP-966622-01	EA/FNSI	Wastewater Collection System Improvement	Project Complete
<i>FY 2006</i>					
Wewoka, OK	\$266,750		EPA issued CE 06/03/10	Water	Rescinded
Nicoma Park, OK	\$194,000		EA/FNSI issued by EPA	Wastewater collection system	Planning stage
<i>FY 2008</i>					
Ardmore, OK	\$300,000		No Project Info Yet	Water and Wastewater Project	Rescinded
<i>FY 2009</i>					
Ada	\$500,000	XP-00F33501-0	EPA issued CE 01/26/2011	Water and Wastewater Project	Planning stage
McAlester	\$300,000	XP-00F33601-0	EPA issued CE 02/14/11	Water	Project Under Construction
<i>FY 2010</i>					
Enid	\$300,000	XP-00F47501-0	Draft CE sent to EPA 06/20/11	Wastewater Plant Improvement	UV Equipment Installed
Lawton	\$750,000			Water & Wastewater	Planning Stage