DW-SRF 2011 Project

Proposal for Green Project Reserve Methodology using format from EPA's • June 22, 2009 guidance for GPR business cases

ESTIMATE OF VALUE OF WATER LOSS WORKSHEET

	SRF PROJECT ID #	**2011-08**	
1	Date:	10/23/2012	
2	PWSID #	ME0090970	
3	System	**MEXICO WATER DISTRICT**	
4	Project Name	Main Replacement Project	
5	Location	South Main, Alder, Osgood	
6	Engineering Consultant	A.E. Hodsdon	
7	Existing Main size, age, and type	6 inch cast iron unlined	
8	Proposed New Water Main size and type	8 inch Ductile Iron Cement Lined	
9	New Main Pipe Length	4,800	
10	Estimated Project Cost	$ 465,120	

Note: Data from Utilities Annual Report to Maine Public Utilities Commission

Page	Line	Description		Units		2011 data
W-12	15	Total Production Water		gallons per year		69,518,000
W-12	17	Total Revenue Water		gallons per year		53,539,000
W-12	19	Total Non-Revenue Water		gallons per year		15,979,000
W-12	19	Percent Non-Revenue Water				23%
W-12	22	Utility Usage - treatment		gallons per year		2,400,000
W-12	23	Utility Usage - hydrant flushing		gallons per year		-
W-12	14	Utility Usage - bleeders		gallons per year		-
W-12	26	Utility Usage - all other (running customers & blow-offs)		gallons per year		1,780,000
W-12	30	Fire Protection		gallons per year		44,000
W-12	31	Main Breaks		gallons per year		
W-12	35	Flushing Mains		gallons per year		-
W-12	36	Total Accounted for Non-Revenue Water		gallons per year		4,224,000
W-12	37	Total Unaccounted Non-Revenue Water		gallons per year		11,755,000
		Estimated Water Loss From ALL Breaks, Leaks, & Bleeders		**gallons per year**		13,535,000
		(PUC Accounts total of lines 14, 26,31,35 and 37)				
		% of Water Loss of Total Production Water				19%
		(PUC Lines 14,26,31,35,37 divided by Line 15)				
W-9	9	Total Transmission Mains		feet		4,526
W-9	23	Total Distribution Mains		feet		95,340
		Total Mains in Service		feet		99,866
				miles		19
		Estimated Distribution System Losses:				
		Loss Water per mile of pipe		gallons per mile per year		715,607
		Loss Water per foot of pipe per year		gallons per foot per year		136
		Loss water per foot of pipe per day		gallons per foot per day		0.37
		Water loss will vary with age of water main - assume Straight line projection as follows:				
		0 to 25 year old pipe	*0 % of Total Loss*	gallons per mile per year		-
		26 to 50 year old pipe	*10% of Total Loss*	gallons per mile per year		*71,561*
		51 to 75 year old pipe	*30% of Total Loss*	gallons per mile per year		*214,682*
		over 75 year old pipe	*60% of Total Loss*	gallons per mile per year		*429,364*
				All Loses:		715,607
		Age of Main to be replaced		years		100
		Length of Main to be Replaced		mile		0.91
		CALCULATED WATER LOSS - FOR PROPOSED PROJECT		**gallons per year**		**390,331**
W-2	29c	**Total PRODUCTION COST of Water**		**$/year**	**$**	**349,768**
W-12	15	Total Production Water		1,000 gallons per year		69,518
		Production Cost of Water		**per 1,000 gallons**	**$**	**5.03**
		PROJECTED ANNUAL VALUE of WATER LOSS		**per year**	**$**	**1,964**

Annual Savings	$	1,964
PV Factor (uniform series present worth factor (1%, 75 years):	$	52.587
Present Value of Savings over Economic life of pipeline:	**$**	**103,275**
Project Cost	**$**	**465,120**
PV Percent of Project Cost:		22%
ESTIMATED % Green		**22%**
$ Amount Green	**$**	**103,275**