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 #	**2011-06**	
1	Date:	10/23/2012	
2	PWSID #	ME0090860	
3	System	**LINCOLN WATER DISTRICT**	
4	Project Name	Main Replacement Project	
5	Location	School, Mechanic, Academy and Lincoln Streets	
6	Engineering Consultant	AE Hodsdon	
7	Existing Main size, age, and type	6" Cast Iron leaded joint unlined installed in 1920's	
8	Proposed New Water Main size and type	8" Ductile Iron cement lined	
9	New Main Pipe Length	2,655	
10	Estimated Project Cost	$ 416,339	

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		292,866
W-12	17	Total Revenue Water		gallons per year		261,832
W-12	19	Total Non-Revenue Water		gallons per year		31,034
W-12	19	Percent Non-Revenue Water				11%
W-12	22	Utility Usage - treatment		gallons per year		-
W-12	23	Utility Usage - hydrant flushing		gallons per year		3,300
W-12	14	Utility Usage - bleeders		gallons per year		-
W-12	26	Utility Usage - all other (running customers & blow-offs)		gallons per year		10,200
W-12	30	Fire Protection		gallons per year		1,400
W-12	31	Main Breaks		gallons per year		7,400
W-12	35	Flushing Mains		gallons per year		-
W-12	36	Total Accounted for Non-Revenue Water		gallons per year		22,300
W-12	37	Total Unaccounted Non-Revenue Water		gallons per year		8,734
		Estimated Water Loss From ALL Breaks, Leaks, & Bleeders ***(PUC Accounts total of lines 14, 26,31,35 and 37)***		**gallons per year**		26,334
		% of Water Loss of Total Production Water ***(PUC Lines 14,26,31,35,37 divided by Line 15)***				9%
W-9	9	Total Transmission Mains		feet		64,792
W-9	23	Total Distribution Mains		feet		113,716
		Total Mains in Service		feet		178,508
				miles		34
		Estimated Distribution System Losses:				
		Loss Water per mile of pipe		gallons per mile per year		779
		Loss Water per foot of pipe per year		gallons per foot per year		0
		Loss water per foot of pipe per day		gallons per foot per day		0.00
		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		*78*
		51 to 75 year old pipe	*30% of Total Loss*	gallons per mile per year		*234*
		over 75 year old pipe	*60% of Total Loss*	gallons per mile per year		*467*
				All Loses:		779
		Age of Main to be replaced		years		100
		Length of Main to be Replaced		mile		0.50
		CALCULATED WATER LOSS - FOR PROPOSED PROJECT		**gallons per year**		**235**
W-2	29c	**Total PRODUCTION COST of Water**		**$/year**	**$**	**625,527**
W-12	15	Total Production Water		1,000 gallons per year		293
		Production Cost of Water		**per 1,000 gallons**	**$**	**2,135.88**
		PROJECTED ANNUAL VALUE of WATER LOSS		**per year**	**$**	**502**

Annual Savings	$	502
PV Factor (uniform series present worth factor (1%, 75 years):	$	52.587
Present Value of Savings over Economic life of pipeline:	**$**	**26,396**
Project Cost	**$**	**416,339**
PV Percent of Project Cost:		6%
ESTIMATED % Green		**6%**
$ Amount Green	**$**	**26,396**