

# MASTER-METER SYSTEM PRIORITIZATION

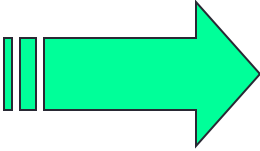
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**Safety and Enforcement Division**

**Gas Safety and Reliability Branch**

**System Characteristics**  
(material installed, pipeline pressures, on-site management requirements, installation period, cathodic protection)



**Cost efficiency issues related to construction**

**Pipe Material**  
Bare Steel  
Coated Steel  
PVC  
Pre-1970 PE  
Post-1970 PE

**Install Date**  
Pre 07/01/1971  
Post 07/01/1971

**CP Type (Steel Systems)**  
None Installed  
CP System Installed

**Pipeline Pressure**  
 $\geq 3$   
 $< 3$

**Number of Spaces**  
 $< 50$   
 $\geq 50$

**Number of leaks**

**Pipe Length**  
 $< 2500$   
 $\geq 2500$

**Dual Systems**  
Gas and electric from same Utility  
Gas and electric from different Utility  
Single utility



# Leak Analysis Breakdown

Leaks/Mile	Material	Cause
9.296	Bare Steel	Other
8.153	Coated Steel	Other
7.677	Protected Bare	Other
6.198	Above Ground	Corrosion
5.910	PVC	Other
5.864	Protected Coated	Other
5.520	PE	Other
5.518	Above Ground	Other
4.698	Bare Steel	Corrosion
4.566	Coated Steel	Corrosion
4.325	Protected Bare	Corrosion
3.837	PVC	Defect
3.790	PE	Defect
3.199	Protected Coated	Corrosion
<b>Corrosion</b>	<b>Other</b>	<b>Defect</b>
Above Ground	Bare Steel	PVC
Bare Steel	Coated Steel	PE
Coated Steel	Protected Bare	
Protected Bare	PVC	
Protected Coated	Protected Coated	
	PE	
	Above Ground	

- Defect Leaks include both construction defects and material defects
- Complete existing data set, all leak information for all MHPs

# Leaks Comparison

	# of MHPs	Length per Space
<b>Total</b>	2527	52.22 ft/sp
<b>≤ 50</b>	988	55.37 ft/sp
<b>&gt; 50</b>	1537	50.21 ft/sp

<b>Overall Leaks</b>		
	Leaks/ft	Leaks/mile
<b>Total</b>	0.00077	4.0810
> 50 Spaces	0.00073	3.8461
≤ 50 Spaces	0.00156	8.2426

<b>Corrosion Leaks</b>		
	Leaks/ft	Leaks/mile
<b>Total</b>	0.00039	2.0534
> 50 Spaces	0.00035	1.8453
≤ 50 Spaces	0.00114	6.0395

<b>Defect Leaks</b>		
	Leaks/ft	Leaks/mile
<b>Total</b>	0.00056	2.9341
> 50 Spaces	0.00049	2.5769
≤ 50 Spaces	0.00182	9.5959

<b>Other Causes Leaks</b>		
	Leaks/ft	Leaks/mile
<b>Total</b>	0.00088	4.6320
> 50 Spaces	0.00084	4.4290
≤ 50 Spaces	0.00158	8.3375

# Priority List – Original Ranking

Pressure	CP Type	Spaces	Install Date	BareSteel	CoatedSteel	PVC	PE	Leaks Found	Score	Pipe Length	Dual System	Same Utility	Dual System Score	Original Rank	Dual System Rank
3	None	9		TRUE	FALSE	FALSE	TRUE	14	13.2632	266	No	No	15.2632	1	1
0.25	None	32	1/1/1968	TRUE	FALSE	FALSE	FALSE	100	11.9524	1680	Yes	Yes	14.9524	2	2
0.25	None	30	1/1/1955	TRUE	TRUE	FALSE	FALSE	30	11.6354	905	No	No	13.6354	3	5
5	None	26	1/1/1938	FALSE	TRUE	FALSE	FALSE	46	11.5778	900	Yes	No	14.0778	4	4
5	None	14	1/1/1951	TRUE	FALSE	FALSE	FALSE	15	11.2051	468	Yes	Yes	14.2051	5	3
5	Sacrificial	32	1/1/1971	TRUE	FALSE	FALSE	FALSE	30	10.4286	875	No	No	12.4286	6	9
5	None	45	1/1/1963	TRUE	TRUE	FALSE	FALSE	23	10.1484	1820	Yes	Yes	13.1484	7	6
5	None	28	1/1/1957	TRUE	FALSE	FALSE	FALSE	25	9.9841	1260	No	No	11.9841	8	15
5	Impressed	34	1/1/1955	FALSE	TRUE	FALSE	FALSE	56	9.7128	1445	Yes	Yes	12.7128	9	7
5	Sacrificial	6		TRUE	FALSE	FALSE	FALSE	8	9.6667	300	No	No	11.6667	10	21
5	None	45	1/1/1959	TRUE	TRUE	FALSE	FALSE	21	9.6528	2160	Yes	Yes	12.6528	11	8
4	None	7	1/1/1968	FALSE	TRUE	FALSE	FALSE	8	9.6000	350	No	No	11.6000	12	23
5	None	45	1/1/1940	FALSE	TRUE	TRUE	FALSE	28	9.4933	2250	No	No	11.4933	13	29
8.5		10		FALSE	TRUE	FALSE	FALSE	14	9.4500	400	No	No	11.4500	14	33
5	None	42		TRUE	FALSE	FALSE	FALSE	30	9.4019	2140	Yes	No	11.9019	15	16
5	None	36		FALSE	TRUE	FALSE	FALSE	36	9.4000	1800	No	No	11.4000	16	37
5	None	28	1/1/1960	FALSE	TRUE	FALSE	FALSE	23	9.3879	1160	Yes	Yes	12.3879	17	10
5	None	49	11/4/1958	FALSE	TRUE	FALSE	FALSE	42	9.3333	2205	Yes	Yes	12.3333	18	11
5	Sacrificial	49	1/1/1960	FALSE	TRUE	TRUE	FALSE	46	9.2531	2450	Yes	Yes	12.2531	19	12
5	None	31		FALSE	TRUE	FALSE	FALSE	24	9.0839	1550	Yes	No	11.5839	20	25
5	None	25	1/1/1970	FALSE	TRUE	FALSE	FALSE	19	9.0640	1250	Yes	Yes	12.0640	21	13
5	None	26		TRUE	FALSE	FALSE	FALSE	13	9.0000	1300	Yes	Yes	12.0000	22	14
5	Sacrificial	5	1/1/1945	TRUE	FALSE	FALSE	FALSE	5	9.0000	250	No	No	11.0000	23	61
5	None	11	1/1/1960	TRUE	TRUE	FALSE	TRUE	3	8.9273	550	No	No	10.9273	24	82
5	None	11	1/1/1954	FALSE	TRUE	FALSE	FALSE	6	8.8750	480	Yes	No	11.3750	25	38
8.4	Sacrificial	29	1/1/1955	TRUE	TRUE	FALSE	FALSE	11	8.8700	1000	Yes	Yes	11.8700	26	17
5	None	23	1/1/1940	TRUE	FALSE	FALSE	FALSE	10	8.8696	1150	Yes	Yes	11.8696	27	18
3	None	48		TRUE	TRUE	FALSE	FALSE	11	8.7792	2400	Yes	Yes	11.7792	28	19
5	Sacrificial	20		FALSE	TRUE	FALSE	FALSE	10	8.7500	400	Yes	Yes	11.7500	29	20
5	None	15	12/31/1960	FALSE	TRUE	FALSE	FALSE	5	8.7000	500	No	No	10.7000	30	91

# Priority List – Dual Ranking

Pressure	CP Type	Spaces	Install Date	Steel	BareSteel	CoatedSteel	PVC	PE	Leaks Found	Score	Pipe Length	Dual System	Same Utility	Dual System Score	Original Rank	Dual System Rank
3	None	9		TRUE	TRUE	FALSE	FALSE	TRUE	14	13.2632	266	No	No	15.2632	1	1
0.25	None	32	1/1/1968	TRUE	TRUE	FALSE	FALSE	FALSE	100	11.9524	1680	Yes	Yes	14.9524	2	2
5	None	14	1/1/1951	TRUE	TRUE	FALSE	FALSE	FALSE	15	11.2051	468	Yes	Yes	14.2051	5	3
5	None	26	1/1/1938	TRUE	FALSE	TRUE	FALSE	FALSE	46	11.5778	900	Yes	No	14.0778	4	4
0.25	None	30	1/1/1955	TRUE	TRUE	TRUE	FALSE	FALSE	30	11.6354	905	No	No	13.6354	3	5
5	None	45	1/1/1963	TRUE	TRUE	TRUE	FALSE	FALSE	23	10.1484	1820	Yes	Yes	13.1484	7	6
5	Impressed	34	1/1/1955	TRUE	FALSE	TRUE	FALSE	FALSE	56	9.7128	1445	Yes	Yes	12.7128	9	7
5	None	45	1/1/1959	TRUE	TRUE	TRUE	FALSE	FALSE	21	9.6528	2160	Yes	Yes	12.6528	11	8
5	Sacrificial	32	1/1/1971	TRUE	TRUE	FALSE	FALSE	FALSE	30	10.4286	875	No	No	12.4286	6	9
5	None	28	1/1/1960	TRUE	FALSE	TRUE	FALSE	FALSE	23	9.3879	1160	Yes	Yes	12.3879	17	10
5	None	49	11/4/1958	TRUE	FALSE	TRUE	FALSE	FALSE	42	9.3333	2205	Yes	Yes	12.3333	18	11
5	Sacrificial	49	1/1/1960	FALSE	FALSE	TRUE	TRUE	FALSE	46	9.2531	2450	Yes	Yes	12.2531	19	12
5	None	25	1/1/1970	TRUE	FALSE	TRUE	FALSE	FALSE	19	9.0640	1250	Yes	Yes	12.0640	21	13
5	None	26		TRUE	TRUE	FALSE	FALSE	FALSE	13	9.0000	1300	Yes	Yes	12.0000	22	14
5	None	28	1/1/1957	TRUE	TRUE	FALSE	FALSE	FALSE	25	9.9841	1260	No	No	11.9841	8	15
5	None	42		TRUE	TRUE	FALSE	FALSE	FALSE	30	9.4019	2140	Yes	No	11.9019	15	16
8.4	Sacrificial	29	1/1/1955	TRUE	TRUE	TRUE	FALSE	FALSE	11	8.8700	1000	Yes	Yes	11.8700	26	17
5	None	23	1/1/1940	TRUE	TRUE	FALSE	FALSE	FALSE	10	8.8696	1150	Yes	Yes	11.8696	27	18
3	None	48		TRUE	TRUE	TRUE	FALSE	FALSE	11	8.7792	2400	Yes	Yes	11.7792	28	19
5	Sacrificial	20		TRUE	FALSE	TRUE	FALSE	FALSE	10	8.7500	400	Yes	Yes	11.7500	29	20
5	Sacrificial	6		FALSE	TRUE	FALSE	FALSE	FALSE	8	9.6667	300	No	No	11.6667	10	21
5	None	25		TRUE	FALSE	TRUE	FALSE	FALSE	7	8.6095	804	Yes	Yes	11.6095	33	22
4	None	7	1/1/1968	TRUE	FALSE	TRUE	FALSE	FALSE	8	9.6000	350	No	No	11.6000	12	23
5	None	25		TRUE	TRUE	FALSE	FALSE	FALSE	9	8.6000	1500	Yes	Yes	11.6000	34	24
5	None	31		TRUE	FALSE	TRUE	FALSE	FALSE	24	9.0839	1550	Yes	No	11.5839	20	25
5	None	49	1/1/1960	TRUE	TRUE	TRUE	FALSE	FALSE	8	8.5551	2450	Yes	Yes	11.5551	37	26
0.25	None	46	1/1/1965	TRUE	TRUE	TRUE	FALSE	FALSE	27	8.5500	1800	Yes	Yes	11.5500	38	27
8	Impressed	40	1/1/1945	FALSE	TRUE	FALSE	FALSE	FALSE	31	8.5423	2010	Yes	Yes	11.5423	41	28
5	None	45	1/1/1940	TRUE	FALSE	TRUE	TRUE	FALSE	28	9.4933	2250	No	No	11.4933	13	29
5	None	32	1/1/1950	TRUE	FALSE	TRUE	FALSE	FALSE	11	8.4813	1600	Yes	Yes	11.4813	44	30