



MHP Pilot Program: Criteria for Prioritization



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Background

Decision 14-03-021 issued March 13, 2014:

- “The first priority of the pilot must be to maximize conversion of higher risk MHP master-meter/submeter systems *that supply natural gas.*”





Decision 14-03-021

Criteria for conversion must focus on:

1. Safety first
2. Reliability and capacity improvements

where possible conversion of entire parks should be encouraged, as should joint trenching efforts that permit conversion of both natural gas and electric systems





Risk

Risk of any event is defined as an equation:

$$(\text{Probability}) \times (\text{Consequence}) = \text{Risk}$$

SED's safety priority focused on both sides of the risk equation.





Criteria

Safety: Pipe material, leak history, installation date, CP type, operating pressure, spaces and occupancy

Reliability: Electric Amperage, summer average high temperature

Cost Efficiency: Dual systems





Safety Criteria

Criteria	Points	Notes
Pipe Material Bare Steel = 1 Coated Steel = 0.7 PVC = 0.5 Pre-1970 PE = 0.3 Post-1970 PE = 0.1	0.1-1	More points for bare steel. Points are multiplied by Leaks/Length. Criteria is based on history of material versus leaks on the gas system. GSRB performed an analysis that looked at material, length of pipe, number of leaks and cause of leaks to determine the ranking of the different pipe material.
Leaks	0-1.25	Leaks reported from the MHP-1 Annual Reports per 10 feet of gas pipeline
Install Date	0-2	More points for pre-code pipeline (7/1/1971 cutoff date)





Criteria	Points	Notes
CP Type (for steel)	0-2	More points for steel systems without CP . Even with CP installed, the system may still be considered more risky versus a plastic system due to the required maintenance on the CP system.
Pressure	0-2	More points for pressure above 3 psi. MHP with pressures equal to or higher than 3 psi will likely have distribution system regulators, which requires additional maintenance to the gas system.
Number of Spaces	0-2	More points for smaller parks. MHP with less than 50 spaces have no requirement for on-site manager. An on-site manager can provide constant patrolling and identify unsafe conditions much sooner.
Occupancy 7	0-1	Normalized percentage value. A higher occupancy would result in higher consequence of risk





Reliability/Capacity Criteria

Criteria	Points	Notes
<p>Electric Amperage</p> <p>< 30 Amps = 2</p> <p>30 Amps <&< 50 Amps = 1</p> <p>> 50 Amps = 0</p>	0-2	<p>Electrical systems are ranked based the number of amperage provided to the park. Systems with lower provided amperage will get higher priority due to modern day increase demand of electricity.</p>
<p>Temperatures (Summer months average high)</p>	0-1	<p>Average Fahrenheit temperature divided by 100. GSRB performed an analysis that looked at average summertime temperatures in all areas of CA to determine the areas with greatest demand for higher amps of electricity.</p>





Cost Criteria

Criteria	Points	Notes
Dual Systems	0-1	<p>More points for the gas and electric from the same utility.</p> <p>Dual gas and electric systems from the same utility can be replaced more efficient versus single utility systems and dual systems with different utility.</p>





Data Sources

- MHP-1 Annual Reports
(these are sometimes updated during safety inspections by SED)
- Pilot Program Application
- GSRB Incident Database





Point System

Each criterion was assigned normalized values

- Normalized values were usually 0-1; some criterion were 0-2.

Safety: 10.25 possible

Reliability/Capacity: 3 possible

Cost: 1 possible





Prioritization

Each MHP system was assigned a total point value based on these issues of safety, reliability, capacity, and cost efficiency.

The MHPs were ordered by this total score.\

The groupings for Phase 1, 2, etc. depended on the numbers of MHPs in service territories and applicants.





E	F	G	H	I	J	K	L	M	N	O	P	Q
MHPCity	County Name	ScoreTr	Tota	Occ	Mater	CPUC_Mater	GasInst	Pressu	C	CPTyp	Am	Temperatu
BAKERSFIELD	KERN	14.13778	18	16	BSteel	BSteel	1/1/1950	5	FALSE		30	86 S
FRESNO	FRESNO	14.02	25	23	BSteel	BSteel	1/1/1961	5	FALSE		50	85 P
BAKERSFIELD	KERN	13.89333	5	5	CSteel	BSteel	1/1/1968	6	FALSE		30	86 P
HEALDSBURG	SONOMA	13.65	9	9	BSteel		1/1/1969	5	FALSE		30	65 P
BURNEY	SHASTA	13.51685	27	23	CSteel		1/1/1955	4	FALSE		30	84 P
SACRAMENTO	SACRAMENTO	13.34829	39	19	BSteel	PE	1/1/1950	5	FALSE		30	75 P
WILLITS	MENDOCINO	13.28906	27	27	CSteel	CSteel	1/1/1957	5	FALSE		50	74 P
RODEO	CONTRA COSTA	12.86494	34	24	CSteel	CSteel	1/1/1947	5	TRUE	Sacrificial	30	61 P
CASTRO VALLEY	ALAMEDA	12.84	34	34	CSteel	CSteel	1/1/1947	5	FALSE		30	64 P
GROVER CITY	SAN LUIS OBISPO	12.815	40	39	CSteel	CSteel	12/31/1961	5	FALSE		30	64 S
CASTRO VALLEY	ALAMEDA	12.68091	49	49	CSteel	CSteel	1/1/1960	5	TRUE	Impresse	30	64 P
TRACY	SAN JOAQUIN	12.45667	30	29	CSteel	CSteel	1/1/1950	5	TRUE	Impresse	30	79 P
SANTA CRUZ	SANTA CRUZ	12.43048	22	22	CSteel	CSteel	1/1/1940	5	TRUE	Sacrificial	30	54 P
BURNEY	SHASTA	12.36	25	13	BSteel	CSteel	1/1/1959	11	FALSE		50	84 P
SANTA ROSA	SONOMA	12.35	46	46	CSteel		1/1/1940	5	TRUE	Impresse	30	65 P
STOCKTON	SAN JOAQUIN	12.34	20	17	CSteel	CSteel	1/1/1940	5	TRUE	Impresse	30	79 P
SOQUEL	SANTA CRUZ	12.21	20	20	CSteel	CSteel	1/1/1970	4	TRUE	Sacrificial	30	61 P
FRESNO	FRESNO	12.20217	23	15	CSteel	BSteel	1/1/1960	5	TRUE	Impresse	30	85 P
REDDING	SHASTA	12.14215	31	29	CSteel	CSteel	1/1/1970	5	FALSE		100	84 P
SANTA MARIA	SANTA BARBARA	12.12	22	22	BSteel	CSteel	1/1/1962	6	FALSE		50	62 S
ARROYO GRANDE	SAN LUIS OBISPO	12.09	34	34	CSteel	CSteel	1/1/1960		FALSE		30	64 S
LOCKEFORD	SAN JOAQUIN	11.88474	40	40	CSteel	CSteel	1/1/1965	5	TRUE	Impresse	50	79 P
FELTON	SANTA CRUZ	11.86108	32	29	BSteel	CSteel	1/1/1963	20	TRUE	Impresse	50	61 P
STOCKTON	SAN JOAQUIN	11.79	11	11	BSteel	BSteel	1/1/1960		FALSE		30	79 P





Thank you!
For Additional Information:
www.cpuc.ca.gov

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