

Cast Iron / Bare Steel Replacements

The following document provides a general overview of the processes currently used to identify areas of cast iron or bare steel mains within the gas distribution system which could be listed for replacement. These areas are then sorted by several considerations including but not limited to leakage data, pressures, local knowledge of operational concerns (water in LP mains), etc. System operation conditions vary according to weather conditions, leakage surveys, municipal upgrade/highway project proposals, etc., which also cause re-evaluation of the general areas that may have previously been identified. The items listed below are generally used in this process and are not necessarily listed in order of their priority of use.

- MAGI is the system of record for electronic mapping of the distribution system throughout Alagasco. Using the material code of pipe attributes, this is set to identify pipe by material type (cast iron, plastic, steel, etc.).
- Leakage data is extracted from SAP (work management/financial system of record) and each leakage record listed is geo-coded into MAGI, by the associated address for possible viewing. This data is also compiled into a database, which is sorted by geographical quarter sections providing a “leak per mile” comparison. This data is filtered to only consider metallic pipe and leak data which is within 150’ of a metallic main. This reduces the possibility that leaks on plastic mains are considered in this analysis.
- Comparing the quarter section leakage data with the various distribution systems that may be contained within that quarter section (using MAGI), a more defined system replacement project area is able to be identified. To assist with resource limitations, the target size of any one project is approximately 250 customers and/or \$250,000 main replacement expense. Due to the distribution system designs, this target is often not possible, but it is the goal to keep projects in a more manageable size. Multiple project areas are sometimes combined due to the specific distribution system requirements or other reasons.
- Before a more formal project design is started, the proposed project area/distribution system is forwarded to the QA group for Stoner model verification. Often larger diameter existing mains can be replaced with smaller diameter mains due to changes in pressure and/or load conditions.
- Projects are identified for each of the various work locations (Anniston, Birmingham, Montgomery, etc.). The resources of the local operations must be considered (manpower limitations for meter swap-overs, tie-ins, etc.) when projects are identified.
- Meetings are held at least annually with the various local management personnel to review the proposed project areas. Any adjustments to project areas and/or their priority that are suggested by local operation personnel are included in the proposed project schedules.
- Each work location’s proposed project areas are then considered as one plan and adjustments are made to meet the financial guidelines provided. Again, local resource limitations are often the guiding factor for the amount of project work planned for any given site, in a given period.