



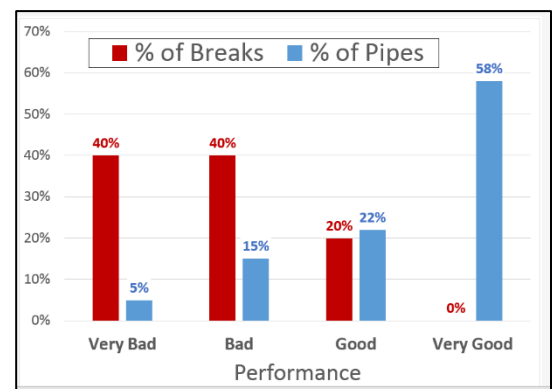
HOW LONG DO WATER MAINS LAST AND HOW DO WE KNOW WHEN TO REPLACE THEM?

As we discussed in the August newsletter, the oldest pipes in the RMWD service area are over 60 years old and about half of the system of 325 miles of pipe is 50 years or older. Since pipelines are generally designed to last 50 years we are at a point where action is needed. Many of our customers have experienced water outages and traffic inconveniences due to water main breaks, and as the system ages this problem will get worse unless proactive approaches are taken to manage the aging system.

One solution would be to simply replace each pipeline as it hits the 50-year mark. While simple, this would be prohibitively expensive. Our system is worth about \$400 Million so replacing the half of it that is over 50 years old is out of the question. Further, even though these pipes are 50 years old they are still providing an acceptable level of service. We will define the level of service as how often a pipeline breaks. Too many breaks means multiple outages, potential property damage, overtime and other costs for repair, etc. It is critical that we manage the performance of pipelines to keep the break rate in acceptable ranges.

As part of our comprehensive Condition Assessment Program, we have evaluated all of our water mains to establish their break rates and corresponding service levels. We organized the pipelines into groups, putting pipelines that were built at the same time and by the same people are grouped together. We called these projects. Back in the day there was some significant variation of installation quality as some pipelines were installed as part of old agricultural mutual water companies and others under more favorable conditions.

The result of the study showed that about 80% of our main breaks over the last ~20 years come from 20% of the projects. About 40% of the failures come from just 5% of the projects! This shows that a small cohort of pipeline projects are causing most of our issues. The good news is that about 60% of our system has had zero failures, indicating that workmanship and inspection processes were working as intended.



With respect to the cause of failures other than construction defects, the data analysis showed that a combination of pressure and aggressive soil conditions correlates fairly strongly to pipeline failure. This finding gives us additional options to reduce break rates by investing in pressure control and cathodic protection of these pipelines, both more cost effective than straight replacement. Our goal is to extend the length of time that we can obtain acceptable levels of service for all pipelines as that delays the need for eventual replacement. At some point in time all pipelines will need to be replaced, but if we can extend the useful lives of each pipeline, the return on investment improves for all ratepayers.

We discuss these matters at our monthly Engineering Services Committee meetings – please join us for more information.



SCAM ALERT

It is unfortunate but every year we receive reports of unscrupulous individuals and groups coming up with clever schemes to defraud people. They may offer some new sophisticated technology coupled with scare tactics. They often add new twists to old schemes and pressure people into making important decisions on the spot, sending money needlessly or giving out personal information.

We are always on the lookout for these types of violations in our District but not always aware of what is happening in your neighborhoods. To protect yourself from any fraudulent activity, make sure to always ask to see the identification of anyone coming to your home claiming to represent Rainbow Municipal Water District, as Rainbow MWD employees always carry proper identification.

If you receive a phone call that seems suspicious ask to put them on hold and call our customer service department to confirm that one of our service technicians is in your area and scheduled to be at your home or business. You can also ask the caller for their contact information so you can check into the circumstances further and call them back. Our employees are happy to wait for a confirmation to be obtained. Anyone who refuses to wait while the agency is being contacted should be considered a fraud and should be reported to either RMWD or the San Diego police.

If you have any suspicions or reservations please contact our customer service staff at 760-728-1178 or notify us through our website at <https://www.rainbowmwd.com/contact-us>. As always, we are here to serve you and answer any questions you may have about your account or utility services.

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FREE SANDBAGS TO PROTECT LILAC FIRE BURN AREAS

The County of San Diego has opened a new center in Bonsall to help people living in and around the areas burned by the Lilac fire by giving out free sandbags, fiber rolls and items to stabilize properties before winter rains arrive. The center is located at the County's Bonsall Road Station at 2370 Pala Road. The center will run Mondays through Saturdays from 8 a.m. to 5 p.m. and Sundays from 9 a.m. to 2 p.m.

In addition to the free sandbags, fiber rolls, stakes and native plant seeds, people can get brochures showing how to properly install the items so rains don't damage properties by washing vital soil away. County Department of Public Works staff will be at the center to advise people about how to protect their properties, homes, garages, sheds, and other structures. Staff will also be available to go to people's properties to visually inspect and offer advice about how best to protect structures.

For more information please go to the County Recovery website at <http://www.sdcountyrecovery.com/>