Wastewater Collection System Assessment

Dallas Water, Texas – USA

Commission / Duration :	2005-2006
Physical Work Value :	N/A

the challenge

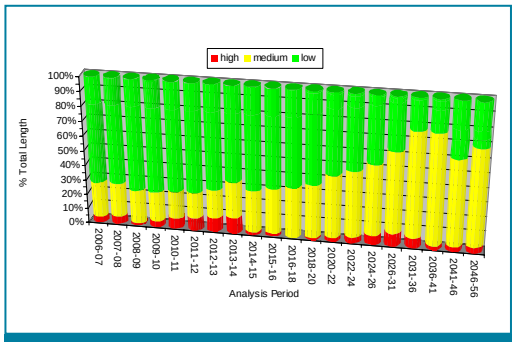
To cope with an anticipated "asset deterioration bubble" due to post-war expansion in the 1950-60s, MWH assisted Dallas Water to undertake a comprehensive asset condition assessment programme.

As part of this overall assessment, Dallas Water recognised the need for a more systematic and automated approach to their asset management planning and decision-making. This was particularly relevant considering the wastewater network comprised over 100,000 separately identifiable pipeline assets of approximately 7,000 km in total length.

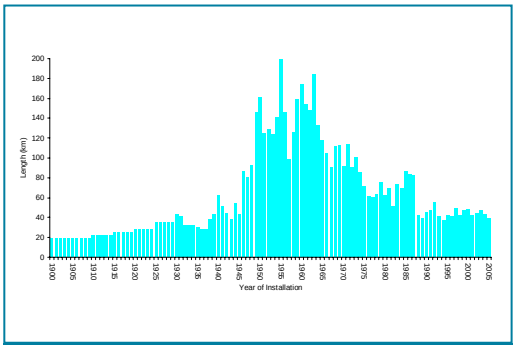
our solution

MWH NZ developed a risk-based Decision Support System (DSS), using the dTIMS Total Infrastructure Management System to plan and prioritise inspection and renewal programmes. The system enabled Dallas Water to identify near-term priority assets for inspection and renewal and also provided a 50-Year "snapshot" forecast of collection system renewal and replacement (R&R) costs. This enabled Dallas Water to effectively plan for the expected increased financial burden.

MWH NZ identified further efficiencies by integrating the DSS within the existing GIS environment which provided clear and concise reporting outputs.



Forecast 50-year risk profile based on risk-based renewals programme



Length of pipe by installation year showing the post-war buble that many utilities are now facing in the near term.

key outcomes

- GIS integration – Prioritised asset renewal and inspection forward works programmes integrated within GIS
- Risk scenarios – Renewal strategies that can be changed to examine effect on the level of network and asset risk.
- 50-year Budget forecasts – Forward works programmes can be generated to provide anticipated future inspection and renewal costs.

Contact

Simon Heart
Asset Management Practice Lead - BSG (Business Solutions Group)
Tel: (303) 439-2733