

Appendix G

1 Continual Improvement

Wannon Water has an integrated management system that incorporates an environmental management system framework. This framework provides a comprehensive approach to the systematic management and continual improvement. The areas of improvement that have been identified for the Hamilton WRP are listed below.

1.1 Sewer relining

Wannon Water recognises that significant inflows during period of wet weather are occurring. Deteriorated pipes, manholes and property connection junctions in gravity sewer networks can all contribute to infiltration of groundwater into the sewage collection system. Infiltration increases the volume processed by WRPs and the thus the volume of effluent to be managed. Rehabilitation and renewal of assets to maintain appropriate condition and service levels in the network can significantly reduce the amount of infiltration into sewage collection systems.

Wannon Water has a proactive CCTV inspection program which inspects approximately 50km of gravity sewer pipes annually, as well as manholes. The sewer inspection program has been running for 9 years and the current contract is an ongoing term contract. The condition inspection program is risk based, targeting the higher risk gravity sewer pipes across Wannon Water's service area. The results of this inspection program are used to identify deteriorated pipes and manholes for renewal.

Wannon Water has completed CCTV inspections of various pipes and also flow monitoring of the Hamilton Sewerage System. The section of network along the south side of the Grange Burn was identified as most affected section where works would provide Wannon Water with the greatest reduction in inflow/infiltration.

11,258 m of gravity sewer pipes have been relined in Hamilton in the last 3 years, and this will continue as part of the proactive management of the sewer network.

During 2018/19 it is proposed to reline approximately 1000 m of 450 mm sewer pipe to seal leaks and damaged joints where infiltration is occurring. This relining is expected to result in a reduction of 5 to 7 ML of infiltration entering the system each year.

Mist testing is also carried out periodically to identify inflow via illegal stormwater connections, manhole lid ingress, etc. to the sewer collection system.

1.2 Irrigation efficiency

Wannon Water is aware that the farm management and irrigation capacity efficiency could be improved at Hamilton, this was highlighted in a preliminary report by Ag Challenge in 2017 (D2017/049827).

Wannon Water has budgeted to undertake a farm management and irrigation study with the aim of improving farm management, irrigation efficiency and ultimately the volume of wastewater reused.

1.2.1 Addition Pivot

In addition to the project above an additional pivot irrigator has been purchased for the Monivae Irrigation Farm. The additional irrigation will allow both pivot areas to be irrigated at the same time. Improving the irrigation efficiency.

1.3 Waterway monitoring

Currently Wannon Water monitors the flow within Muddy Creek at the Henty Hwy Road Bridge. The operator uses a gauge board to assess the creek height and the time it takes the flow to travel under the bridge. This information is used to calculate the Muddy Creek flow in ML/day. If discharge to Muddy Creek is included as part of the EPA corporate licence, Wannon Water plans to engage a hydrologist to undertake a detailed cross section survey of Muddy Creek with the aim of developing a rating table. Wannon Water will install an on-line level sensor that will capture real-time creek heights. This will allow Wannon Water to accurately time discharges to maximise dilution ratios.