Table 46 – Wastewater Serviceability – Lines 42, 43 & 44

Commentary by REPORTER

1. Key Findings

- In the case of Lines 42 there is a significant improvement in the availability of equipment for wastewater infrastructure assets. The number of sewer repairs and pumping station overflows triggered by equipment failures are also slightly lower than the numbers reported in previous years, suggesting the relatively benign weather in 2015/16 has benefited the performance of sewerage infrastructure.

2. Audit Approach

- The information in this table (selected for review in AIR16) is used to measure the level of maintenance activity on sewerage infrastructure undertaken within the Company, and is used to assess the asset serviceability status. The audit of Lines 43 and 44 consisted of an interview with the line owner to discuss the methodology and data used to generate this table.
- The responsibility for the compilation of Line 42 data is split between several system holders. Data is collected and analysed by a team at the NI Water's Gelvin Grange office but for ease of auditing logistics a meeting was held with the team manager at NI Water's Westland office in Belfast to review the methodology and reported figures for this year.

3. Audit Findings

3.1 Equipment Failures Repaired (Line 42)

For sewerage infrastructure assets, the relatively benign weather, with fewer storms causing blockages appears to have been a significant factor in the significant reduction in the total number of equipment failures sewerage infrastructure (line 42), summarised below.

Table 46, Line 42	2013/14	2014/15	2015/16
Total number of failures repaired	10,899	11,245	9,986

The improvement is also understood to be partly due to targeted maintenance where area managers have been looking at equipment off-line and focusing on bringing it back into service quicker. The targeted maintenance aimed at improving availability of assets is not necessarily going to reduce the count of number of failures but should improve the availability by restoring them to service more quickly and with better prioritisation of those which are more critical.

3.2 Number of pumping station emergency overflows triggered by equipment failure (Line 43)

For AIR16, NI Water has reported 15 overflows triggered by equipment failure which represents a slight improvement in the number of incidents reported in previous years.

In order to determine the number of pumping station events triggered by equipment failure, NI Water has manually analysed all confirmed 2015/16 pollution incidents (as agreed with NIEA) and manually identified the number of incidents that were due to pump related issues.

As part of our review of all maintenance activity on sewerage infrastructure undertaken within the Company for AIR16, we undertook a review of the overall analysis undertaken and concur with the number of reported incidents.

3.3 Number of sewer repairs (Line 44)

The total number of sewer repairs is gathered by Wastewater Networks Field Managers using checked and paid invoices from the Sewer Maintenance Contractor and submitted through to the WW Business Unit on a monthly basis.

For AIR16, NI Water has reported 1,227 repairs to the sewer network, a slight decrease on that reported in AIR15, again reflecting the more benign weather conditions.

We undertook a review of the monthly analysis undertaken by the Ww Business Unit and confirm the number of repairs reported for AIR16.

4. Company Methodology

4.1 Equipment Failures Repaired (Line 42)

The Company's methodology for capturing data and recording information on sewerage equipment failures for line 42 follows that previously devised for Table 16a Line 4 of previous Annual Information Returns and is the same as last year. Information is taken from NI Water's Mobile Work Management system on a monthly basis: extracting entries relating to reactive maintenance jobs associated with CSOs or Sewage Pumping stations. NI Water does not have the ability to record data on non-electromechanical devices such as storage tanks anti-flood devices or flow control devices.

Manual filtering of the information extracted is undertaken to remove duplicates arising from the entries of "two-man" jobs, it is also noted that some out of hours jobs may not be captured by the Mobile Work Management system. The methodology only captures equipment failures, not the outcome associated with the failure, so it cannot be filtered to report only those that result in "a detrimental impact on service".

A change in working arrangements also occurred in the 2015/16 year whereby contractors are now available to assist NI Water staff with pump blockages. .Contractors only respond to work requests from NI Water, contractor unblock jobs are included in the report.

Although there are some shortcomings with this methodology, it uses the best information available to NI Water and is consistent with previous years. Overall it should give a good year on year representation of this serviceability indicator.

We would however suggest that an occasional review of the cleansing assumptions used for "two-man jobs" on line 42 is undertaken. The review should look to ensure consistency over time and that only the jobs reported through the Work Management System, which relate to separate attendances for the same failure, are removed and nothing more.

4.2 Number of pumping station emergency overflows triggered by equipment failure (Line 43)

As described above, NI Water has used the data gathered from pollution incidents and manually analysed the April 15 to March 16 data, totalling the incidents that were due to pump issues and provided this figure for the data return. These pollution incidents are audited quarterly by NIEA and submitted to NI Water for reporting.

4.3 Number of sewer repairs (Line 44)

Network failure data is collated by the Networks Sewerage field managers using checked and paid invoices from the sewer maintenance contractor under the '309 contract'. The base data that is collected differentiates between rising main failures, gravity sewer collapses and sewer blockages. This data is submitted on a monthly basis to the four network area managers and then to the Networks Sewerage Business Unit.

5. Confidence Grades

Not Applicable

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