

FORBES SEWAGE TREATMENT WORKS - EPA LICENCE TESTING RESULTS

Published 15 July 2016

Licensee: Forbes Shire Council

License No. 4809

Address: 2 Court Street Forbes NSW 2871

Monitoring Point 5 - Discharge from Sewer Plant

Site Address: Forbes STP Newell Hwy Forbes NSW 2871 Pollutant concentrations of water being discharged from Sewer Treatment Plant

Lot 226 DP752962

| Date Sampled | Effective Month | | | 6/Oct/15 | 11/Nov/15 | 13/Dec/15 | 12/Jan/16 | 9/Feb/16 | 15/Mar/16 | 5/Apr/16 | 3/May/16 | 7/Jun/16 | 5/Jul/16 | Aug/16 | Sep/16 | of tests | | | | |
|------------------------|-----------------|-----------------------|---------------------|---|-----------|-----------|-----------|----------|-----------|----------|----------|----------|----------|--------|--------|----------|------|------|-------|--|
| | | | | Oct/15 | Nov/15 | Dec/15 | Jan/16 | Feb/16 | Mar/16 | Apr/16 | May/16 | Jun/16 | Jul/16 | | | | | | | |
| Parameters Monitored | Units | 100 percentile limits | 90 percentile limit | Required Monitoring Frequency - Monthly | | | | | | | | | | | | | Min | Avg | Max | |
| | | License Limits | PQL limit | Measured Values | | | | | | | | | | | | | | | | |
| pH | | 6.8 - 8.5 | 6.8 - 8.5 | 7.00 | 7.00 | 7.50 | 7.20 | 7.10 | 7.80 | 7.00 | 7.00 | 7.40 | 7.30 | | | 10 | 7 | 7.23 | 7.8 | |
| Total Nitrogen | mg/l | 15 | 10 | 3.50 | 3.50 | 3.60 | 3.90 | 4.20 | 4.80 | 3.90 | 4.80 | 4.30 | 5.60 | | | 10 | 3.5 | 4.21 | 5.6 | |
| Total Phosphorus | mg/l | 0.5 | 0.3 | 0.06 | 0.07 | 0.08 | 0.05 | 0.06 | 1.09 | 0.05 | 0.05 | 0.09 | 0.17 | | | 10 | 0.05 | 0.18 | 1.09 | |
| Faecal Coliforms | CFU/100ml | 600 | 200 | 1.00 | 1.00 | 1.00 | 11.00 | 1.00 | 4.00 | 1.00 | 1.00 | 1.00 | 2.00 | | | 10 | 1 | 2.40 | 11 | |
| BOD5 | mg/l | 15 | 10 | 3.00 | 2.00 | 2.00 | 2.00 | 2.00 | 3.00 | 2.00 | 2.00 | 2.00 | 2.00 | | | 10 | 2 | 2.20 | 3 | |
| Non Filterable Residue | mg/l | 20 | 15 | 7.00 | 12.00 | 2.00 | 1.00 | 6.00 | 9.00 | 4.00 | 5.00 | 7.00 | 5.00 | | | 10 | 1 | 5.80 | 12 | |
| Ammonia | mg/l | 5 | 2 | 0.37 | 0.17 | 0.02 | 0.19 | 0.35 | 1.33 | 0.23 | 0.23 | 0.18 | 0.38 | | | 10 | 0.02 | 0.35 | 1.33 | |
| Oil and Grease | mg/l | 15 | 10 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 3.00 | 2.00 | 2.00 | 2.00 | 2.00 | | | 10 | 2.00 | 2.10 | 3.00 | |
| Chlorophyll-a | ug/L | | | 6.00 | 2.00 | 2.00 | 4.00 | 3.00 | 3.00 | N/A | 10.00 | 3.00 | 2.00 | | | 10 | 2.00 | 3.50 | 10.00 | |

Indicates result was below the limit of measure of the test

Indicates results exceed the licence limits

Monthly Discharge

| Volume | Megalitres | 6/Oct/15 | 11/Nov/15 | 13/Dec/15 | 12/Jan/16 | 9/Feb/16 | 15/Mar/16 | 5/Apr/16 | 3/May/16 | 7/Jun/16 | 5/Jul/16 | Aug/16 | Sep/16 |
|--------|------------|----------|-----------|-----------|-----------|----------|-----------|----------|----------|----------|----------|--------|--------|
| | | 52.375 | 51.755 | 58.763 | 58.709 | 49.789 | 52.001 | 53.001 | | | | | |

Monitoring Point 7 - Gum Swamp Water Quality near Birdhide

Pollutant concentrations of water in Gum Swamp

| Date Sampled | Effective Month | | | 6/Oct/15 | 11/Nov/15 | 13/Dec/15 | 12/Jan/16 | 9/Feb/16 | 15/Mar/16 | 5/Apr/16 | 3/May/16 | 7/Jun/16 | 5/Jul/16 | Aug/16 | Sep/16 | No of tests | | | | |
|------------------------|-----------------|---|--|----------|-----------|-----------|-----------|----------|-----------|----------|----------|----------|----------|--------|--------|-------------|------|--------|------|--|
| | | | | Oct/15 | Nov/15 | Dec/15 | Jan/16 | Feb/16 | Mar/16 | Apr/16 | May/16 | Jun/16 | Jul/16 | | | | | | | |
| Parameters Monitored | Units | Required Monitoring Frequency - Monthly | | | | | | | | | | | | | Min | Avg | Max | | | |
| | | Measured Values | | | | | | | | | | | | | | | | | | |
| pH | | | | 7.50 | 7.60 | 8.00 | 7.60 | 8.80 | 8.60 | 7.70 | 7.80 | 8.00 | 7.50 | | | 10 | 7.5 | 7.9 | 8.8 | |
| Total Nitrogen | mg/l | | | 6.60 | 4.80 | 5.30 | 4.70 | 6.80 | 5.90 | 5.20 | 4.40 | 3.40 | 2.60 | | | 10 | 2.6 | 5.0 | 6.8 | |
| Total Phosphorus | mg/l | | | 0.50 | 0.47 | 1.10 | 0.87 | 0.89 | 1.64 | 0.87 | 0.80 | 0.35 | 0.23 | | | 10 | 0.23 | 0.8 | 1.64 | |
| Faecal Coliforms | CFU/100mL | | | 1660.00 | 1780.00 | 1040.00 | 2940.00 | 170.00 | 3601.00 | 4.80 | 6.30 | 1.05 | 100.00 | | | 10 | 1.05 | 1130.3 | 3601 | |
| BOD5 | mg/l | | | 7.00 | 4.00 | 14.00 | 13.00 | 28.00 | 22.00 | 2.00 | 14.00 | 8.00 | 2.00 | | | 10 | 2 | 11.4 | 28 | |
| Non Filterable Residue | mg/l | | | 34.00 | 31.00 | 186.00 | 61.00 | 115.00 | 88.00 | 78.00 | 93.00 | 34.00 | 9.00 | | | 10 | 9 | 72.9 | 186 | |
| Ammonia | mg/l | | | 4.00 | 2.40 | 0.01 | 0.17 | 0.01 | 1.01 | 0.01 | 0.55 | 0.79 | 1.20 | | | 10 | 0.01 | 1.0 | 4 | |
| Oil and Grease | mg/l | | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 3.00 | 2.00 | 2.00 | 2.00 | 2.00 | | | 10 | 2 | 2.1 | 3 | |

Indicates result was below the limit of measure of the test

Monitoring Point 9 - Lachlan River Downstream of sewer outfall location

Pollutant contrations of Lachlan River Water Downstream of Sewer Outfall

| Date Sampled | | | | 6/Oct/15 | 11/Nov/15 | 13/Dec/15 | 12/Jan/16 | 9/Feb/16 | 15/Mar/16 | 5/Apr/16 | 3/May/16 | 7/Jun/16 | 5/Jul/16 | | | No of tests | | | |
|------------------------|-----------|---|--|----------|-----------|-----------|-----------|----------|-----------|----------|----------|----------|----------|--------|--------|-------------|---------|-------|------|
| Effective Month | | | | Oct/15 | Nov/15 | Dec/15 | Jan/16 | Feb/16 | Mar/16 | Apr/16 | May/16 | Jun/16 | Jul/16 | Aug/16 | Sep/16 | | | | |
| Parameters Monitored | Units | Required Monitoring Frequency - Monthly | | | | | | | | | | | | | | Min | Average | Max | |
| | | Measured Values | | | | | | | | | | | | | | | | | |
| pH | | | | 7.70 | 7.80 | 8.00 | 7.80 | 7.80 | 8.70 | 7.90 | 7.80 | 7.80 | 7.60 | | | 10 | 7.6 | 7.9 | 8.7 |
| Total Nitrogen | mg/l | | | 0.74 | 0.70 | 0.68 | 0.69 | 0.71 | 1.63 | 0.52 | 1.30 | 0.54 | 3.00 | | | 10 | 0.5 | 1.1 | 3 |
| Total Phosphorus | mg/l | | | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 1.05 | 0.05 | 0.05 | 0.05 | 0.11 | | | 10 | 0.1 | 0.07 | 1.05 |
| Facael Coliforms | CFU/100mL | | | 370.00 | 160.00 | 108.00 | 48.00 | 130.00 | 211.00 | 74.00 | 140.00 | 210.00 | 180.00 | | | 10 | 48 | 163.1 | 370 |
| BOD5 | mg/l | | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 3.00 | 2.00 | 2.00 | 2.00 | 2.00 | | | 10 | 2 | 2.1 | 3 |
| Non Filterable Residue | mg/l | | | 36.00 | 25.00 | 20.00 | 26.00 | 35.00 | 33.00 | 18.00 | 19.00 | 21.00 | 111.00 | | | 10 | 18 | 34.4 | 111 |
| Ammonia | mg/l | | | 0.02 | 0.02 | 0.01 | 0.02 | 0.01 | 1.01 | 0.01 | 0.01 | 0.01 | 0.03 | | | 10 | 0 | 0.1 | 1.01 |
| Oil and Grease | mg/l | | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 3.00 | 2.00 | 2.00 | 2.00 | 2.00 | | | 10 | 2 | 2.1 | 3 |

Indicates result was below the limit of measure of the test

Monitoring Point 10 - Lachlan River Upstream of sewer outfall location

Pollutant contrations of Lachlan River Water Upstream of Sewer Outfall

| Date Sampled | | | | 6/Oct/15 | 11/Nov/15 | 13/Dec/15 | 12/Jan/16 | 9/Feb/16 | 15/Mar/16 | 5/Apr/16 | 3/May/16 | 7/Jun/16 | 5/Jul/16 | | | No of tests | | | |
|------------------------|-----------|---|--|----------|-----------|-----------|-----------|----------|-----------|----------|----------|----------|----------|--------|--------|-------------|---------|-------|------|
| Effective Month | | | | Oct/15 | Nov/15 | Dec/15 | Jan/16 | Feb/16 | Mar/16 | Apr/16 | May/16 | Jun/16 | Jul/16 | Aug/16 | Sep/16 | | | | |
| Parameters Monitored | Units | Required Monitoring Frequency - Monthly | | | | | | | | | | | | | | Min | Average | Max | |
| | | Measured Values | | | | | | | | | | | | | | | | | |
| pH | | | | 7.70 | 7.70 | 7.80 | 7.70 | 7.90 | 8.60 | 7.90 | 7.70 | 7.80 | 7.60 | | | 10 | 7.6 | 7.8 | 8.6 |
| Total Nitrogen | mg/l | | | 2.70 | 0.73 | 0.74 | 0.64 | 0.70 | 1.66 | 0.51 | 0.52 | 0.60 | 2.80 | | | 10 | 0.5 | 1.2 | 2.8 |
| Total Phosphorus | mg/l | | | 0.05 | 0.05 | 0.05 | 0.05 | 0.06 | 1.05 | 0.05 | 0.05 | 0.05 | 0.08 | | | 10 | 0.1 | 0.2 | 1.05 |
| Facael Coliforms | CFU/100mL | | | 520.00 | 280.00 | 220.00 | 280.00 | 70.00 | 151.00 | 200.00 | 350.00 | 104.00 | 240.00 | | | 10 | 70 | 241.5 | 520 |
| BOD5 | mg/l | | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 3.00 | 2.00 | 2.00 | 2.00 | 2.00 | | | 10 | 2 | 2.1 | 3 |
| Non Filterable Residue | mg/l | | | 37.00 | 25.00 | 25.00 | 27.00 | 35.00 | 32.00 | 22.00 | 19.00 | 27.00 | 57.00 | | | 10 | 19 | 30.6 | 57 |
| Ammonia | mg/l | | | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 1.01 | 0.01 | 0.01 | 0.01 | 0.01 | | | 10 | 0 | 0.1 | 1.01 |
| Oil and Grease | mg/l | | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 3.00 | 2.00 | 2.00 | 2.00 | 2.00 | | | 10 | 2.00 | 2.1 | 3.00 |

Indicates result was below the limit of measure of the test