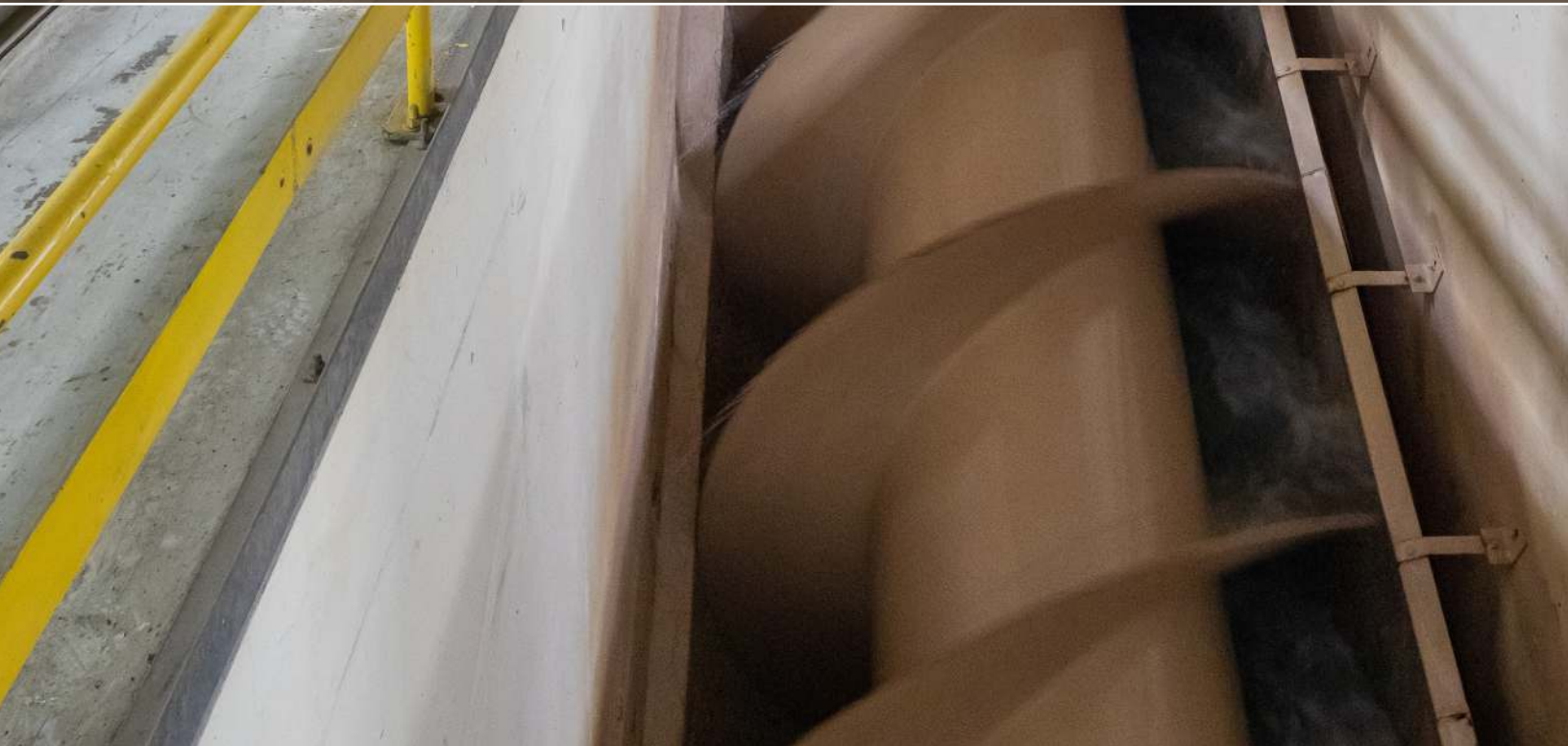


# Water Treatment



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| Goal   | KPI  | Applicable System Type   | Breakdown  | Units                   |
|--|--|--|--|-------------------------|
| Ensure Adequate Capacity                           | Average Day Demand / Existing Water Licence Capacity | All Systems  | Average Day Demand / Existing Water Licence Capacity | %                       |
|  | Days Plant Operated above 100% Capacity              | Conventional Filtration & Membrane Filtration & Direct Filtration & Unfiltered | Days Plant Operated above 100% Capacity              | #                       |
|  | Days Plant Operated above 90% Capacity               | Conventional Filtration & Membrane Filtration & Direct Filtration & Unfiltered | Days Plant Operated above 90% Capacity               | #                       |
| Meet Service Requirements with Economic Efficiency | Chemical Cost  | All Systems  | Chlorination   | \$ / ML Treated         |
|  |  |  | Coagulation  | \$ / ML Treated         |
|  |  |  | Corrosion Control                                    | \$ / ML Treated         |
|  |  |  | Dechlorination                                       | \$ / ML Treated         |
|  |  |  | Disinfection   | \$ / ML Treated         |
|  |  |  | Flocculation   | \$ / ML Treated         |
|  |  |  | Fluoridation   | \$ / ML Treated         |
|  |  |  | Iron Sequestering                                    | \$ / ML Treated         |
|  |  |  | Membrane Cleaning                                    | \$ / ML Treated         |
|  |  |  | Other  | \$ / ML Treated         |
|  |  |  | Ozone Generation                                     | \$ / ML Treated         |
|  |  |  | pH Control / Stabilisation                           | \$ / ML Treated         |
|  |  |  | Phosphorus Removal                                   | \$ / ML Treated         |
|  |  |  | Pre-oxidation  | \$ / ML Treated         |
|  | Sludge Conditioning                                  | \$ / ML Treated  |  |                         |
|  | Softening  | \$ / ML Treated  |  |                         |
|  | Taste and Odour                                      | \$ / ML Treated  |  |                         |
|  | Energy Consumed                                      | All Systems  | Diesel   | kWh / ML Treated        |
|  |  |  | Electricity  | kWh / ML Treated        |
|  |  |  | Natural Gas  | kWh / ML Treated        |
|  |  |  | Oil  | kWh / ML Treated        |
|  |  |  | Propane  | kWh / ML Treated        |
|  | FTEs relative to No. of Groundwater Wells            | Groundwater System   | Laboratory   | FTEs / Groundwater Well |
|  |  |  | O&M  | FTEs / Groundwater Well |
|  |  |  | Program Support / Clerical                           | FTEs / Groundwater Well |
|  |  |  | Supervisor / Management                              | FTEs / Groundwater Well |
|  |  |  | Technical / Engineering                              | FTEs / Groundwater Well |
| FTEs relative to Volume Treated                    | All Systems  | Laboratory   | FTEs / 1,000 ML Treated                              |                         |
|  |  | O&M  | FTEs / 1,000 ML Treated                              |                         |
|  |  | Program Support / Clerical   | FTEs / 1,000 ML Treated                              |                         |
|  |  | Supervisor / Management  | FTEs / 1,000 ML Treated                              |                         |
|  |  | Technical / Engineering  | FTEs / 1,000 ML Treated                              |                         |
| O&M Cost + Capital Reinvestment Cost               | All Systems  | Capital Reinvestment   | \$ / ML Treated                                      |                         |
|  |  | O&M  | \$ / ML Treated                                      |                         |
| O&M Cost relative to No. of Groundwater Wells      | Groundwater System                                   | O&M Cost   | \$ ('000) / Groundwater Well                         |                         |
| O&M Cost relative to Volume Treated                | All Systems  | Chemicals  | \$ / ML Treated                                      |                         |
|  |  | Energy   | \$ / ML Treated                                      |                         |
|  |  | Equipment and Materials  | \$ / ML Treated                                      |                         |
|  |  | External Contracted Services   | \$ / ML Treated                                      |                         |
|  |  | Internal Contracted Services   | \$ / ML Treated                                      |                         |
|  |  | Other  | \$ / ML Treated                                      |                         |
|  |  | Staff Training   | \$ / ML Treated                                      |                         |
|  |  | Wages  | \$ / ML Treated                                      |                         |

| Goal  | KPI  | Applicable System Type   | Breakdown  | Units                      |
|---|--|--|--|----------------------------|
| Protect Public Health and Safety            | Average Annual Treated Water Turbidity   | All Systems  | Treated Water Turbidity                              | NTU                        |
|   | Average Treated Water Nitrates   | All Systems  | Average Treated Water Nitrates                       | mg / L                     |
|   | Days in Turbidity Ranges   | All Systems  | Days < 1 NTU   | %                          |
|   |  |  | Days > 50 NTU  | %                          |
|   |  |  | Days b/w 1 & 5 NTU                                   | %                          |
|   |  |  | Days b/w 15 & 50 NTU                                 | %                          |
|   |  |  | Days b/w 5 & 15 NTU                                  | %                          |
|   | Days over Group Nitrate Target of 10 mg/L                                      | All Systems  | Days over Group Nitrate Target                       | #                          |
|   | Days over Group Turbidity Target   | All Systems  | Days over Group Turbidity Target                     | #                          |
|   | Raw Water Dissolved Carbon   | Conventional Filtration & Membrane Filtration & Direct Filtration                      | Raw Water Dissolved Carbon                           | mg / L                     |
| Raw Water Total Organic Carbon              | Conventional Filtration & Membrane Filtration & Direct Filtration              | Raw Water Total Organic Carbon   | mg / L   |                            |
| Total Coliform Occurrences in Treated Water | All Systems  | Total Coliform Occurrences in Treated Water  | #  |                            |
| Treated Water Dissolved Carbon              | Conventional Filtration & Membrane Filtration & Direct Filtration              | Treated Water Dissolved Carbon   | mg / L   |                            |
| Treated Water Total Organic Carbon          | Conventional Filtration & Membrane Filtration & Direct Filtration              | Treated Water Total Organic Carbon   | mg / L   |                            |
| Protect the Environment                     | GHG Emissions from Energy Consumed   | All Systems  | Diesel   | kg CO2e / ML Treated       |
|   |  |  | Electricity  | kg CO2e / ML Treated       |
|   |  |  | Natural Gas  | kg CO2e / ML Treated       |
|   |  |  | Oil  | kg CO2e / ML Treated       |
| Propane                                     |  |  | kg CO2e / ML Treated                                 |                            |
| Percent Backwash Waste Treated              | Conventional Filtration & Membrane Filtration & Direct Filtration              | Percent Backwash Waste Treated   | %  |                            |
| Water Wasted During Treatment Process       | Conventional Filtration & Membrane Filtration & Direct Filtration & Unfiltered | Water Wasted   | %  |                            |
| Provide a Safe and Productive Workplace     | Cost of Overtime Hours   | All Systems  | Cost of Overtime Hours                               | \$ / O&M FTE               |
|   | Field Accidents with Lost Time   | All Systems  | Field Accidents with Lost Time                       | # / 1,000 O&M Labour Hours |
|   | Lost Hours due to Field Accidents  | All Systems  | Lost Hours   | # / 1,000 O&M Labour Hours |
|   | Sick Days Taken  | All Systems  | Sick Days Taken                                      | # / O&M Employee           |
|   | Total Overtime Hours / Total Paid O&M Hours                                    | All Systems  | Total Overtime Hours / Total Paid O&M Hours          | %                          |
|   | Unavailable O&M Hours / Total Paid O&M Hours                                   | All Systems  | Expended Banked Time                                 | %                          |
|   |  |  | Long Term Leave                                      | %                          |
|   |  |  | Other  | %                          |
|   |  |  | Other Training                                       | %                          |
|   |  |  | Safety Training                                      | %                          |
| Sick Time                                   |  |  | %  |                            |
| Union Paid Time                             |  |  | %  |                            |
| Vacation                                    | %  |  |  |                            |
| Provide Reliable Service and Infrastructure | Capital Reinvestment / Replacement Value                                       | All Systems  | Capital Reinvestment/ Replacement Value              | %                          |
|   | Reactive Maintenance Hours / Total Maintenance Hours                           | All Systems  | Reactive Maintenance Hours / Total Maintenance Hours | %                          |
|   | Total Maintenance Hours  | All Systems  | Total Maintenance Hours                              | # / ML Treated             |
|   | Unit Filter Run Volume   | Conventional Filtration & Membrane Filtration & Direct Filtration & Groundwater System | Unit Filter Run Volume                               | m3 / m2                    |
|   | Unplanned Hours that Plant Could not Operate at Rated Capacity                 | All Systems  | Unplanned Hours                                      | #                          |

## About AECOM

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