

Appendix E Wastewater Services Use Cases

Request Service/Manage Event

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| Title | Request Service / Manage Event |
| Description | <ol style="list-style-type: none"> 1. Customer contacts 311 with a concern or inquiry. This may be considered an informational request (IR) where 311 provides information and no further action is required. A service request may be created to address the concern or inquiry. Services requests will nearly always link to a work order; multiple services requests may link to the same work order. If follow up work is required, additional work orders may be created. The purpose of a service request is to satisfy the customer need, whatever category that happens to be. Service requests are updated on an ongoing basis, until a resolution is reached. SRs are viewed and/or updated by multiple groups. SRs are classified using standard categories/problem codes. 2. WWS staff or City employee contacts 311 with a noted issue. An SR is created, which may lead to a WO. 3. WWS staff can create WO directly if they notice an issue, or if another department contacts them directly. 4. A councilor may contact 311 or the manager with a request via a different (escalated) queue; the request goes into the main queue after it is logged. |
| Trigger | <ol style="list-style-type: none"> 1. Customer contacts 311 2. Internal WWS staff (or other City employee) contacts 311 3. WWS creates WO 4. Councilor contacts 311 |
| Actor(s) | <p>Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew, WWS Maintenance Coordinator, SCADA Operator, WS Emergency Services Dispatcher, F&A Communications Coordinator, WWS Manager, Councilor</p> <p>Notes: SCADA crew receives SRP directly from 311 - these would not go to Yard Clerks</p> |

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| Title | Manage Sewer Complaint |
| Description | The purpose is to satisfy a sewer related concern for a customer or customers. Possible concerns include flooding, backup and odour. This is a standard type of SR, created when a customer calls in a concern/complaint regarding a sewer. This may lead to an inspection. |
| Trigger | Customer contacts 311 |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WWS Maintenance Coordinator, WS Emergency Services Dispatcher, F&A Communications Coordinator |

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| Title | Investigate Roadway Void |
| Description | <p>The purpose is to identify and investigate a void in the roadway.</p> <ol style="list-style-type: none"> 1. This is a standard type of SR, created when a customer calls in a concern/complaint regarding a roadway void. This may lead to an inspection. 2. This may be brought to attention by Public Works, either via 311 or through direct communication with WWS. This may lead to an inspection. 3. This may be brought to attention by WWS crew, who would contact a Supervisor or Foreman, who would in turn create a WO. |
| Trigger | <ol style="list-style-type: none"> 1. Customer contacts 311 2. Public Works contacts 311, or contacts WWS directly 3. WWS crew discovers a void |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WWS Maintenance Coordinator, WS Emergency Services Dispatcher, F&A Communications Coordinator |

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| Title | Manage Heavy Rain Event |
| Description | <p>The purpose is to manage an event where many customers may call in about the same weather-related concern. In the case of a heavy rain event, the problem may resolve itself after a given amount of time or may only require a single WO to handle. The City is split into three areas: North, South and East, and one Work Order is created for each area for the rain event. Service Requests are attached to one of the three Work Orders to prevent duplication. Examples are a flooded street or underpass.</p> |
| Trigger | Customer(s) contacts 311 |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WWS Maintenance Coordinator, WS Emergency Services Dispatcher, F&A Communications Coordinator, WWS Manager |

Operational Status

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| Title | Manage Sluice Gate Status |
| Description | Gates are exercised twice annually by Regional. In addition, they may be opened or closed for flood management or outfall events. There are multiple types of gates that are exercised. A Gate Activity form is used to track this. This info is entered into the electronic floor manual. There is currently no way of checking the operational status (open/closed) of a gate. |
| Trigger | <ol style="list-style-type: none"> 1. Annual exercise – handled through OWAM PM routes (there are quarterly and biannual routes for sluice gates) 2. Outfall event 3. Flood event |
| Actor(s) | WWS Regional Crews, OWAM Note: Local would need read only access to the status. |

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| Title | Manage Temporary Pump Location |
| Description | This involves tracking the location of temporary pumps, as well as their maintenance. <ol style="list-style-type: none"> 1. A flood event occurs and temporary pumps are required to reduce or prevent flooding. 2. A WO is created for repair work and a pump is required during the repair process. It will be installed, and removed after repairs are complete. 3. A pump requires repair work. This will be tracked as a WO in OWAM. Pumps have asset IDs assigned in OWAM. When a flood event occurs, a pump of the appropriate size will be selected. They are tracked in a fleet module. Temporary (non-City) pumps are tracked in Flood Manual. Examples of events are: wet weather events, if a lift station goes down for any reason, flood event for bypass pumping. |
| Trigger | <ol style="list-style-type: none"> 1. Flood event 2. WO created for repair work that will require a temporary pump 3. Pump requires repair work |
| Actor(s) | Flood Manual, OWAM, WWS Field Crew, WWS Foreman, WWS Supervisor, Regional Crews, Mechanical Maintenance, Maintenance Coordinator, Flood Manual |

Future State

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| Title | Manage Sewer Plug Status |
| Description | This involves tracking the location of sewer plugs, which are used to temporarily stop sewage flow. A visual indicator of sewer plug location is desired. Location is currently tracked in a spreadsheet when they are in storage. |
| Trigger | Sewer flow needs to be temporarily stopped because of repair work. |
| Actor(s) | OWAM, WWS Regional Foreman, WWS Local Foreman |

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| Title | Manage CSO Control Status |
| Description | This involves monitoring dry weather events to determine if/when overflows occurred. There are PM routes in OWAM for dry weather checks. WWS Local checks known problem spots and possible overflow locations. WWS Regional checks their own known trouble spots and the equipment at all locations. Overflow events are reported to the province. |
| Trigger | PM route |
| Actor(s) | WWS Regional, WWS Local |

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| Title | Catch Basin Cleaning Program |
| Description | Desired program. Would be a 5-6 year cycle cycling through all of the known catch basins. |
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| Actor(s) | WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead , OWAM, Maintenance Coordinator |

Network Corrective Maintenance

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| Title | Repair Damaged Sewer |
| Description | <p>Corrective maintenance is required for a damaged sewer, due to a leak or other deficiency. In the case of a high impact leak, additional escalation may be required and higher level WWS staff may be engaged.</p> <ol style="list-style-type: none"> 1. A service request is initiated by a customer calling in to identify a damaged sewer, or a concern that results from the damaged sewer. A field crew is dispatched to investigate. If an issue requiring further work is identified, a WO is created for the repair work. Subsequent WO may be created as needed. 2. WWS field staff notices a void as part of their regular duties or a PM process and creates a WO directly 3. A void is discovered as part of sewer inspections managed by Engineering 4. A private contractor may identify a problem when attempting to do a tie-in to the sewer main and would call Engineering who would contact WWS |
| Trigger | <ol style="list-style-type: none"> 1. Customer contacts 311 2. Field staff identifies the issue 3. Regular sewer inspections 4. Contractor discovers a void |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WS Emergency Services Dispatcher, Maintenance Coordinator, Customer Technical, Contractor, Engineering |

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| Title | Repair Collapsed Sewer |
| Description | <p>Corrective maintenance is required for a collapsed sewer. A service request is initiated by a customer calling in to identify a collapsed sewer, or a concern that results from the collapsed sewer. A field crew is dispatched to investigate. If an issue requiring further work is identified, a WO is created for the repair work. Subsequent WO may be created as needed. In the case of a high impact leak, additional escalation may be required and higher level WS staff may be engaged. This is an urgent issue, and will be handled immediately.</p> |
| Trigger | Customer contacts 311 |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WS Emergency Services Dispatcher, F&A Communications Coordinator, WWS Manager, WWS Field Services Engineer, WWS Superintendent , Maintenance Coordinator |

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| Title | Repair Manhole |
| Description | <p>A manhole cover is either missing, off, or damaged. A service request is initiated by a customer calling in to identify a concern with the manhole. A field crew is dispatched to investigate. The crew may be able to correct the issue immediately, as in the case of replacing the manhole. If an issue requiring further work is identified, a WO is created for the repair work.</p> |
| Trigger | <ol style="list-style-type: none"> 1. Customer contacts 311 |

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| | 2. Field staff identifies the issue |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WS Emergency Services Dispatcher , Maintenance Coordinator |

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| Title | Degrease Sewer |
| Description | A sewer main has a buildup of grease, which causes issues within the sewer system such as slow flow or backup. <ol style="list-style-type: none"> 1. A service request is initiated by a customer calling in to identify a concern with the sewer. A field crew is dispatched to investigate. If an issue requiring further work (actual degreasing) is identified, a WO is created for the repair work. 2. Environment Services identifies a concern or receives a complaint from 311 regarding grease dumping; they would contact WWS. |
| Trigger | <ol style="list-style-type: none"> 1. Customer contacts 311 2. Environment Services contacts WWS |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WS Emergency Services Dispatcher, Environment Services, Maintenance Coordinator |

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| Title | Root Cutting |
| Description | A sewer main has roots growing into the sewer lines, which can cause issues within the sewer system such as slow flow or backup. A service request is initiated by a customer calling in to identify a concern with the sewer. A field crew is dispatched to investigate. If an issue requiring further work (actual degreasing) is identified, a WO is created for the repair work. |
| Trigger | <ol style="list-style-type: none"> 1. Customer contacts 311 (sewer backup complaint) 2. Annual schedule |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WS Emergency Services Dispatcher, Maintenance Coordinator |

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| Title | Clean Sewer Main |
| Description | A sewer main requires spot cleaning. A service request is initiated by a customer calling in to identify a concern with the sewer. A field crew is dispatched to investigate. If an issue requiring further work (degreasing) is identified, a WO is created for the repair work. |
| Trigger | <ol style="list-style-type: none"> 1. Customer contacts 311 |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WS Emergency Services Dispatcher, Maintenance Coordinator |

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| Title | Repair WWS Culvert |
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| Description | A culvert belonging to WWS requires repair work. A service request is initiated by a customer calling in to identify a concern with the culvert. A field crew is dispatched to investigate. If an issue requiring further work is identified, a WO is created for the repair work. Possible repair work includes reinstalling or repairing the inlet grate. Possible causes of damage are snow removal, blocks of ice or debris. Regional may handle repairs |
| Trigger | 1. Customer contacts 311 |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WS Emergency Services Dispatcher, Maintenance Coordinator, WWS Regional |

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| Title | Repair Catch Basin |
| Description | A catch basin requires repair work, thawing or cleaning. A service request is initiated by a customer calling in to identify a concern with the catch basin. A field crew is dispatched to investigate. If an issue requiring further work is identified, a WO is created for the repair work. |
| Trigger | 1. Customer contacts 311 |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WS Emergency Services Dispatcher, Maintenance Coordinator |

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| Title | Sewer Cutdown |
| Description | A rare case where a service request is initiated by a customer calling 311. The concern may be sent forward to Water Services if it relates to work they carried out. |
| Trigger | 1. Customer contacts 311 |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WS Emergency Services Dispatcher, Maintenance Coordinator, Water Services |

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| Title | Area Cleanup |
| Description | This is a SR that comes in via 311, regarding the need to clean up an area where work was done. It may lead to an investigation to determine whether WWS performed the original work. If they did, a WO will be created to encompass the cleaning work. If not, the SR will be sent to another department. |
| Trigger | 1. Customer contacts 311 |
| Actor(s) | Customer, 311 Operator, 311 System (Lagan/Kana), OWAM, WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, WS Emergency Services Dispatcher, Maintenance Coordinator |

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| Title | Siphon Cleaning |
| Description | Cleaning required to a siphon, or dip in sewer pipe, which can be due to gravity's impact on water movement. The issue would be discovered during a sewer inspection and communicated to Engineering via SMS. Engineering would communicate with |

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| | WWS. Other departments may be involved because of lane closures, etc – the Foreman or Supervisor would be responsible for communication. |
| Trigger | 1. An issue is discovered during a sewer inspection |
| Actor(s) | WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead , OWAM, Public Works, Maintenance Coordinator, CWMS Specialist |

Support Tasks

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| Title | Excavated Repairs |
| Description | <ol style="list-style-type: none"> 1. Excavate an area of another department, such as Engineering when they are doing a renewal, because WWS has the necessary equipment. 2. This may be required as part of another piece of work for WWS, such as a sewer repair. Regional may request Local's assistance for this. 3. Customer Technical Services may contact WWS for assistance with an excavation on a house, which is referred to as Section 37 |
| Trigger | <ol style="list-style-type: none"> 1. Engineering (or another department) requests assistance 2. WWS receives an issue and determine that an excavation is required to perform other work 3. Customer Technical Services contacts WWS |
| Actor(s) | WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, Engineering, Customer Technical Services |

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| Title | Gather/Update Asset Information |
| Description | <ol style="list-style-type: none"> 1. If an unrecorded asset, such as a catch basin, is found Engineering Drafting and Graphics should be notified so they can update the GIS 2. If inaccuracies are found in an asset's properties, or any changes are made to the properties, Engineering Drafting and Graphics should be notified so they can update the GIS 3. Following an excavated repair, a drawing of changes is made and sent to Engineering to update the GIS |
| Trigger | <ol style="list-style-type: none"> 1. An unrecorded asset is discovered 2. Any changes are made to an asset's properties, or the GIS is determined to have inaccurate information 3. An excavated repair is performed |
| Actor(s) | WWS Supervisor, WWS Yard Clerk, WWS Foreman, WWS Field Crew Lead, Engineering Field Crew, Maintenance Coordinator, Superintendent, Engineering |

Preventative Maintenance

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| Title | Trouble Spot Program |
| Description | Regular maintenance and cleaning of locations identified as “Trouble Spots” in OWAM. |
| Trigger | PM schedule (OWAM) |
| Actor(s) | WWS Supervisor, WWS Foreman, WWS Field Crew Lead , OWAM, Maintenance Coordinator, CWMS Specialist |

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| Title | Annual Sewer Inspections |
| Description | Annual inspection and cleaning of sewer mains conducted by Engineering and largely outsourced to external engineering companies. Details on cleaning locations are sent from external companies to Engineering, who provides them to WWS to publish in SharePoint for 311’s consumption. The results of the inspections may lead to WO for necessary repairs. |
| Trigger | Engineering contracts inspections to an external company. |
| Actor(s) | SMS, SharePoint, 311, Engineering |

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| Title | Culvert Safety Inspections |
| Description | Regular inspections of WWS culverts, maintained in OWAM. |
| Trigger | PM schedule (OWAM) |
| Actor(s) | WWS Supervisor, WWS Foreman, WWS Field Crew Lead , OWAM, Maintenance Coordinator, CWMS Specialist |

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| Title | Dry Weather Overflow Inspection Program |
| Description | Inspecting known locations that are assets in the system on a weekly basis |
| Trigger | PM schedule (OWAM) |
| Actor(s) | WWS Supervisor, WWS Foreman, WWS Field Crew Lead , OWAM, Maintenance Coordinator, CWMS Specialist |

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| Title | Sewer Degreasing Program |
| Description | Regular preventative degreasing of locations that have been noted to frequently require degreasing. |
| Trigger | PM schedule (OWAM) |
| Actor(s) | WWS Supervisor, WWS Foreman, WWS Field Crew Lead , OWAM, Maintenance Coordinator, CWMS Specialist |

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| Title | Underpass Cleaning Program |
| Description | Regular cleaning of underpass catch basins and LDS lines, maintained in OWAM. Note that Regional does interior cleaning. |
| Trigger | PM schedule (OWAM) |

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| Actor(s) | WWS Supervisor, WWS Foreman, WWS Field Crew Lead , OWAM, Maintenance Coordinator, WWS Regional, CWMS Specialist |
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| Title | Root Cutting Program |
| Description | Regular checking and cutting down of roots in locations that have been noted to frequently require cutting. |
| Trigger | PM schedule (OWAM) |
| Actor(s) | WWS Supervisor, WWS Foreman, WWS Field Crew Lead , OWAM, Maintenance Coordinator, CWMS Specialist |