

Mapping the Future of our Stormwater Networks

Optimising Asset Maintenance through FME Integration

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Helping Water Services Organisations go from
REACTIVE ► **PROACTIVE**



SWAT

Find address or place



The Challenge

**SCALE
STRATEGY
EFFICIENCY
CONSISTENCY
REPORTING**



SWAT

STORMWATER ASSET TRACKING



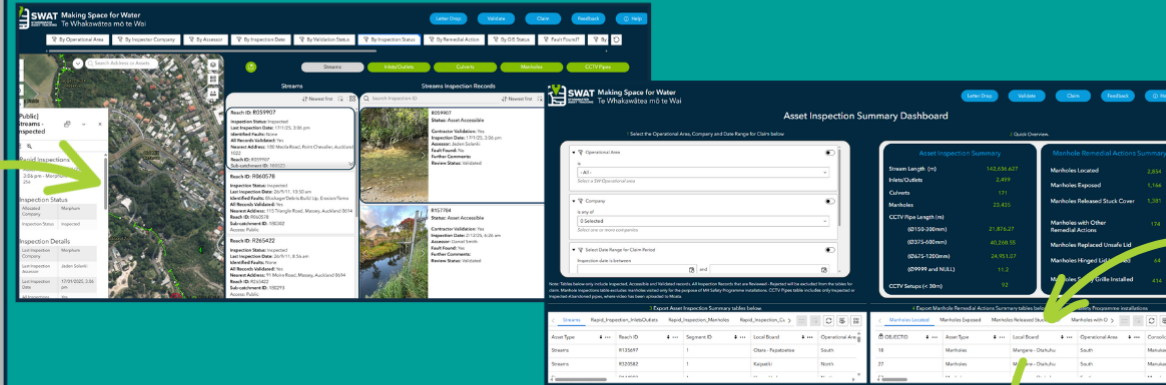
SWAT - FIELD

SWAT - Inspect



Mobile Rapid Inspections

SWAT - Claim



Validation of field work and prep for claims

SWAT - EXTERNAL INTEGRATION

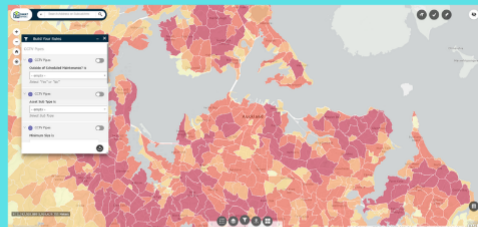
External Asset Management Systems

Pipe Inspections integration

Work Order and Claim integration

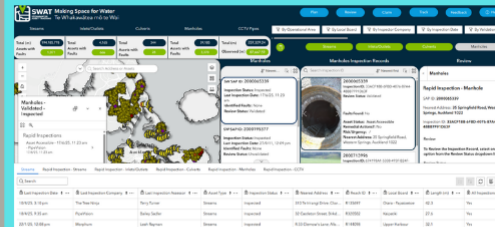
SWAT - MANAGER

SWAT - Plan



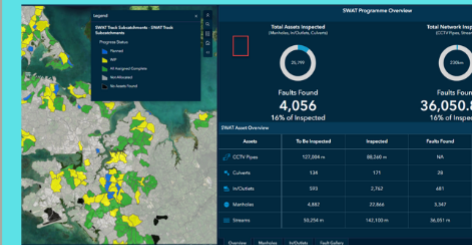
Planning and Allocating Assets

SWAT - Review



Review/approve contractor work

SWAT - Track



KPI Reporting and Tracking



Plan

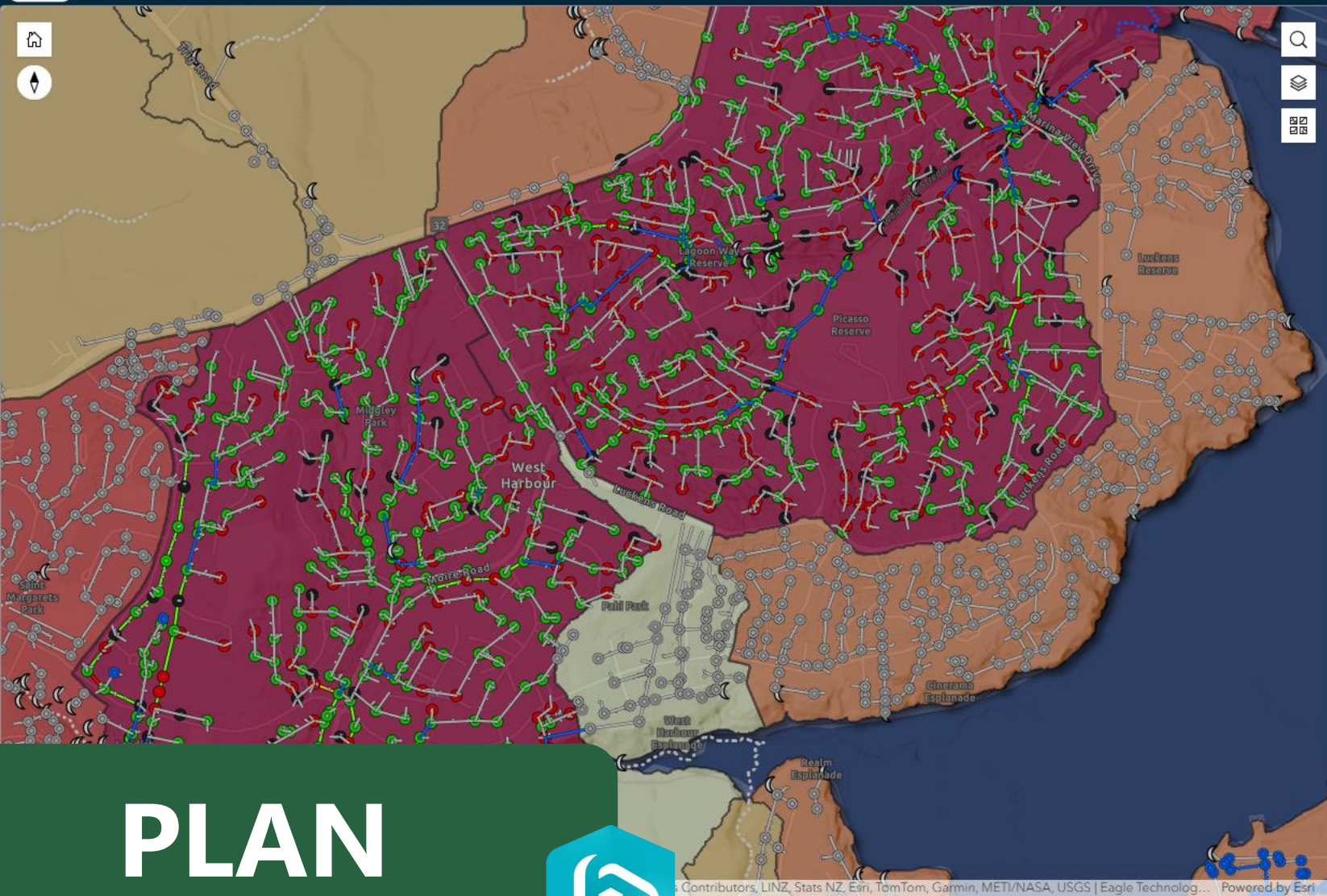
Review

Claim

Track

Feedback

Help



Auckland Operational Area

- All -

North

Central

South

Asset Inspection Status

- All -

Not Inspected

To be Inspected

1. Filter

2. Select

3. Assign

▼ Auckland Local Board

- All -

▼ CCTV Pipes

Diameter (mm) is at least

Asset Sub Type is

- All -

Outside of Scheduled Maintenance? is

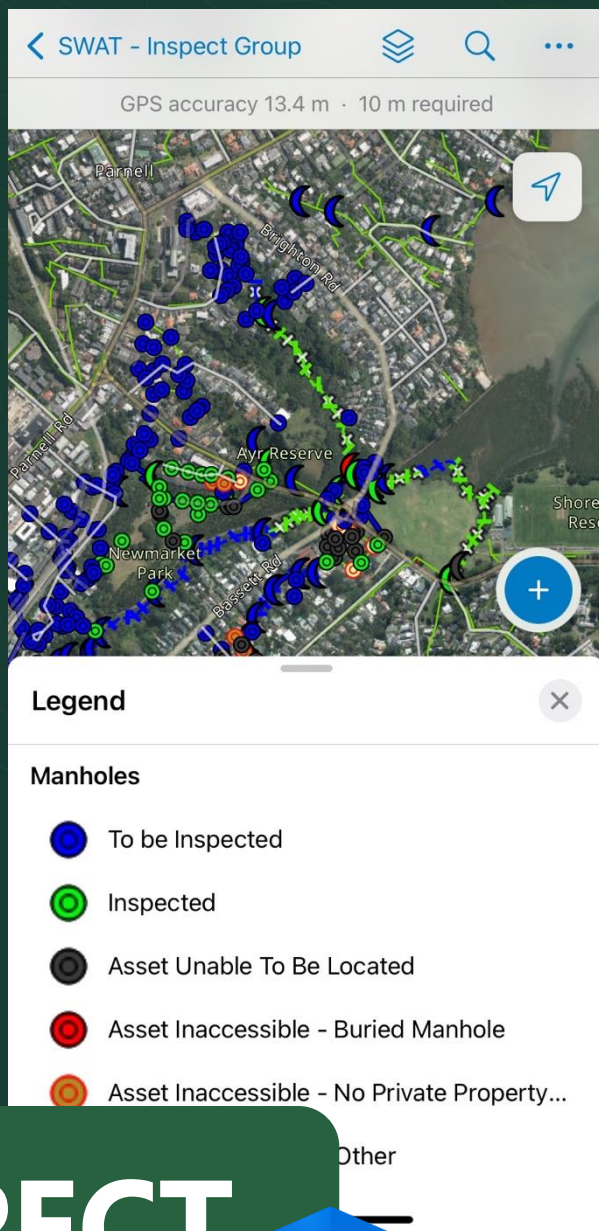
- All -

▼ Culverts

Diameter (mm) is at least

PLAN





Cancel Collect Submit

Rapid Inspection - Manholes

FAULTS

Fault Found? ☒ Yes

Asset Damaged ☐ No

Check for missing, damaged, or dislodged cast iron manhole frames, covers, and benching. Ensure manhole frames and covers are properly fitted, not cracked, seized, damaged, or displaced.

Blockage/Debris Build Up ☐ No

Check for obstructions, blockages, or debris (including rubbish and organic material) inside the manhole.

Water Quality ☐ No

Check for sewer overflows, hydrocarbons, oil spillages, solids/floatables (i.e. toilet paper) and sewage fungus.

Other Fault ☐ No

Other fault found?

Have you uploaded a photo? *

No Value

Photos are mandatory for all inspection submissions. No photo limit exists.

Cancel Collect Submit

Rapid Inspection - Manholes

Take Photo Attach

⚠ WARNING ⚠

This asset is not assigned to your Company for inspection. Use the 'Company' filters (*layers button*) to view your assigned assets, or contact your manager to resolve.

-

Please select 'Cancel' above then 'Discard' to continue.

INSPECT



[Letter Drop](#)[Validate](#)[Claim](#)[Feedback](#)[Help](#)[By Remedial Action](#)[By GIS Status](#)[Fault Found?](#)[By Asset Status](#)[Manhole Safety Programme?](#)[By Property Access](#)[Asset Located in Road Corridor?](#)[By Review Status](#)[By Validation Date](#)[Streams](#)[Inlets/Outlets](#)[Culverts](#)[Manholes](#)[CCTV Pipes](#)

Manholes

↓↑ Newest first

SW SAP ID: 2000038508
Inspection Status: Inspected
Last Inspection Date: 20/5/26, 2:24 pm
Identified Faults: None
All Records Validated: Yes
Nearest Address: 31 Cape Road, Mangere, Auckland 2022
SW SAP ID: 2000038508
Sub-catchment ID: 140881
Property Access: Private

SW SAP ID: 2000671958
Inspection Status: Inspected
Last Inspection Date: 20/5/26, 2:23 pm
Identified Faults: None
All Records Validated: Yes
Nearest Address: 12 Waddon Place, Mangere, Auckland 2022
SW SAP ID: 2000671958
Sub-catchment ID: 140881

SW SAP ID: 2000520076
Inspection Status: Inspected
Last Inspection Date: 20/5/26, 2:11 pm
Identified Faults: None
All Records Validated: Yes
Nearest Address: 7 Rymer Place, Mangere Bridge, Auckland 2022
SW SAP ID: 2000520076
Sub-catchment ID: 140876

SW SAP ID: 2000321879
Total: 42,789 | Selection: 1

Manhole Inspection Records

Search Inspection ID

↓↑ Newest first



2000038508
Status: Asset Accessible
Contractor Validation: Yes
Inspection Date: 20/5/26, 2:24 pm
Assessor: Leo Zhang
Fault Found: No
Further Comments:
Review Status: Validated

Edit or Validate

Asset Accessible - 20/5/26, 2:2...

Editing is restricted but you have privileges to edit this layer.

Rapid Inspection - Manholes

Validate Inspection Record

To validate the record, select 'Yes' from the Contractor Validation field below. Select 'Delete' to flag any inspection records that need to be removed.

Contractor Validation

Yes

Date Validated

20/05/2026

02:53:24 pm

Asset Type

Manholes

Update

Delete

VALIDATE



[Plan](#)[Review](#)[Claim](#)[Track](#)[Feedback](#)[Help](#)

 **Operational Area**
None

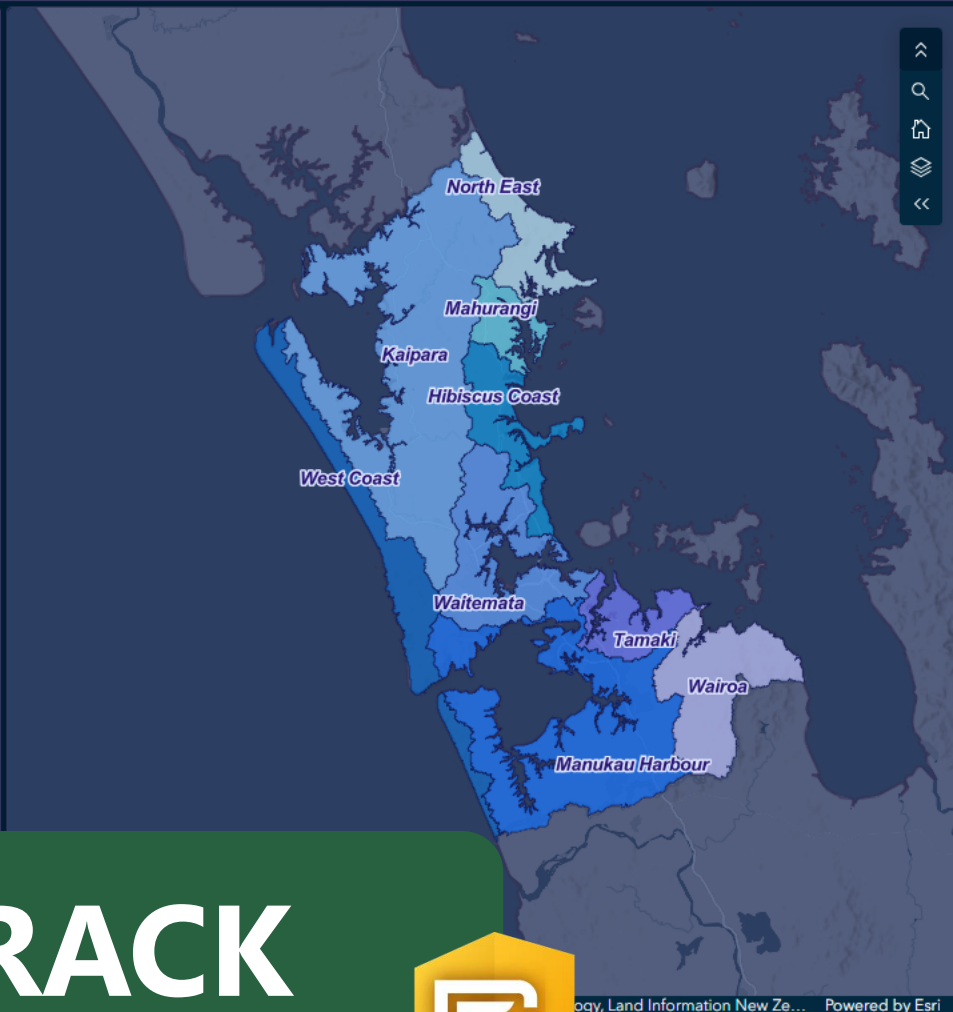
 **CRE**
None

 **Local Board**
None

 **SW Catchment**
None

 **Last Inspection Date**
No date selected

No legend



PROGRAMME OVERVIEW

Total Assets Inspected

Single-point assets covering manholes, inlets, outlets, and culverts



Faulty Assets
5,578
(16% of Assets Inspected)

Total Network Inspected

Including stream reaches and pipes inspected via CCTV



Faults Found Across
64,092 m
(33% of Inspected Stream Network)

ASSET OVERVIEW

Asset Type	Total (Length/Count)	Planned Inspection	Inspected	Faulty Asset/Network
 Manholes	195,759	7,475	31,193	4,555
 In/Outlets	36,914	682	3,367	893
 Culverts	10,273	255	517	130
 Streams	12,783,503 m	59,665 m	191,794 m	64,092 m
 CCTV Pipes	9,510,819 m	209,566 m	125,815 m	NA

[Overview](#)[Manholes](#)[In/Outlets](#)[Culverts](#)[Streams](#)[CCTV](#)[Fault Gallery](#)

TRACK



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Field to Desktop Automated

FME:





1

Field Updates - Webhooks

2

Quality Control Schedules

3

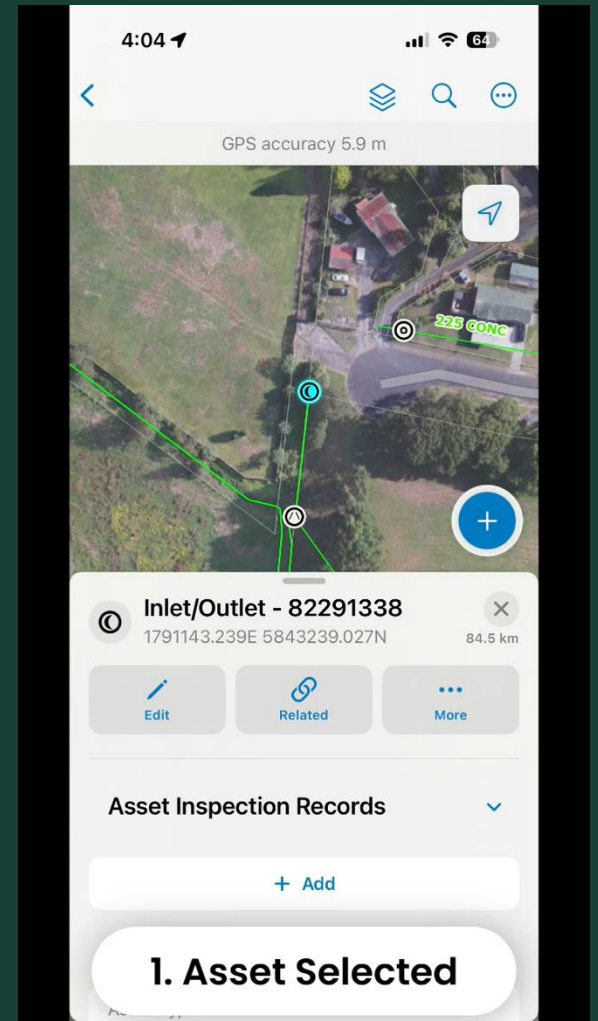
Data Resilience



1 Field Updates - Webhooks

Data Updates In-field

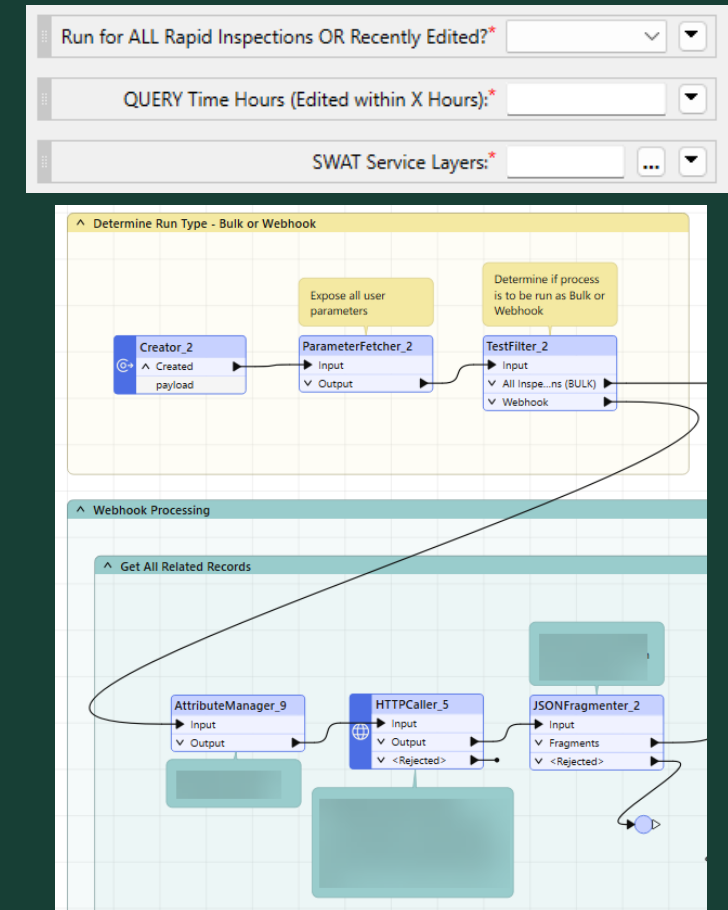
- Challenge of related records
- Live Symbology and attribute updates for field workers
- Process deleted features



2 Quality Control Schedules

Maintaining the Data

- Challenge – Data Changing Frequently
- Daily updates – full data scan
- Integration with external systems (API's for claiming and reporting services)

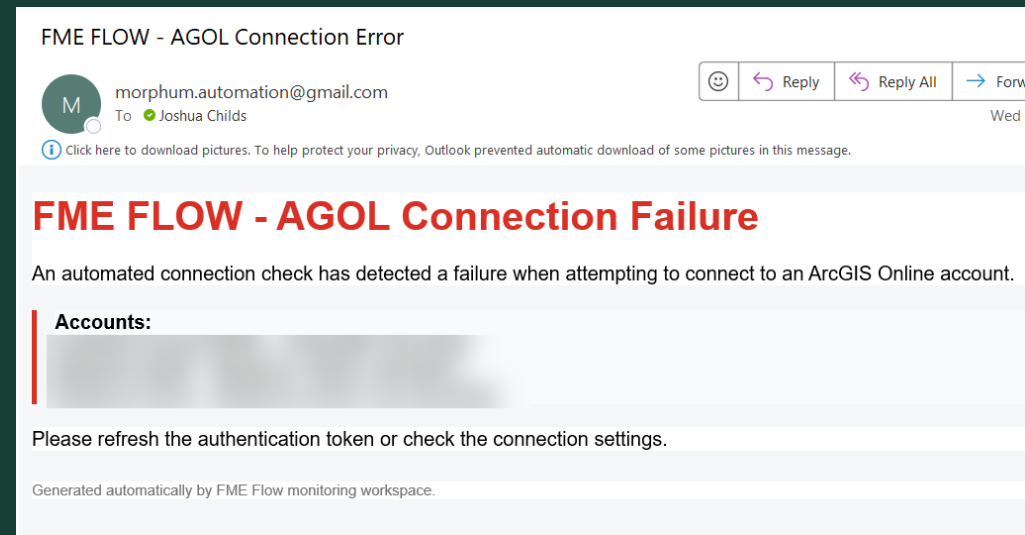
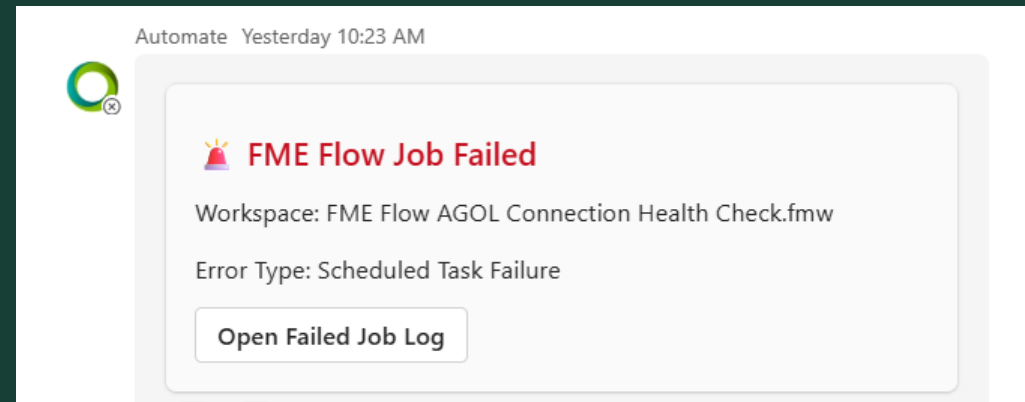


3

Data Resilience

Future Proofing the SWAT Ecosystem

- Challenge – 1 Flow Engine and Multiple workflows
- Automated Data Backups and Archiving
- Webhook and Login Health Checks
- MS Teams and Email Alerts





Digital platforms like SWAT
help solve key asset management challenges:

SCALE
STRATEGY
EFFICIENCY
CONSISTENCY
REPORTING

Mapping the Future of our Stormwater Networks

Thank You

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MORPHUM
environmental