Pollution Incident Reduction Plan

Published in June 2022

Contents

Executive summary

Since we published our first Pollution Incident Reduction Plan (PIRP) in August 2020, our PIRP has evolved from an initial concept and the setting-up a team in year one, through a pilot phase in year two – where multiple initiatives were tried and tested – to a focus on scaled-up and targeted delivery in year three.

Throughout the evolution of our PIRP, our overall number of pollutions has continued to decrease. We are pleased to have achieved a further 18% reduction in pollutions during 2020–21, while our position of 90% self-reported incidents remains industry-leading.

Most of our year two plan was delivered successfully and the way we approach preventing and responding to pollutions has now changed significantly. In fact, many initiatives from year two are now embedded as business-as-usual. These include pollution awareness training, the use of the Clever Nelly training needs analysis tool to assess effectiveness, the 30-minute response to pollutions, and the development of an operator framework aligned to external NVQ standards.

In addition, we have completed a major restructure of our Wastewater Directorate to drive focus and accountability. This includes the introduction of network field managers and a Human Factors Investigator. Improvements to company systems are underway to ensure more timely and accurate reporting of the root causes of pollutions, so we are better able to develop and continuously improve the current and future iterations of our PIRP.

We have developed an ambitious plan for year three to bring the reduction in pollutions back on track to deliver our 2024 target. Our year three plan is informed by lessons learnt from the initiatives delivered in year two, which have been analysed together with the insights from root cause analysis over the year. The plan includes five key workstreams – the most immediately impactful being the ‘Top 250 WPS Upgrade’ and network cleaning programmes.

While our year two performance saw a 27% drop in operational pollutions, these were offset by a higher number of pollutions related to spills due to the intense and heavy storms during summer 2021. Although we are currently an industry outlier for including pollutions related to spills in our self-reported pollutions, we know this needs to improve – which is why our year three plan includes a programme to address the root causes of pollutions from non-compliant spills.

Meanwhile, pollutions from Wastewater Pumping Stations (WPSs) and Wastewater Treatment Works (WTWs) stood still in year two, so these sites are key areas of focus for year three:

- Our WPS upgrade programme is well underway and focuses on 250 sites that have had a pollution in the past three years with a forecast spend of £15 million.
- A strong focus is also maintained on WTWs with ongoing work focused on inlets, reducing pollutions from spills and black starts.

In addition, our year three plan includes three strategic programmes (control room transformation, network digitalisation and planned preventative maintenance), which build on the work completed throughout 2022, with benefits forecast to be apparent at the end of year three and into year four.

Through the targeted activities scheduled for year three, we forecast a 60% reduction in Cat1–3 pollutions by the end of 2022. This ambitious aim is supported by our planned investment of £145 million during 2020–25 to improve operational performance and drive pollution reductions.

1. Document purpose

Southern Water first published a Pollution Incident Reduction Plan (PIRP) in August 2020. The plan aims to significantly reduce the volume of pollution incidents by 2024 and to zero by 2040.

This document is being published to provide an overview and analysis of our 2021 pollution performance and the key learnings, an update on our PIRP delivery in year two, and set out our plans for year three.

2. Year two performance and delivery

2.1 Year two performance

Pollutions are categorised by the Environment Agency based on their impact to the environment. For the purposes of the Environment Agency's Environmental Performance Assessment (EPA), only Categories 1 to 3 are included as Category 4 is deemed to have 'No impact'. The data is measured on a calendar year basis. Our results for 2021 are shown in **Table 1**.

Table 1 – Performance summary by category

Pollution category	2019	2020	2021
Category 1: Major damage to environment, people and/or property	3	0	3
Category 2: Significant damage to environment, people and/or property	4	4	9
Category 3: Minor damage to environment, people and/or property	423	398	360
% Self-reported	87%	88%	90%
TOTAL	430	400	372

Our overall number of pollutions has continued to decrease and since 2019 we have achieved an overall reduction in pollutions of 14%. In addition, our current position of 90% self-reported incidents remains industry leading (the 10% of pollutions that are not self-reported pollutions are reported by customers and other stakeholders) and is indicative of our goal to remain completely transparent both to our customers and regulator.

Figure 1 shows the EPA reported performance for pollutions since 2011 against the forecast and targeted performance from 2020 onwards. Two factors contributed to the significant increase from 2018 to 2019:

- We changed our policy to reflect our decision to assess all permit non-compliant spills detected by telemetry for environmental impact and self-report these to the EA.
- A focused drive for pollutions awareness and training throughout the organisation and supply chain has resulted in an increase in pollutions detected.

Significant improvement in performance is required from the 2021 outturn to achieve the 2024 target and an ambitious year three PIRP has been developed to achieve this based on insights from root cause analysis of year two as well as the results of key pilot initiatives.

Figure 1: EPA reported pollutions versus forecast and targeted improvements

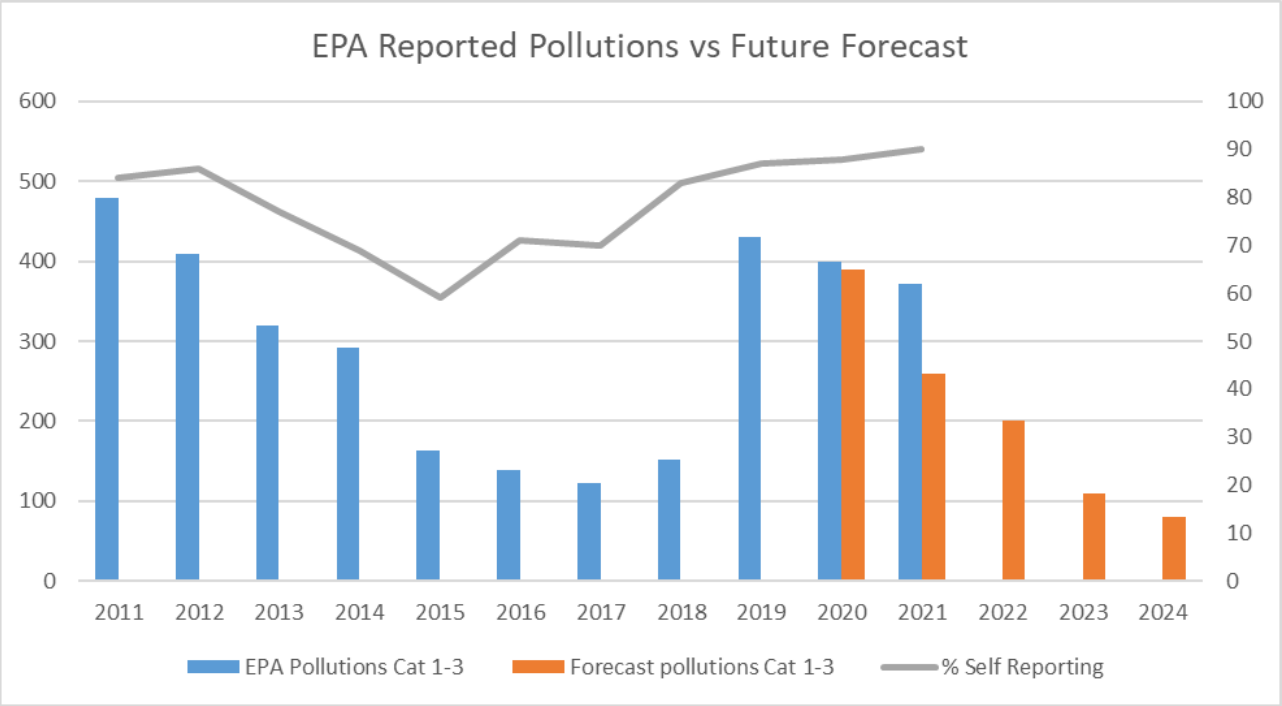


Figure 2 shows that we have achieved a 27% reduction in operational reported pollutions in 2021 compared to 2020. While we achieved significant reductions in operational reported pollutions, these were offset by a higher number of pollutions related to spills due to the atypical weather seen over the summer months of 2021, which included very intense and heavy summer storms.

Figure 2: Pollutions 2019– 21

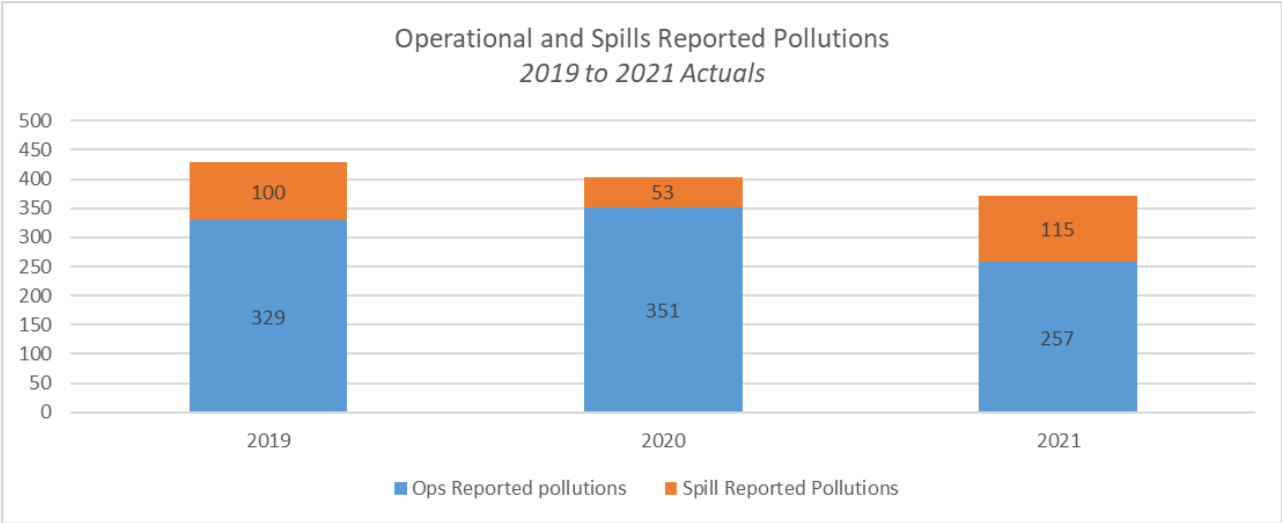
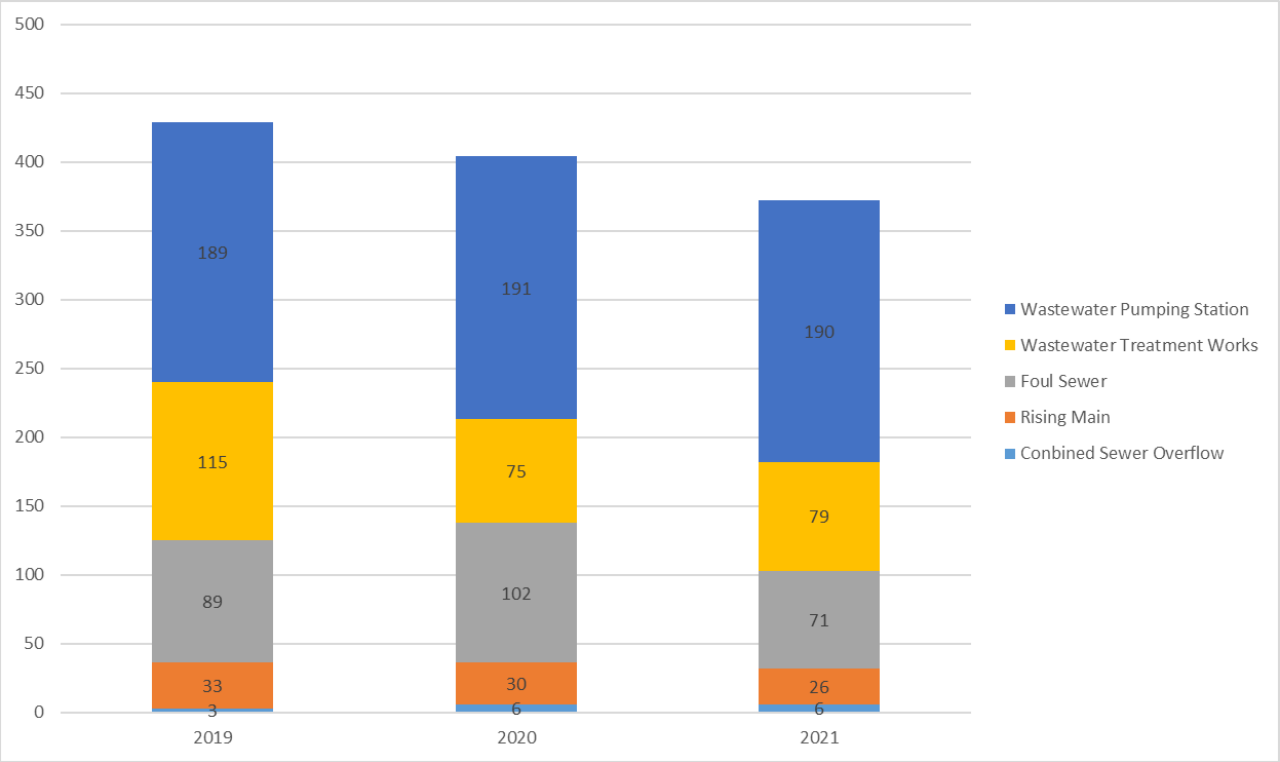


Figure 3 shows some significant improvements have been delivered on reducing pollutions from the sewerage network and that spill reported pollutions are mostly from WPSs and WTWs. However, pollutions from Wastewater Pumping Stations (WPSs) and Wastewater Treatment Works (WTWs) remain static and, as an industry outlier, these are the key areas of focus for the year three PIRP.

Figure 3: Category 1–3 events by asset type 2019–21 actuals



2.1.1 Analysis of Operational Reported Pollutions

We have seen a significant reduction in foul sewer reductions due to drive in the network pollution reduction plan to include high-risk manhole inspections (see case study in **Figure 4**) and local area catchment surveys to prevent pollutions due to blockages. Accelerated delivery of targeted sewer capacity surveys plus root ingress cut and network line programmes has been progressed which will drive reductions in flooding and pollutions.

Figure 4: Detail of high-risk manhole workstream

Blocked and fully-charged chamber just 4.5mm from surface water line.

An overflow was imminent as the surface water line outfalls to a watercourse 65 metres away. Additional risk due to a ditch 12 metres away.

The blockage was cleared, preventing a spill and pollution incident.

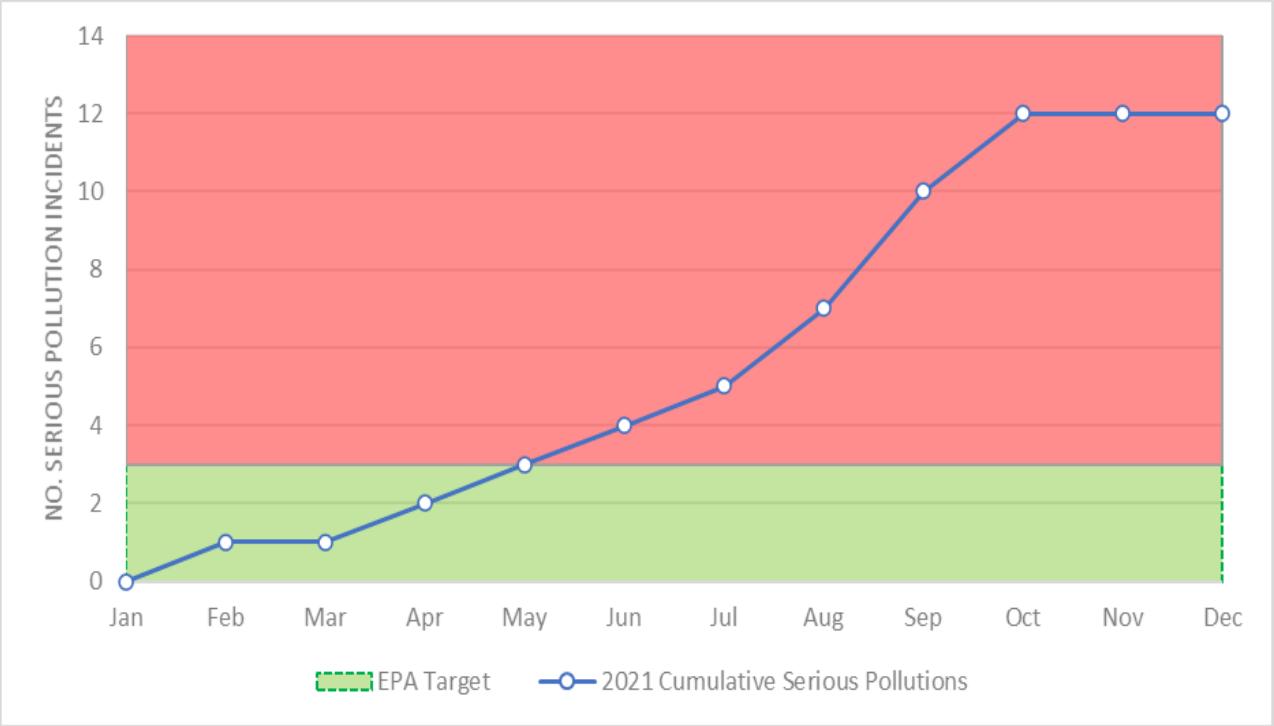
2.1.2 Analysis of serious pollutions

12 serious pollution incidents occurred in 2021, against an EP21 target of three (as shown in **Figure 5**). These pollution incidents were made up of made up of:

- Five WPS
- Three WTW

- Two foul sewers
- Two rising mains

Figure 5: Serious pollution incidents 2021



Notes:

- A gap in detection and response processes was identified following bowtie analysis of serious pollutions in September 2021.
- This prompted the introduction of Pollution Prevention Leads in the control centre and a rotation of operational mangers that would mentor controllers. Processes are being refined and recruitment is ongoing to introduce 24/7 cover.
- All five programmes in the year three PIRP will look to address the root causes of serious pollutions seen in 2021.
- The forecast for 2022 is a 58% reduction to five serious pollution incidents.

The most significant reductions into 2022 are focused on WPSs and WTWs to bring pollutions from these sites in line with industry comparisons.

2.1.3 Analysis of spills-related pollutions

Our success in reducing operational pollutions is offset by a higher number of reported pollutions related to spills (releases from storm overflows) when the permit conditions for full flow to treatment (FFT), storm and emergency discharges are not being met.

If we meet the permit conditions on the FFT volumes, and storm tanks are full before spilling, then the spill is classified as a compliant discharge in storm conditions. If any permit conditions are not met, then it is classified as a non-compliant storm discharge and therefore a pollution. All permit non-compliant and compliant emergency discharges are classified as pollutions.

Pollutions from spills have doubled in number from 2020 to 2021. Atypical weather has contributed to this increase. Our region experienced heavy, intense rainfall with higher long-term average (LTA) rainfall over the summer months in 2021 than in each of the previous two years.

We are currently an industry outlier for including pollutions related to spills in our self-reported pollutions. This decision was made at the end of 2018 to enable total transparency to both our customers and regulators, following internal audits and the recent investigations by our regulators. All spills are reviewed by our Pollutions Team to assess the probability of pollution being caused to a water body. If so, the spill is included in our self-reported pollutions.

We have included a programme within the year three PIRP that will address the root causes of pollutions from non-compliant spills, which will include enhanced storm tank preparedness, CSO care plans and other improvements to ensure network permit compliance is met.

2.2 Year two plan delivery

The majority of year two activities were delivered as planned (as shown in **Table 2**) and some metrics have been adjusted because they were not feasible. Some areas of the plan were delayed due to a combination of a reorganisation and delays in recruitment due to a lack of applicants. However, actions were taken to address these issues, including ongoing monitoring and actions identified to bring the plan back on track.

Table 2: Programme activity summary for year two (position on 30 April 2022)

Programme	Activity description	AMP7 year two target	AMP7 year two actual (RAG status* + notes)
Human error reduction	'Think Pollution' training	• Roll out e-learning to other contractors	Green
	Clever Nelly	• Maintain and continuously improve	Green
	Interactive scenario training	• Pilot complete	Green
	WPS site continuity plans	• 150 WPS • Conti plans reviewed as per Ofwat agreed frequency • Deep dives completed as part of BAU	Amber
	WTW site continuity plans	• Maintain • Deep dives completed as part of BAU	Green
	Pollution critical process checklist	• Checklist pilot complete 30 Sept • 100% adherence of checklists	Green
	Video risk triage	• Pilot complete	Green
	Post incident retrospective discussion	• 100% of Cat3 (or greater) incidents	Green

Swim-lane	Activity description	AMP7 year two target	AMP7 year two actual (RAG status* + notes)
Improving Asset Resilience project	Health checks (no. of sites WPS and WTW)	• 200	**Green** 250/200
	WPS auto pump resets	• 170	**Green** 700/170
	WPS condition-based monitoring	• 180	**Green** 180/180
	Black start key risk WTW sites	• 20 high-risk WTW sites	**Green** 23/20
	High risk and repeat sites with action plans	• 10 WTW • 30 WPS	**Green** • 17/10 WTW • 37/30 WPS
	Air lock & Underload protection on high risk WPS	• 170 WPS	**Green** 138/170
	Backup control enhancement and resolution of pump inhibit fault rectification on high sites	• 75 WPS	**Green** 95/75
	WTW - APR and CBM	• APR – 88 equipment sets, 40 sites • CBM – 20 equipment sets, 18 sites	**Green** • APR – 50/88 equipment sets, 40 sites • CBM – 3/20 equipment sets, 18 sites
	PLC Backup control testing and enhancement	• 75 sites	**Green** 67/75
	Go to Green	• WPS – 123 sites Expected status by Dec 2021: 71 Green, 48 Amber and 4 Red • WTW – 38 sites Expected status by Dec 2021: 22 Green, 15 Amber, and 1 Red	**Amber** • WPS – 77 Green, 43 Amber and 3 Red • WTW – 15 Green, 19 Amber, and 4 Red

Swim-lane	Activity description	AMP7 year two targets	AMP7 year two actuals (RAG status* + notes)
Trusted Monitoring and Analysis	Alarm transformation (no. of WPS sites	• 100 WPS	**Amber** 46/100
	Alarm quality review (high risk sites)	• 60 sites	**Green** 91/60
	Proactive Analytics Centre – WPS proactive intervention	• Establish and refine • Business case to establish permanent setup	**Green**

	Spills Reporting System (ASPIRE) – maintain and enhance	• Additional 500 outfall profiles implemented	**Green** 85/500 outfall profiles implemented
		• Maintain Beachbuoy improvements in line with stakeholder requirements	**Green**

Swim-lane	Activity description	AMP7 year two target	AMP7 year two actual (RAG status* + notes)
Customer Participation and Network	High pollution risk manhole inspections	• 10,000 • Analysis has established an optimal number of 3,000	**Green** 5,805/10,000
	Pollution spotter signs at high-risk network locations	• 500	**Green** 500/500
	Customer participation – blockage reduction	• Deliver targeted campaigns in nine local area catchments (LACs) alongside other network inspection	**Green** 9/9 LACs

*RAG (Red, Amber, Green) status key:

- **Red** = Mostly incomplete
- **Amber** = Mostly complete
- **Green** = Complete

2.2.1 Evaluation of the year two plan

A benefits tracker was developed in relation to the PIRP. This forecasts the expected benefits from each activity within the plan to 2024. It also allows for rolling forecasts of performance to be generated using current actuals to provide best, mid, and worst-case scenarios. This is based on actual numbers of pollutions alone, which is very much a lag indicator and does not break down the benefits of individual activities. Hence, assessing the success of the plan is difficult until the following year after the actions have been delivered and assessing the different contributions from each activity is not possible using this tool.

As a result, identifying the extent to which different elements of the plan have contributed to a reduction in the risk and number of pollutions is hard. Therefore, adjusting the plan and resources according to the effectiveness of each activity has been challenging.

2.3 Conclusion from year two

Although the majority of the plan was delivered successfully, the effectiveness of the plan was limited by scale of delivery.

The ‘Improving Asset Resilience’ workstream was not sufficiently scaled up or targeted on high-risk sites, which has been addressed by the build of the top 250 WPS upgrade scheme due for delivery

in 2022. This focuses on every site that has had a pollution in the last three years with an estimated spend on £15 million.

The lessons learnt sessions for the year two PIRP have concluded that while some excellent individual improvement initiatives were in place – including installation of Auto Pump Resets (APR), Back Up Control and Conditioned Based Monitoring (CBM) improvements – the programme was not large enough.

The atypical weather over the summer months impacted progress against targets, which has reinforced the need to develop specific plans to reduce pollutions from spills and continue to improve resilience on WPSs and WTWs. The WPS and WTW premises require the greatest focus to achieve our pollution reduction targets for 2024.

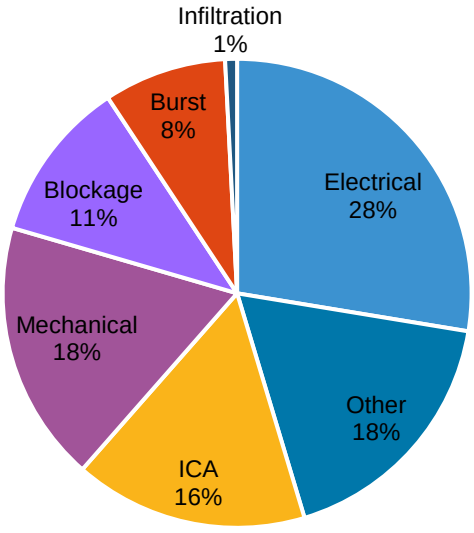
3. Year three plan and forecast

3.1 Year three plan

We have developed an ambitious year three PIRP to bring the reduction in pollutions back on track to deliver our 2024 target. The target reductions are challenging, so we are investing £145 million into a series of projects that will help us reduce Cat1–3 pollutions by 60% by the end of 2022.

As monitoring the effectiveness of activities was challenging in year two, our plans for year three place greater focus on capturing better insights through changes to people, processes and systems to include training and system improvements / alignment. An in-depth audit and peer review on root causes has been completed for all pollutions July–December 2021 with the insights shown in **Figure 6**, which have been used to inform the year three PIRP.

Figure 6: Fault cause data for pollution incidents from July–December 2021*



Although the telemetered assets WTWs and WPSs require the greatest focus, continued reductions on pollutions from the sewer network and from spills across all premises will be needed to achieve the targets for 2024.

Our plan for year three consists of five workstreams and blends targeted work – such as pumping station mechanical, electrical and control improvements – with wider-reaching workstreams, such as network and WPS cleaning to reduce blockages. The plan includes challenging targets for reducing pollutions by 60% during 2022.

The contributions to reducing pollutions from different elements of the PIRP and from activities that sit outside the PIRP have been identified. The development of measurement of leading indicators is underway with a dedicated benefit-tracking resource.

An overview of our year three plan can be seen in **Figure 7**.

Figure 7: Year three plan overview

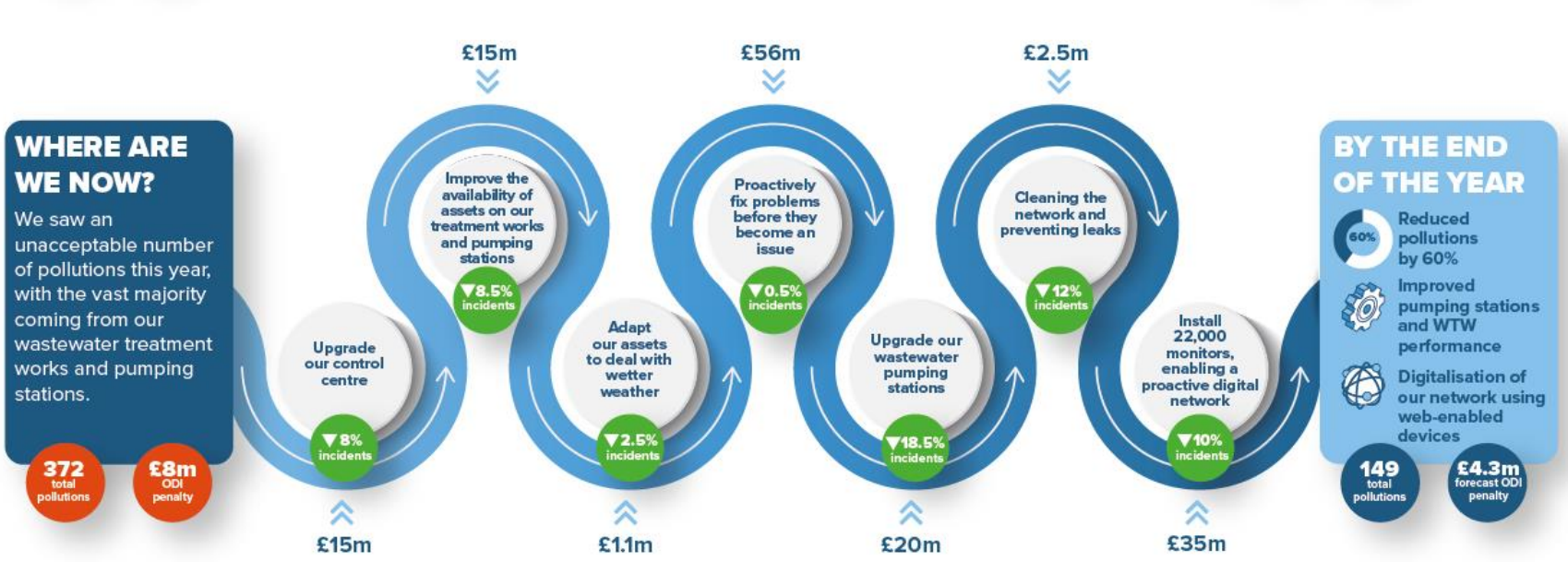


Table 3 provides more detail about the activity within each programme, along with our targets for the end of year three.

Table 3 – Programme activity summary and estimated impact for year three

Programme 1	Activity	Description	Cat 1–3 pollution reduction
WPS Upgrade	Top 250 platinum health check and remedials	This programme focuses on prioritised WPS sites, which collectively account for 100% of all Cat3 pollutions over the last three years, to deliver a range of maintenance to restore 250 additional sites to a newly-commissioned state, providing confidence that future pollution incidents will not occur from electrical, mechanical and control causes. (See **Figures 8 and 9** for details and early start progress.)	66
	WPS internal reset removal	Activity to reduce the impact third party power issues have across our WPSs.	3

Programme 2	Activity	Description	Cat 1 -3 pollution reduction
WPS / WTW Asset Availability	WPS black starts	Black starts to be carried out to ensure power reliability on targeted WPS sites to reduce pollution events. Learning from Storm Eunice has identified 106 WPS sites requiring further investigation.	12
	WTW inlet works	A tiered maintenance programme and best practice for WTW inlet works, targeted on those WTWs with frequent spills and pollutions.	17
	Drainage plans	The creation of 88 site drainage plans for the highest risk sites will be developed and placed on sites to enable visibility / awareness and minimise pollutions to the environment.	3

Programme 3	Activity	Description	Cat 1 -3 pollution reduction
WPS and Network Cleansing & Escape Prevention	Network and wet well cleaning programme	A scaled-up, proactive wet well and sewer network cleaning programme will be delivered to reduce pollutions associated with pump blockages/failures and sewer blockages. Plan optimisation will occur throughout the year and link with the network digitalisation strategic project.	10
	Sewer network capacity survey and remedials	Surveys of the sewer network to identify current condition of and the extent to which capacity or condition has been compromised, with follow on remedial work. (See **Table 4** and **Figure 10** for Ramsgate case study.)	5
	CSO Care Plan	Combined Sewer Overflows (CSOs) on the sewer network represent a high risk of pollutions. If blockages occur downstream of a CSO, the backup of sewage will spill from the CSO outfall into the receiving watercourse. Dedicated CSO Care Plans for each CSO on the sewer network will be put in place to	10

		embed ownership, focus, improved process, and action plans to prevent and mitigate pollutions from CSOs.	
	Dual sewer survey	Dual sewer surveys (where foul and surface water sewers exist next to each other but share one manhole / access point) will be undertaken to inspect caps and replace them, if required, to reduce the overflow of the foul sewer into the surface water sewer, which leads to pollution.	5
	Proactive root ingress surveys and remedial	The ingress of roots in the sewer network is a known cause of blockages which lead to pollution as well as flooding to customers' property, both internally and externally. Proactive surveys where roots are known to cause problems will be carried out, cutting out roots and lining sewers to prevent re-growth.	4
	Rising Main Improvement Plan	Investigation of the top 150 repeat rising mains and completion of remedial work. Network calming will be enabled by the installation of Variable Speed Drives (VSDs) and Proportional-Integral-Derivative (PID) loops as well as air valve replacement. This will enable consistent pumping at lower pressures and reduce the build-up of corrosive gases enabling smart, calm and robust rising mains.	11

Programme 4	Activity	Description	Cat 1 -3 pollution reduction
Pollution from Spills Reduction Programme	Network whole permit compliance	The network compliance project will identify and resolve any existing non-compliance issues with permits across all our wastewater pumping stations and ensure we have the processes, culture, and motivation in place to either pre-empt compliance issues or resolve them quickly and effectively.	2
	Additional signals to improve automated intermittent discharge determination	The Aspire additional signals project will install additional signals onsite to match the optimum design standard to allow Aspire to make fully-autonomous decisions over spill classification. This will improve the reliability of our spill data and reduce the manual verification required.	3
	Isle of Wight focus	The Isle of Wight (IoW) has a disproportionately high number of spills and associated pollution events when compared to our other operational areas. A plan has been produced with three main areas of focus: resource levels, processes and autonomous resilience.	3
	Evidence capture and pollution response app	An initial one year's contract with the environmental consultancy specialist Adler & Allen will be put in place to provide a well-resourced enhanced pollution response. This will enhance our ability to provide mitigation and reduce environmental impact and allow our sewerage contractor to focus on repair.	2

Programme 5	Activity	Description	Cat 1 -3 pollution reduction
Strategic Projects	Control centre transformation	We are introducing new systems to give our Control Centre and Field Operator teams better access to information, so they can manage incoming alerts more effectively, make decisions more efficiently and increase the likelihood of a first-time fix. We are also improving the processes around our alarms, so events are detected and investigated earlier. Meanwhile, we are re-organising and expanding our Control Centre team to achieve improved availability and responsiveness out of hours.	29
	Waste network digitalisation	We are deploying 22,000 Sewer Level Monitors across our network to identify changes in sewer levels so we can proactively intervene and stop floods and pollutions before they happen. Monitors will be installed in high-risk areas and sensors will be placed on manholes linked to past pollutions. Combined with our existing pumping station sensors, this will give us better insight and early warning of any problems.	36
	Preventative maintenance to reduce mechanical and electrical failures	We are introducing a new proactive maintenance strategy to optimise the life of assets and avoid incidents. A key focus is cultural change, led by new policy, strategy, training, and processes. Proactive maintenance will be prioritised over reactive activity, while dynamic risk scoring will be introduced to give us a better understanding of the level of risk across our assets.	2

Figure 8: Top 250 WPS upgrade

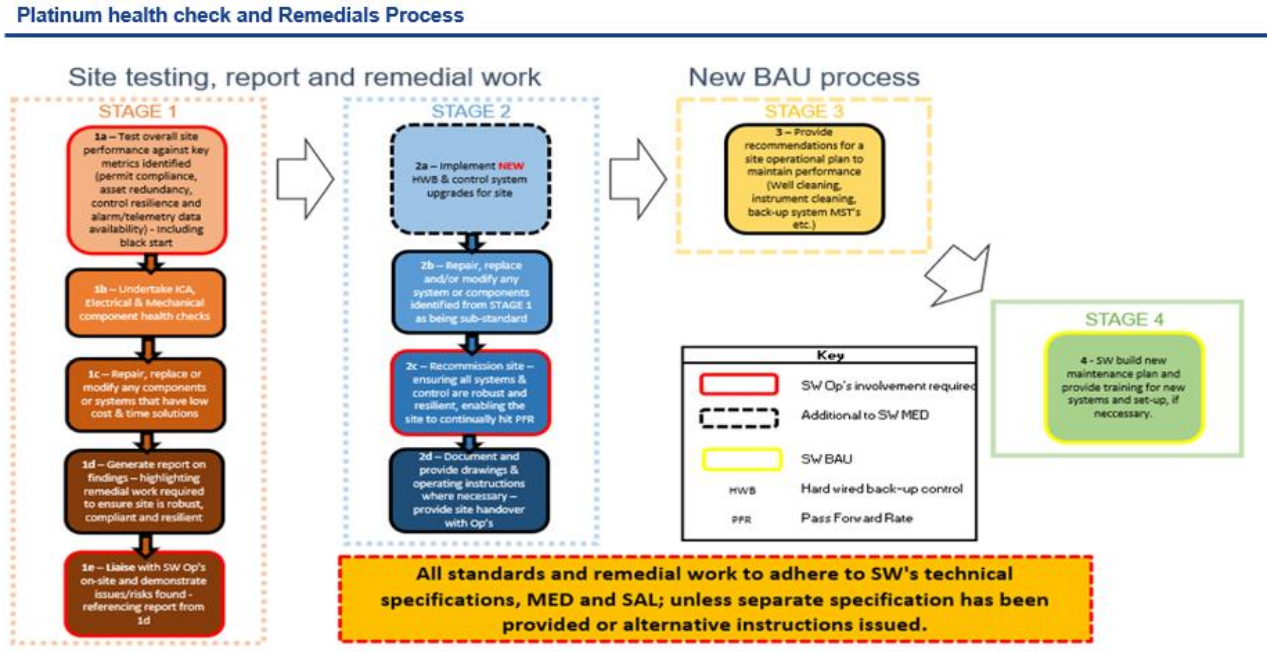
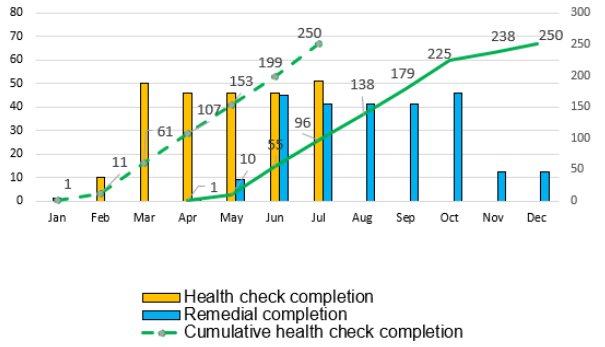


Figure 9: Top 250 WPS upgrade – progress to date

Run Rate



Assumptions

- Health check completion programmed to be completed by July, with remedials scheduled to be completed by Dec '22.
- Remedials assumed to take 3 months to complete post health check for 90% of sites, with 10% taking an additional 2 months (due to supply chain for parts and consumables).

Milestones

Project Initiation	Sep 21	Completed
PSG funding	Nov 21	Completed
Technical contractor spec design	Dec 21	Completed
Procurement and Contractor Tenders	Dec 21	Completed
Contractor Allocation	Jan 22	Completed
Programme Kick off	Jan-22	Completed
Health Check Completion	July-22	
Remedial Completion	Dec-22	

Table 4: Network capacity surveys

Outputs/outcomes/benefits which will be achieved	Early start example: Harbour Parade, Ramsgate
As an early start of our year three FRP plans, surveys in Ramsgate have been started already. Internal flooding was occurring during heavy rain and investigations suggested some capacity loss in the sewer. Results have provided successful with the removal of large amounts of rubble and tarmac from the 1200mm sewer. Work continues, including investigation into the source of the debris (see Figure 9).	History from 2021: • One Cat4 pollution • 35 internal floods Results so far: • Survey total approx. 600m • Many sections 20–30% capacity loss • Around two skips of rubble, concrete and tarmac removed Forecast benefits • Reduction of one Cat3 per year • Reduction of 15 internal flooding incidents

Figure 10: Debris discovered during Ramsgate network capacity survey

3.1.1 Human factors

Our investigation into the root causes of pollution has identified human factors as a secondary contributor in approximately 20% of cases, with the highest associated with control issues.

Within our year three plan, activities to address human factors have been embedded within the other programmes rather than being a specific programme on its own.

Revised processes and procedures, training and surveys on attitudes and ideas for improvements are some of the activities that will be delivered in year three to support the reduction of pollution incidents. In summary, our plans include mitigation workstreams to address the three key elements of people, process and control as detailed in **Table 5**.

Table 5: Activity to address human factors

Element	Activity
People	• **Operator training programmes** – linked to NVQ and development framework. This will include practical training by newly recruited technical leads and will be complemented by virtual reality training.
Process	• **Compliance Process Assessment and Controls (CPAC)** – implemented and tracked with area targets.
Control	• **Control Centre transformation** – re-organising and expanding our Control Centre team to include pollution prevention leads, as well as introducing new systems to improve incident detection and response. • **Investigations team restructure** – to include Human Factors Practitioner which is in recruitment.

3.2 Evidence to support our plan

As detailed above, pumping stations and treatment works are the immediate focus to bring performance closer to industry averages. Our plans to address pumping station and treatment works failures have been shown to be effective by industry peers that have applied similar programmes.

In 2015, Northumbrian Water was ranked one of the lowest within the industry for pollution performance. After implementing programmes similar to those set out in our year three plan – particularly, increased use of data and proactive maintenance (as set out in our own strategic projects for year three) – Northumbrian Water was able to become an industry leader.

Meanwhile, Severn Trent Water has halved pollutions over the past decade through a suite of activities, including proactive monitoring and maintenance of pumping stations and rising mains, proactive cleansing and repairs of sewers, strict treatment works compliance and improved monitoring and response to the use of storm overflows.

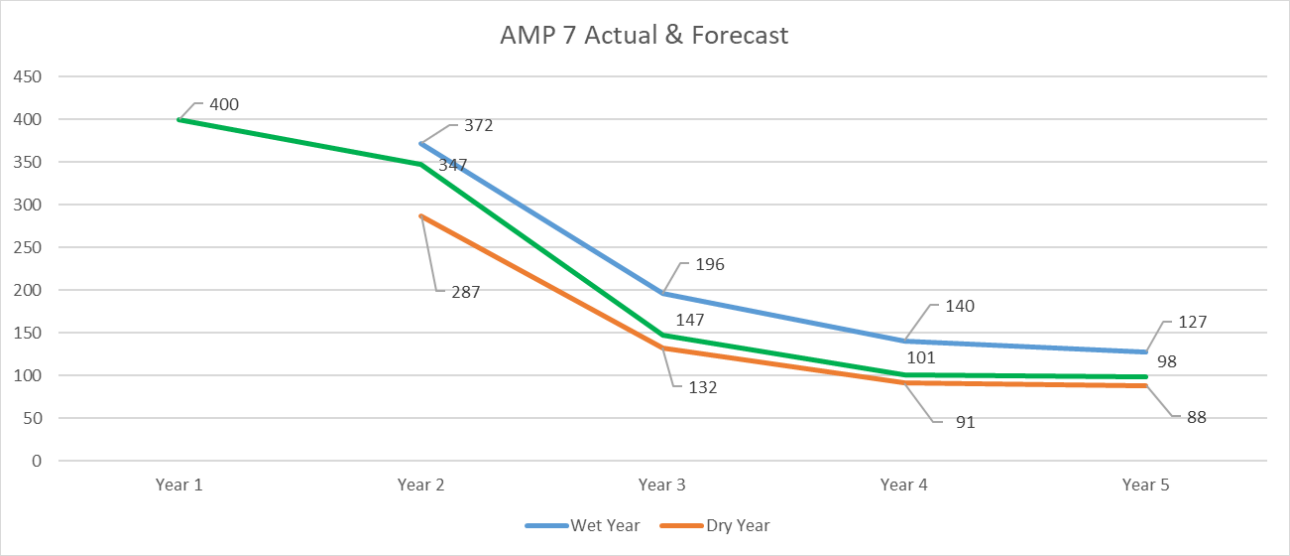
These case studies give us confidence our year three plan will deliver targeted improvements and put us on a better trajectory towards our targets for AMP7.

3.3 Year three forecast

The year 3 PIRP will deliver a 60% reduction in total pollutions and a 58% reduction in serious pollution incidents. An increased understanding in 2021 of the root causes of pollutions from spills has enabled the build of a specific pollution from spill reduction programme. Upper and lower tramlines have been calculated for wet and dry years, narrowing over time as asset resilience improves.

Improvements to forecasting accuracy have been made to enable accurate and rapid course correction of the reduction plan as the year progresses. Figure 11 shows our forecast for the remainder of AMP7 with our target of less than 100 pollution incidents in 2024.

Figure 11: AMP7 forecast



4. Glossary

AMP7	The seventh asset management period planned by the UK water industry and running from 2020 to 2025
APR	Auto Pump Resets
Cat1	CICS category 1 pollution incident – major, serious, persistent and/or extensive impact or effect on the environment, people and/or property
Cat2	CICS category 2 pollution incident – significant impact or effect on the environment, people and/or property
Cat3	CICS category 3 pollution incident – minor or minimal impact or effect on the environment, people and/or property
Cat4	CICS category 4 pollution incident – no impact on the environment
CBM	Condition Based Monitoring
CICS	Common Incident Classification Scheme
CSO	Combined Sewer Overflow
EA	Environment Agency
EA EPA	Environment Agency Environmental Performance Assessment
FOG	Fat, Oil and Grease
FS	Foul Sewer
HEC	High environmental consequence
MH	Manhole
OFWAT	The Water Services Regulation Authority
PIRP	Pollution Incident Reduction Plan
PIRS+	Enhanced Pollution Investigation Report System
PR19	Ofwat's Price Review 2019
PR24	Ofwat's price review 2024
RCA	Root cause analysis
SR	Self-reported incident
Unflushables	Items which should be disposed of in the bin, not the toilet.
WaSC	Water and Sewerage Companies
WPS	Wastewater pumping station
WTW	Wastewater treatment works