

Expectations for what DWMPs will deliver & How the Environment Agency has/can contribute to the success of DWMPs

CIWEM Urban Drainage Group
Training Day
19th February 2019

Philip Hulme
Water Quality Regulatory Development
Environment Agency

*Dr Philip Hulme BEng PhD MCIWEM C.WEM CEng
phil.hulme@environment-agency.gov.uk*

Content of Presentation

- Why is the Environment Agency interested in Drainage Planning
- Expectations of what DWMPs will deliver
- Environment Agency Contribution to success of DWMPs
- Defra Consultation

Roles of the Environment Agency In relation to Drainage Planning



Regulator



Advisor to Government



Co-deliverer



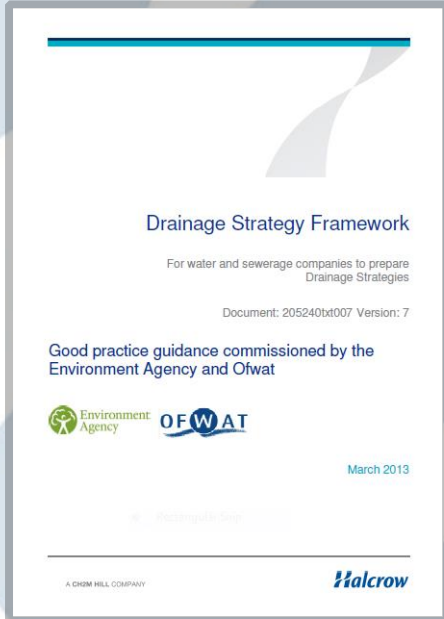
Innovator



Overseeing role (Flooding)

Environment and Flood

DWMPs Provide Detail Supporting the Drainage Strategy Framework



- Partnership,
- Uncertainty,
- Risk Based,
- Whole Life Costs & benefits,
- Live Process
- Innovative & Sustainable Solutions

DWMPs will build on the principles of the 2013 Ofwat/Environment Agency Drainage Strategy Framework (DSF)

Content of Presentation

- **Why is the Environment Agency interested**
- Expectations of what DWMPs will deliver
- Environment Agency Contribution to success of DWMPs
- Defra Consultation

Why are the Environment Agency interested in DWMPs

We in this audience all know of the innovative work and effort that WaSCs and their consultants do in drainage planning.

BUT before DWMPs:

- A lack of a consistent framework and terminology often makes those outside the industry find it difficult to engage and understand.
- Customers and stakeholders want reassurance that investment decisions today are forward looking considering future risks and opportunities.
- We have not seen the progress expected through implementation of the DSF.
- We have seen investment made in previous AMPs eroded by pressures on sewerage being realised. Robust planning informing investment is essential.

DWMPs are the Answer !

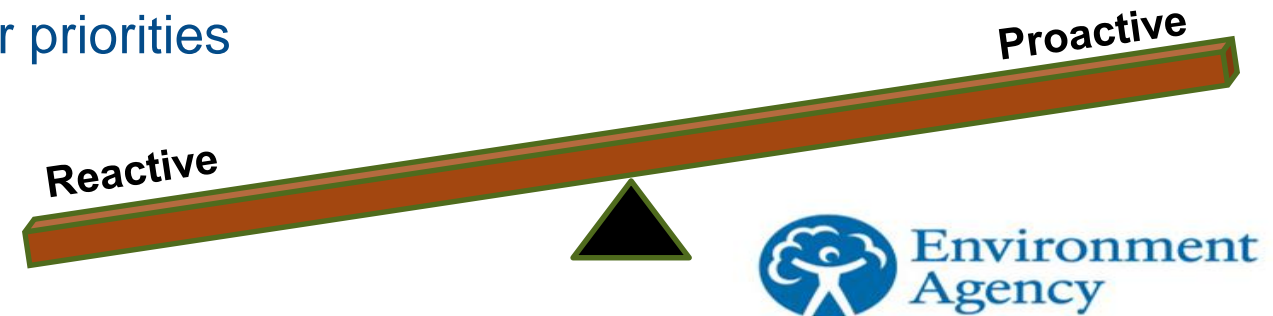
The right balance between Reactive or Proactive investment

Reactive

- We previously looked to past to direct our actions. Eg on CSOs.
- Significant improvements through **capital schemes**, delivered **step changes** in performance.

Proactive

- We now need to **protect current performance** by addressing future pressures and challenges.
- Waiting for outcomes to be affected and then **reacting is not always acceptable**
- Large capital schemes may not be appropriate to address **creeping pressures**
- DWMPs will help WaSCs establish the **right balance**
 - Informed by **Customers decisions** over priorities
 - Benefitting from **partnership** working



Potential Benefits from DWMPs – Continual Improvement - Pollution Incidents



Pollution Incidents 2015 evidence summary

September 2016

This report summarises Environment Agency statistics on serious pollution incidents in England for the calendar year 2015. It provides information on their impact on the environment and the sectors responsible.

We classify pollution incidents according to their impact on the environment and people, from category 1 (the most serious) to category 4 (little or no impact) and the level of response needed. We investigate reported pollution incidents on a risk basis to limit their impact and, where appropriate, we take action against those responsible for the pollution.

Serious pollution incidents can harm people and the environment as well as damage businesses and affect recreational activities such as angling. A serious incident can have a significant financial impact on a business in clean-up and enforcement costs, and claims for damages from third parties. Pollution incidents can damage the reputation of businesses and can affect their ability to secure contracts or subsidies.

The Environment Agency spends about £12 million a year in time and materials responding to pollution incidents to reduce harm. Our officers investigate the causes of serious pollution incidents to help determine the sectors (types of businesses) or activities we should focus our efforts on, and identify areas for businesses to improve. We also monitor pollution incidents through sector performance reports. These are used to engage with industry, disseminate lessons learnt, share best practice, and target improvement actions.

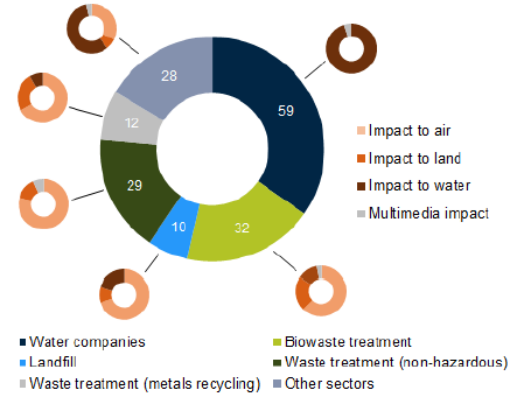
This summary is about the most serious pollution incidents, categories 1 and 2. It makes a distinction between sites or activities we regulate under the Environmental Permitting Regulations 2010 (EPR), referred to in the summary as permitted sites or activities, and those that we don't. The activities of some of the industries and businesses that we don't permit under EPR will be regulated under other legislation. For example, activities may be regulated under the Water Resources Act or monitored under the Water Framework Directive.

The data in this summary was extracted on 1 April 2016. The underlying database is live and data retrieved in any future extract may be different.

www.gov.uk/environment-agency



Serious pollution incidents caused by industrial activities with permits, by sector, in England, 2015



Serious pollution incidents caused by water company activities in England

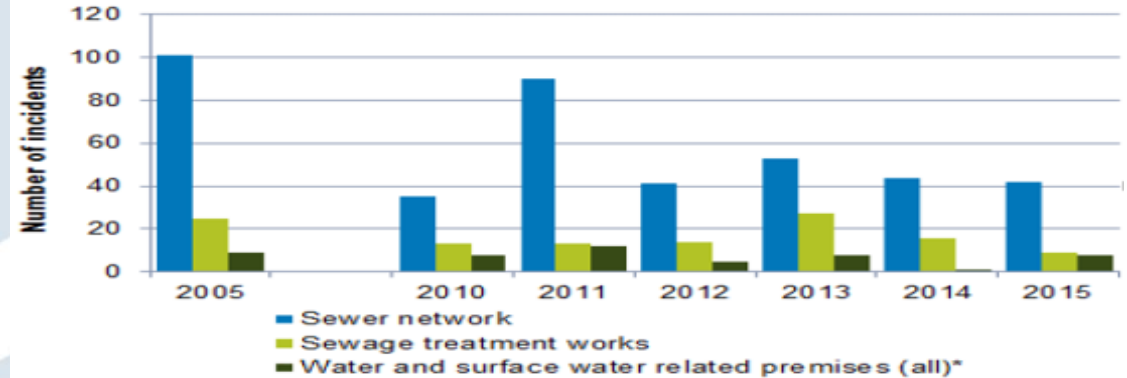
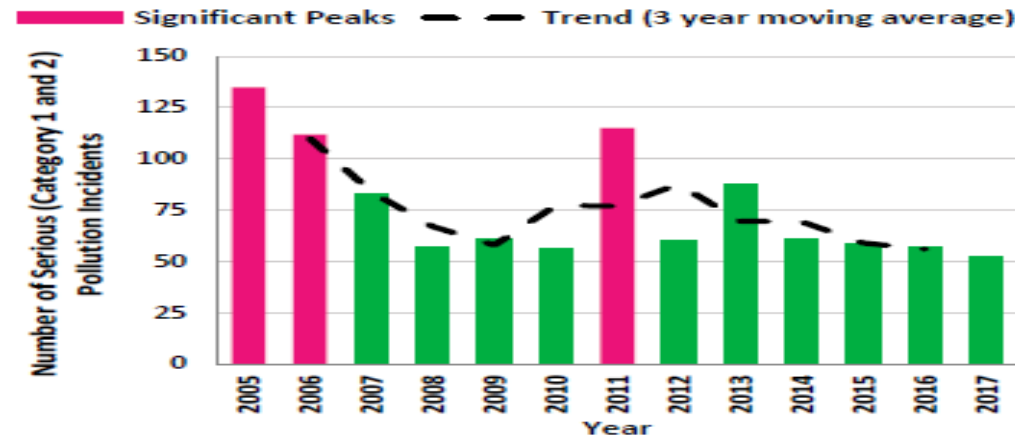


Figure 1. Numbers of serious pollution incidents and trend for the 9 water companies 2005 to 2017



Water and sewerage companies' performance

2017 summary July 2018
A summary of the environmental performance of the 9 water and sewerage companies operating wholly or mainly in England.

Chair's foreword



In February, I called for fines for the most serious pollution incidents to be proportionate to the turnover of water companies. In March, the Secretary of State said the public see "an industry slow to stop leaks, slow to repair them, slow to stop pollution and slow to stop saying 'it's April. Check out our agenda for rebuilding public trust in the sector and the National Infrastructure Commission said if they don't improve infrastructure and water efficiency there won't be enough water to meet demand in the future."

All of this could lead you to believe that England's water is in dire straits, but water quality is better than at any time in over a century, thanks, in part, to the hard work and investment of water companies. So what's going on?

The industrial revolution changed the UK forever, but progress also wrought terrible damage to people's health and the natural landscape, not least rivers. Regulation developed to protect people and the natural world from unfettered profit-making.

Today, the Environment Agency's objectives, to protect people, the environment, and to promote sustainable economic growth, would be a good guide for any modern regulator. We are committed to partnership with the water industry, helping them achieve the best results they can, while regulating them in a fair and transparent way.

This report assesses their performance in terms of pollution incidents, compliance with permits, and managing sewage. There's much to celebrate this year: a majority of companies (7 out of 9) delivered 'Good' or 'Leading' performance. United Utilities and Wessex Water maintained their 'Leading' 4 star status and Severn-Trent Water has joined them.

We've seen the highest ever level of self-reporting of pollution incidents (70%, up from 50% in 2015) with 8 of the 9 companies improving, which should help them to better manage their assets and provide quicker action to reduce pollution. There was 100% delivery of environmental improvement schemes for the financial year and sewage use and disposal was 100% in 2017.

But, the number of serious pollution incidents, while down on historic highs, has plateaued in recent years. There's been a rise in the most serious (category 1) pollution incidents to 11, 10 of which were associated with waste water.

The sector is not doing enough to reduce serious pollution incidents and ensure compliance with discharge permits. Pollution incidents cause distress to local communities, blight our rivers and beaches, and damage the reputation of the water industry. We will take tough action against any company or individual who causes significant pollution and damage to the environment. The continuing poor performance of South West Water is not acceptable. Northumbrian Water also needs to improve permit compliance.

In addition to those concerns, the whole sector must show clear focus on resilience to climate change. Winter rainfall is increasing, bringing increased risks of flooding, and summer rainfall is decreasing, bringing

customer service line 03708 506 506 Incident hotline 0800 80 70 60 Faxline 03459 88 11 88

www.gov.uk/environment-agency

Page 1



Potential Benefits from DWMPs – Challenge

– CSO Performance



Over half of all CSOs improved to meet environmental needs

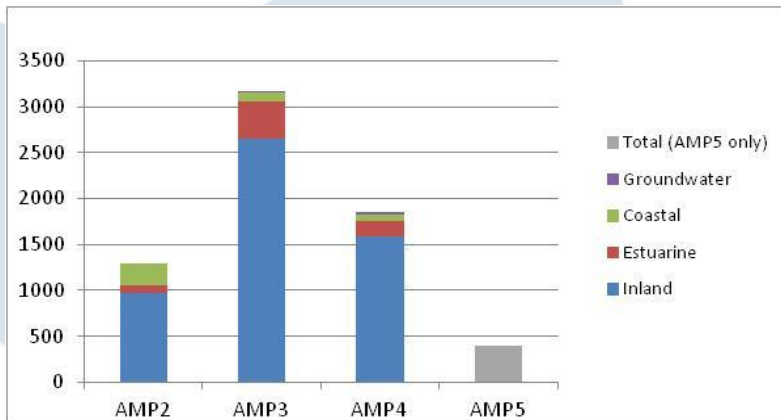
EDM will provide critical information to the industry but will also provide information to those who challenge CSOs

We (the Sector) continue to get challenged:

- NGOs
- Local Communities
- EC Infraction risk

We need to be more **open about the CSO story** and the **choices available** to us.

DWMPs and the frameworks which it supports (eg SOAF) have potential to **play a key role**.



Potential Benefits from DWMPs – Supporting Regulation – Groundwater Inundation



Regulatory Position Statement

Discharges made from Groundwater Surcharged Sewers

If you comply with the requirements below the Environment Agency will take no further enforcement action where groundwater induced infiltration leads to unavoidable discharges being made in accordance with the approved Infiltration Reduction Plan.

Background

1.1 On occasions temporary discharges have been used by Water and Sewerage Companies (WaSCs) to relieve pressure on sewers and ensure the continued efficiency and operation of household drainage facilities. These occasions are when sewerage systems become inundated by groundwater entering sewers (infiltration). While such occasions may be infrequent at a national scale it is recognised there are localities where groundwater levels (resulting from the nature of the underlying geology (e.g. chalk areas) or connectivity to fluvial flooding) means temporary discharges have been more frequently used.

1.2 Groundwater infiltration into drains and sewers generally occurs through cracks and faults in the pipe fabric. (In this RPS we will refer to sewers and drains generically as "sewers") These may develop as sewers deteriorate over time. Whilst sewers are generally designed with sufficient capacity to deal with moderate quantities of infiltration as well as sewage, in catchments where the water table rises above the level of the sewer any cracks can admit substantial quantities of groundwater. The result can be loss of service to customers and in extreme cases sewers can overflow flooding land or property and impact on watercourses.

1.3 In the past we have generally acknowledged the need for such temporary discharges to watercourses in the short to medium term while the problems are investigated and resolved. We had recognised these temporary discharges using regulatory controls such as temporary consents. However, under the Environmental Permitting (England and Wales) Regulations 2010 (EPR) it is an offence to discharge sewage effluent to surface waters without a permit. Water and Sewerage Companies have therefore sought to permit these activities.

When sewerage systems become inundated by groundwater entering sewers (infiltration)

Under a **Regulatory Position Statement** - temporary discharges have been used by Water and Sewerage Companies (WaSCs) to relieve pressure on sewers and ensure the continued efficiency and operation of household drainage facilities.

If you comply with the RPS the Environment Agency will take no further enforcement action where groundwater induced infiltration leads to unavoidable discharges being made in accordance with the approved **Infiltration Reduction Plan**.

Risk of challenge for continued use of RPS's

DWMPs will context these catchments in a wider framework and help **stakeholders appreciate the challenges faced and customers inform investment priorities.**



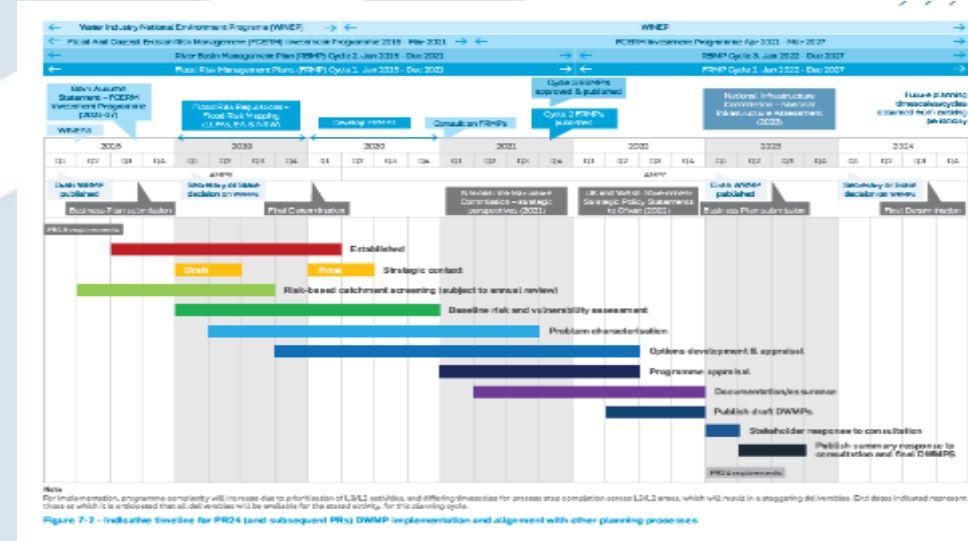
Content of Presentation

- Why is the Environment Agency interested
- **Expectations of what DWMPs will deliver**
- Environment Agency Contribution to success of DWMPs
- Defra Consultation

Expectations for what DWMPs will deliver

WaSCs Working in Partnership

- When we **plan together** we are more likely to deliver in partnership (ie more co-funded schemes)
- DWMP timetable is an **opportunity to align with other partners plans and investment programmes.**
- WaSCs** will need to invest effort and resources into engagement to bring DWMPs to life for partners.



Expectations for what DWMPs will deliver

What others are expecting?

- Defra - Strategic Policy Statement
- EA – Water Industry Strategic Environmental Requirements (WISER)
- Government – Richard Benyon 2103 letter
- National Infrastructure Commission – National Infrastructure Assessment

Defra's Strategic Policy Statement

This statement sets out Defra's strategic priorities and objectives for Ofwat.

- **Securing long-term resilience:** Customers expect resilient services, now and in the future
- **Protecting customers:** Every home and business depends on a resilient water industry



The government's strategic priorities and objectives for Ofwat

September 2017

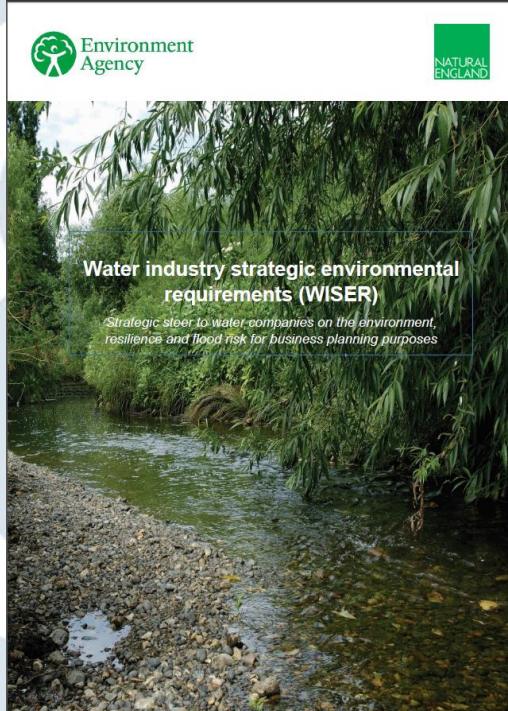
Presented to Parliament pursuant to section 2A of the Water Industry Act 1991

Objective: Ofwat should challenge **water companies to improve planning** and investment to meet the wastewater needs of **current and future customers**.

Objective: Ofwat should challenge **water companies to make sure that they assess the resilience of their system** and infrastructure against the full range of potential hazards and threats and **take proportionate steps to improve resilience** where required.

Environment Agency

PR19 Water Industry Strategic Environmental Requirements (WISER)



- We expect you to **use the 21st CDP recommendations**
- Move towards the establishing a **resilient drainage** system that can accommodate **future risks**.
- **target investment** to reduce the risk of future failures.
- Address challenges of protecting the environment, **supporting economic growth**, and **dealing with the pressures** of new development, climate change and ageing infrastructure.
- Any interventions should **be informed by liaison with customers and stakeholders** before being included in business plans.

Richard Benyon Letter to Water and Sewerage Company CEOs

July 2013


Department
for Environment
Food & Rural Affairs

Nobel House
17 Smith Square
London SW1P 3JR

T: 08459 335577
helpline@defra.gov.uk
www.defra.gov.uk

18 July 2013

From Richard Benyon MP
Minister for Natural Environment and Fisheries

Dear Chief Executive,

Discharges from combined sewer overflows (CSOs) are increasingly becoming a reputational issue for water companies in a way not dissimilar to leakage from supply a few years ago. Whilst much has been done and considerable investment made to improve the performance of CSOs their management and operation remains a regular cause for concern for both water users and the wider public. Of course we must not lose sight of the key role played by CSOs in the management of combined sewerage systems. They will continue to represent a legitimate safety valve when systems become overwhelmed by exceptional circumstances. However I would agree with many customers and communities that a water company understanding where its CSO assets are and how they are performing is a basic element of sound sewerage management.

The frequency of discharges from many CSOs, particularly those to sensitive waters such as bathing or shellfish waters, is already monitored and many more are monitored to enhance the management of sewer systems. Monitoring discharges can provide clear and consistent data to inform discussions around the performance of sewer systems with customers and other interested groups such as surfers and river users. I know that many water companies have engaged with their customers and others in these sorts of discussions and that the industry has been working with the Environment Agency on a good practice approach to monitoring and assessing frequency of discharges. Monitoring changes in the behaviour of CSOs allows potential issues to be addressed before there are adverse impacts on the environment.

Looking forward, however, I believe more needs to be done. We know that the pressure on CSOs is likely to increase. The risk of increased levels of discharge from changes in



*“I believe more needs to be done. We know that the **pressure on CSOs is likely to increase.**”*

*“There are a range of possible solutions available to water companies. These are likely to have strong links to **wider drainage planning allowing the most sustainable options to be identified.**”*

*“I think this presents a real **opportunity for the industry to show clear leadership,** to be ambitious and to quantify these ambitions and share them with their customers, the Government and more widely. “*

National Infrastructure Commission

NATIONAL
INFRASTRUCTURE
COMMISSION

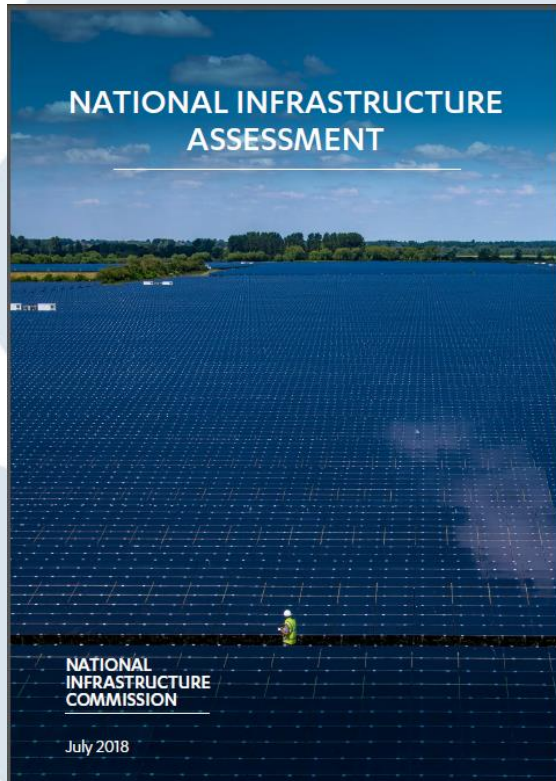
- The Commissioners provide expert, impartial **advice to the government on infrastructure**, work with the Chair and each other to **shape and develop the national infrastructure assessment**
- A **National Infrastructure Assessment once in every Parliament**, setting out the NIC's assessment of long-term infrastructure needs with **recommendations to the government**.
- In-depth studies into the **UK's most pressing infrastructure challenges**, making recommendations to the government.
- Monitoring the government's progress** in delivering infrastructure projects and programmes recommended by the NIC.

National Infrastructure Assessment

NATIONAL
INFRASTRUCTURE
COMMISSION

Surface water management

- The **data needed** to robustly assess the costs and benefits of different resilience standards for surface water flooding is **currently unavailable**.
- All relevant organisations should **ensure data is available in good time for the next Assessment**.
- Water companies are developing Drainage and Wastewater Management Plans.**
- Water companies and local authorities **should work together** to build on their existing **plans** and take **action** on local flood risk where this is possible.
- This should include identifying communities at greatest risk from severe surface water flooding and **developing joint plans**, including investment requirements, to ensure resilience.
- These plans should **inform the next Price Review and Assessment**.



Can we live up to these expectations?



Where are you:

- At the top?
- Base Camp?
- Asleep?

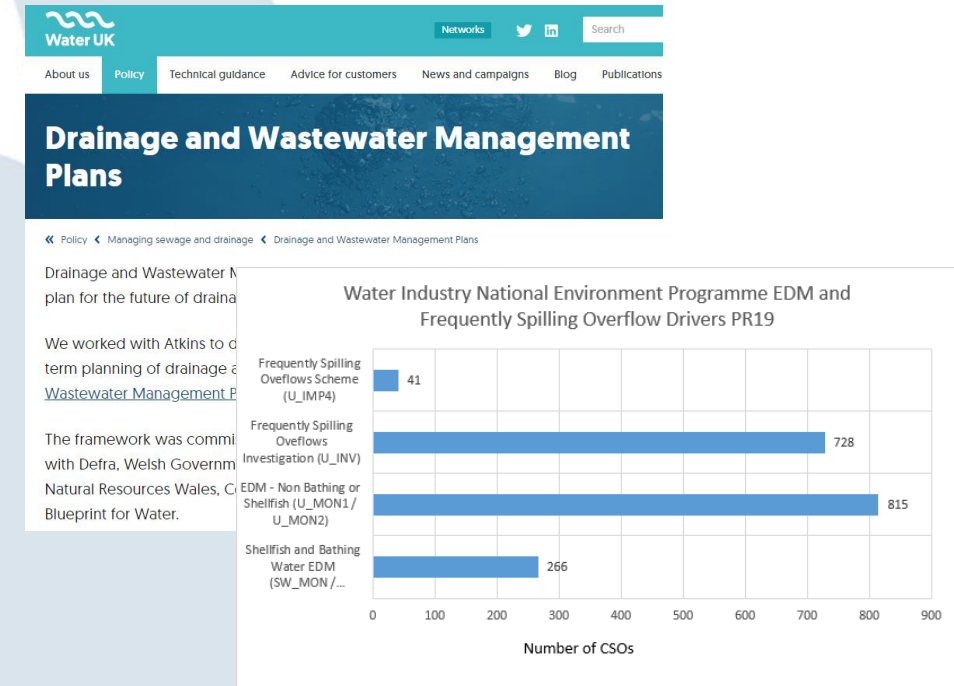
Content of Presentation

- Why is the Environment Agency interested
- Expectations of what DWMPs will deliver
- **Environment Agency Contribution to success of DWMPs**
- Defra Consultation

Environment Agency Contribution to the success of DWMPs

Setting Direction / Providing Advice

- 21st Century Drainage Programme Board
- DWMP Steering Group
- Advice to Defra
- PR19 Drivers
- Not part of the WaterUK led DWMP Implementation Group
 - EA Offer Autumn 2018 to lead engagement workshops
-?

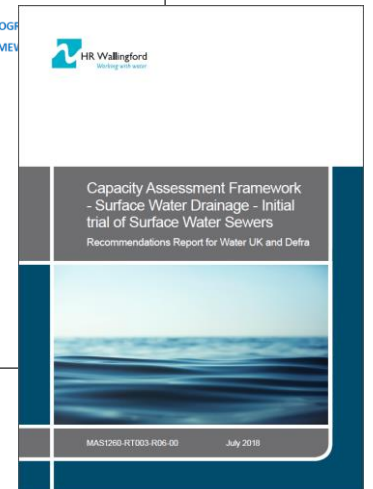
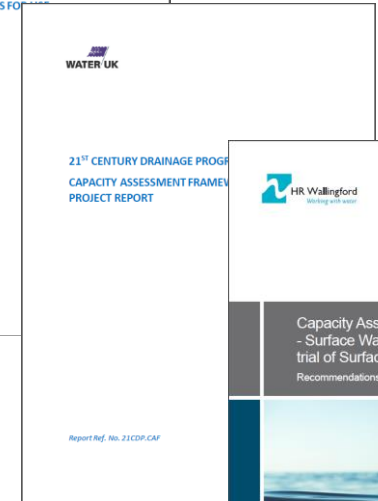
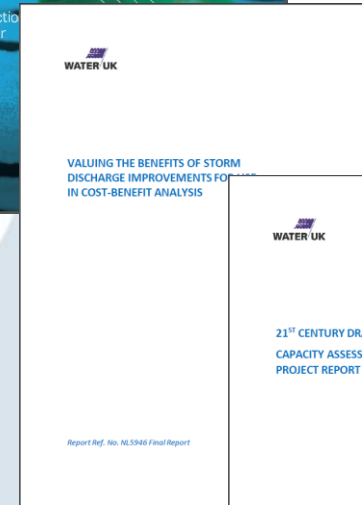


Environment Agency Contribution to the success of DWMPs

Co-develop Frameworks

21st Century Drainage Tools:

- DWMP Framework
- Storm Overflow Assessment Framework (SOAF)
- Capacity Assessment Framework (CAF)
- Capacity Assessment Framework testing (CAF SW)
-?



Environment Agency Contribution to the success of DWMPs

Internal Guidance

- Briefing EA staff (in local PSO) Teams
- Including DWMPs in our guidance to Areas for improving flood strategic planning and refreshing Flood Risk Management Plans over the next 2 years (the flood equivalent of RBMPs)
- Guidance on CSO related drivers in PR19
- Encouraging Regional Flood and Coastal Committees to discuss DWMPs at their April Committee meetings
-?

Environment Agency Contribution to the success of DWMPs

Further Contributions

- Environment Agency undertaking work to consider need for and how to :
(For both current Non Statutory and the potentially Statutory scenario)
 - Monitor Progress in the development of DWMPs
 - Pace, Quality & Breadth of Collaboration
 - Opportunities to Maximise Synergies between plans
 - Address Resource Commitments
- Continued support to Defra - considering evidence for Statutory DWMPs
-?

Content of Presentation

- Why is the Environment Agency interested
- Expectations of what DWMPs will deliver
- Environment Agency Contribution to success of DWMPs
- **Defra Consultation**

Defra Consultation – January 2019



Department
for Environment
Food & Rural Affairs

Improving our management of
water in the environment

Consultation proposals

January 2019

In contrast with water supply, **companies are not under a specific legal requirement to plan their long-term wastewater needs as transparently or robustly.**

The lack of transparent, integrated planning means that **customers do not fully understand the sewerage services** they receive, and how they can affect them.

Also, the need to **work with partners** who use or have an impact on wastewater networks, such as local authorities and developers, **can be overlooked.**

We would like **more assurance** that companies are planning and investing in drainage and wastewater **strategically.**

We need to be sure that they are doing so in a way that will **manage the risks of pollution, flooding or spikes in future bills.**

Water companies have recognised the importance of long-term drainage and waste water planning and have **started a non-statutory process for such planning.**

Defra Consultation – January 2019



Department
for Environment
Food & Rural Affairs

Improving our management of
water in the environment

Consultation proposals

January 2019

The **drainage strategy framework** was intended to help companies, working together with other organisations, to **plan better their drainage needs**.

The framework assisted in this respect, but **inconsistency in the quality and coverage of plans and the pace** they have been produced, has identified that **more detailed guidance was required**.

Drainage owned by water companies is of course only part of the issue and the **risks and impacts on the wider drainage network, needed to be considered more fully**.

Through **its 21st Century Drainage Programme**, Water UK (the water industry representative body) has since been working with water companies, UK and Welsh governments, Ofwat, and the environmental regulators¹² to improve long-term planning for both drainage and wastewater.

Defra Consultation – January 2019

(Responses by 12 March 2019)



Department
for Environment
Food & Rural Affairs

Improving our management of
water in the environment

Consultation proposals

January 2019

Question 7: Do you agree that Drainage and Wastewater Management Plans **should be made statutory and produced every five years?** Please provide reasons.

Question 8: **Who should a water company consult with,** and obtain information from in developing their Drainage and Wastewater Management Plans **and at what stage** in the development of their plans?

Question 9: What, if any, are **the lessons we could use from the water resources management planning** process in making Drainage and Wastewater Management Plans statutory?

Question 10: Is the **current non-statutory** Drainage and Wastewater Management Plan framework clear and complete, **and are there any changes/lessons** learnt which we should take on board in making the process statutory?

Question 11: **Should there be government or regulator oversight in the Drainage and Wastewater Management Plan process and review of plans?** What level and type of oversight should this be? Please provide reasons.

End of Presentation