

Data Table Commentaries

Appendix-3 -Storm Overflow PCDWW5

Contents

1. Spill Reduction – Network.....	3
2. Spill Reduction – STW	5

1. Spill Reduction – Network

Storm Overflow Spill Reduction -Network: Rows 9-15

These lines are currently unnamed in the WINEP submission for DCWW. Based on the modelling undertaken to date and targeting sites that are currently classed as causing severe harm, we would anticipate 7 sites on top of the two named sites in England to be causing severe harm. However due to the number of investigations undertaken these have not yet been identified and are currently placeholders, as per the approach we have agreed with EA in the WINEP.

Storm Overflow Spill Reduction – Network: Rows 16-17

These lines are for named sites in the WINEP which have already been classified for harm impact and are identified for improvements in the final WINEP. It should be noted that Row 16 is identified as high impact, so does not meet our criteria as a standalone site to include in the AMP8 WINEP, but it is hydraulically linked to the site in Row 17 so needs to also be carried out to achieve the harm reduction on that site.

Storm Overflow Spill Reduction – Network: Rows 18-117

From current modelling and harm impact assessment, these 100 sites are identified as causing severe harm impact and have therefore been included in the NEP as our initial commitment for improvement in AMP8. Classification through the remaining SOAF investigation programme in AMP7, and the classification investigation included for AMP8, we expect to identify further assets in Wales that will be causing severe harm impact. Further prioritisation will take place in discussion with NRW through the remainder of AMP7 and into AMP8 as surveys are complete, and some of these sites may be swapped with those deemed to be higher priorities through the NEP change control process.

Storm Overflow Spill Reduction – Network: Row 118

This site at risk of deteriorating a class in Bathing Water Quality against the 2017 baseline. There is a requirement in the NEP, from NRW, for Welsh Water to deliver improvements under driver code W_BW_IMP1 i.e., reduced apportionment and/or risk from DCWW assets causing a drop in classification.

Column Heading *Capital Expenditure*

Commentary

The cost values are taken from the associated raw values in the Options Development Reports, submitted to NRW and EA, which reflects the cost build up from the Cost and Carbon Estimating templates in 20/21 (WINEP) or 21/22 (NEP) prices which are then adjusted in line with the methodology applied and described for all Capex values in CWW1 and CWW3 to inflate to 2022/23 prices, and account for revised overheads and efficiencies.

Operating Expenditure

The Opex values have been corrected for an increase in unit rate of power from to 9.23p/Kwh used in the Cost and Carbon Estimating Template, and included in the Options Development Reports, to an updated 2021/22 rate of 20.4p/Kwh. The total Opex has then been inflated to the 2022/23 price base. This applies the same methodology as the remainder of the investment plan.

Column Heading	Commentary
<i>Cost driver 1 Current spills (annual spills - EDM, 2020)</i>	Data included in the table is from our EDM Annual Return. Cells have been left blank if we do not have the data available.
<i>Cost driver 2 Current spills (annual spills - EDM, 2021)</i>	Data included in the table is from our EDM Annual Return. Cells have been left blank if we do not have the data available.
<i>Cost driver 3 Current spills (annual spills - EDM, 2022)</i>	Data included in the table is from our EDM Annual Return. Cells have been left blank if we do not have the data available.
<i>Cost driver 4 Model predicted spills (annual, 2025)</i>	An Average of 2020, 2021 & 2022 spill numbers from the EDM Annual Return have been utilised to create a consistent average spill number for 2025. This is based upon these 3 years due to the availability of data and that those years represent a statistical spread of annual rainfall as defined by 20 years of SAAR values: a Wet year (2020), Average year (2021) & Dry year (2022). This provides our best indication of the average being representative.
<i>Cost driver 5 Target spills (annual spills)</i>	<p>This Cost driver column is aligned to the Environment Act 2021 targets, which are set for companies wholly and mainly in England. These targets are not applicable to companies operating wholly and mainly in England.</p> <p>For Wales the driver for solution delivery is based upon reaching a reduction of ecological impact to a No/Very low level there is no numeric target for each discharge, therefore cells have been left blank.</p>
<i>Cost driver 6 Total Equivalent Storage (m3)</i>	This is the sum of Cost driver 7, 8 and 9 Grey, Green and Other solutions. Where 10 th spill volumes have been calculated through SOAF investigations and the modelling is complete this volume has been used, where the volume is unknown the cell have been left blank.
<i>Cost driver 7 Equivalent Storage delivered through Grey solutions (CWW20.36 / 7E.13) (m3)</i>	All solutions, had an 100% grey solution and a 70% Grey 30% green price banding, All volume bandings bar Band 2 the cheapest option was grey so any assets in these bands will have a 100% Grey solution matching the volume of the Total Equivalent Storage (m3) from Cost Driver 6
<i>Cost driver 8 Equivalent Storage delivered through green solutions (CWW20.37 / 7E.14) (m3)</i>	Where the volume of the 10 th spill is within the Band 2 solution range 30% of the Total Equivalent Storage (m3) from Cost Driver 6 is populated in this column.

Column Heading	Commentary
<i>Cost driver 9 Equivalent Storage delivered through other solutions (m3)</i>	There are currently no 'other solutions' identified in our PR24 programme, therefore cells remain blank.
<i>Cost driver 10 BP Spill reduction (annual spills)</i>	Spill targets are not a cost driver in Wales and so this column has been left blank.
<i>Cost driver 11 Priority site (yes/no)</i>	Based upon mapping of assets discharging within high priority areas as defined by our Storm Overflows Discharge Reduction Plan Annex 1
<i>Cost driver 12 Company specific - Assumed Harm category pre- intervention</i>	Based upon known outputs of SOAF investigations. With the exception of Jacksons Bay which has been listed as N/A as it is a bathing water scheme
<i>Cost driver 13 Company specific - Assumed Harm category post- intervention</i>	Based upon delivery of a satisfactory asset as per driver code W_U_O_IMP1, where impact cannot be greater or equal to Low (harm assessment range between low and up to Severe+). Only no/very low level of harm is acceptable. Jacksons bay has been listed as N/A as it is a bathing water scheme.

2. Spill Reduction – STW

Storm Overflow Spill Reduction – STW: Rows 9-33

These sites have been identified through the NEP and WINEP assessment methodology to require increases to the existing permitted storm storage capacity requirements and are included on the NEP and WINEP under the W_U_IMP6 driver. There are currently more sites included on the NEP spreadsheet than are listed here, as it was deemed these sites did not meet the driver requirements or required no intervention.

The methodology for identifying sites for the U_IMP6 WINEP/NEP programme was based on an assessment of PR19 deferred sites and whether they were meeting minimum standard for storm tank capacity as stipulated by our environmental regulators. The purpose of the schemes is to address the shortfall in the minimum standard and not based on a targeted spill reduction. As such cost driver 1 to 5 has not been provided.

Cost drivers 10 to 13 data is also excluded. In order to determine a BP spill reduction figure, additional hydraulic modelling would be required to understand the benefit of meeting minimum storm tank capacity standard in spill frequency and volume terms. This exercise has not been undertaken to date for sites within this programme. Assessment of priority and harm has not been undertaken as these are PR19 deferred schemes to meet a minimum standard and have not been prioritised based on water quality impact. As such, no pre-intervention environmental impact assessment has been carried out.

The figure provided for each site is the volume required for storage to meet the minimum regulatory standards and has been calculated using the agreed regulatory approach. The value given is the increase in volume to be provided during AMP8 under the WINEP/NEP U_IMP6 driver. The total programme volume is 7,941 m³ of additional storage across 25 sites in England and Wales.

Storm Overflow Spill Reduction – STW: Rows 34-36

These sites come under two driver codes which are defined as W_WFD_SHELL_IMP 1- Actions to implement improvements identified by W_WFD_SHELL_INV1 to ensure the Shellfish Water achieves a minimum of Class B and W_WFD_SHELL_IMP2 - Actions to implement improvements identified by W_WFD_SHELL_INV2 to ensure in harvesting beds achieving Guideline (defined as an average of 80% of the time or 8 years in 10 or 4 years in 5). Such improvements should be for shellfish waters that are economically significant and sustainable. An evaluation of shellfish water and DCWWs assets has been carried out, resulting in the identification of the three sites.

For all Rows:

Column Heading	Commentary
<i>Capital Expenditure</i>	The cost values are taken from the associated raw values in the Options Development Reports, submitted to NRW and EA, which reflects the cost build up from the Cost and Carbon Estimating templates in 20/21 (WINEP) or 21/22 (NEP) prices which are then adjusted in line with the methodology applied and described for all Capex values in CWW1 and CWW3 to inflate to 2022/23 prices, and account for revised overheads and efficiencies.
<i>Operating Expenditure</i>	The Opex values have been corrected for an increase in unit rate of power from to 9.23p/Kwh used in the Cost and Carbon Estimating Template, and included in the Options Development Reports, to an updated 2021/22 rate of 20.4p/Kwh. The total Opex has then been inflated to the 2022/23 price base. This applies the same methodology as the remainder of the investment plan.
<i>Cost driver 1 Current spills (annual spills - EDM, 2020)</i>	Rows 9-35. The purpose of the schemes is to address the shortfall in the minimum standard and not based on a targeted spill reduction. As such EDM data is not provided. Rows 34-36 only: Data included in the table is from our EDM Annual Return.
<i>Cost driver 2 Current spills (annual spills - EDM, 2021)</i>	Rows 9-35. The purpose of the schemes is to address the shortfall in the minimum standard and not based on a targeted spill reduction. As such EDM data is not provided. Rows 34-36 only: Data included in the table is from our EDM Annual Return.
<i>Cost driver 3 Current spills (annual spills - EDM, 2022)</i>	Rows 9-35. The purpose of the schemes is to address the shortfall in the minimum standard and not based on a targeted spill reduction. As such EDM data is not provided. Rows 34-36 only: Data included in the table is from our EDM Annual Return.

Column Heading	Commentary
<i>Cost driver 4 Model predicted spills (annual, 2025)</i>	An Average of 2020, 2021 & 2022 spill numbers from the EDM Annual Return have been utilised to create a consistent average spill number for 2025. This is based upon these 3 years due to the availability of data and that those years represent a statistical spread of annual rainfall as defined by 20 years of SAAR values: a Wet year (2020), Average year (2021) & Dry year (2022). This provides our best indication of the average being representative.
<i>Cost driver 5 Target spills (annual spills)</i>	Rows 9-33. Investment is not based on waterbody priority and therefore this column is not completed. Row 34 – 36. In alignment with Shellfish Water Driver, annual spill target is 10 on average per annum.
<i>Cost driver 6 Total Equivalent Storage (m3)</i>	Rows 9-33 This is the sum of Cost driver 7, 8 and 9 Grey, Green and Other solutions.
<i>Cost driver 7 Equivalent Storage delivered through Grey solutions (CWW20.36 / 7E.13) (m3)</i>	Rows 9-33. It is assumed this links to RAG APR 7E L11. The values provided within the PR24 'Spill Reduction - STW' tab are the current design storage volumes for the U_IMP6 programme.
<i>Cost driver 8 Equivalent Storage delivered through green solutions (CWW20.37 / 7E.14) (m3)</i>	Rows 9-33. There is no plan to deliver green solutions to address shortfall in the minimum standard for storm tank capacity.
<i>Cost driver 9 Equivalent Storage delivered through other solutions (m3)</i>	Rows 9-33. There is no plan to deliver 'other' solutions to address shortfall in the minimum standard for storm tank capacity. As such, all figures provided in this column are 0 m ³ .
<i>Cost driver 10 BP Spill reduction (annual spills)</i>	Rows 9-33. Investment is not based on spills and therefore a reduction not calculated. Row 34 – 36. This is calculated from Cost Driver 4 – Cost Driver 5.
<i>Cost driver 11 Priority site (yes/no)</i>	Rows 9-33. Investment is not based on waterbody priority and therefore this column is not completed. Row 34 – 36. Shellfish waters are considered high priority.