Background information for Item 10

Combined Sewer Overflows Explained

Recently we have seen prominent coverage in the press and television which claims that untreated human waste was released into streams and rivers for more than 1.5 million hours.

There are a number of points that are important to put these articles into context.

England has a combined sewage system made up of hundreds of thousands of kilometres of sewers, built by the Victorians, in many urban centres. This means that clean rainwater and waste water from toilets, bathrooms and kitchens are conveyed in the same pipe to a sewage treatment works.

During heavy rainfall the capacity of these pipes can be exceeded, which means possible inundation of sewage works and the potential to back up and flood peoples' homes, roads and open spaces, unless it is allowed to spill elsewhere. Combined sewer overflows (CSOs) were developed as overflow valves to reduce the risk of sewage backing up during heavy rainfall.

Overflows of diluted sewage during heavy rainfall are not a sign that the system is faulty. Combined sewer overflows (CSOs) are a necessary part of the existing sewerage system, preventing sewage from flooding homes and businesses.

Weather 2023

According to the Met Office 2023 had the wettest October/November in 2023 since the 1800's. The average rainfall for Dorset was between 115-120% of the average annual rainfall.

According to local records for Dorset rainfall records were broken in 2023. January experienced torrential rain. 3.3 inches fell during March/April/May which is above the 10 year average. July August experienced heavier than usual rainfall this continued into November with Stirm Cieran.

As an example *"Weymouth started the year with a rainfall annual deficit of 70.2 mms. The year ended with an annual rainfall surplus of 210 mms or over eight inches.'*

Beer Hackett CSO

This is a sewage discharge monitoring station, which is usually a type of Event Duration Monitor (EDM).
These stations themselves are designed to mitigate the impact of heavy rainfall by discharging, under permitted conditions, any overflow into a water body. They are often actively discharging during flood events.

The declared body of water receiving this discharge is the "Wriggle River"
This station discharged sewage 58 time(s) during 2023.

Operational Summary Year 2024

Wriggle River l 51 Spills l 587 hours l 6.68

The declared body of water receiving this discharge is the "Wriggle River"
This station discharged sewage 51 time(s) during 2024.
The station discharged for a total of 587 hour(s).
This is around 24 day(s)* or 6.68% of the year.
Monitor operational 96.2% leaving 1314.9 hours unaccounted for
The following reasons have been given for the high spill frequency in 2024:
High Spill Threshold Not Met

The following comments have been given on the station operators intended actions:
Operational Improvement Ongoing

Operational Summary Year 2023

Wriggle River 58 Spills |598.5 hours | 262.8 hours l 6.83% of year

This monitor has been operational for 99% of its total time we have data for.
There are 262.8 hours unaccounted for due to downtime of the monitor.
The station discharged for a total of 598.5 hour(s).
This is around 24 day(s)* or 6.83% of the year.
The following reasons have been given for the high spill frequency in 2023:
Performance - Infiltration
The following comments have been given on the station operators intended actions:
N/A - Ongoing Investigation

This monitor was operational for 99.7% of the year.
Leaving 21.9 hours unaccounted for in the data.

The worst year in our records for the "Beer Hackett Pumping Station" is 2023, discharging sewage for 598.5 hours of the year.

Operational Summary Year 2022

Wriggle River | 19 Spills | 91.5 hours | 1.04% of year

The declared body of water receiving this discharge is the "Wriggle River"
This station discharged sewage 19 time(s) during 2022.
The station discharged for a total of 91.5 hour(s).
This is around 3 day(s)* or 1.04% of the year.
The following reasons have been given for the high spill frequency in 2022:
N/A - Ongoing Investigation
The following comments have been given on the station operators intended actions:

N/A - Ongoing Investigation

This monitor was operational for 99.9% of the year.
Leaving 4.3 hours unaccounted for in the data.

Operational Summary 2021

19 Spills | 93.7 hours | 1.06 % of year
The declared body of water receiving this discharge is the "Wriggle River"
This station discharged sewage 19 time(s) during 2021.
The station discharged for a total of 93.7 hour(s).
This is around 3 day(s)* or 1.06% of the year.
The following reasons have been given for the high spill frequency in 2021:
Not Asset Maintenance - Hydraulic Capacity
The following comments have been given on the station operators intended actions:
N/A - Hydraulic Capacity

This monitor was operational for 99.1% of the year.
Leaving 78.8 hours unaccounted for in the data.

.Data from https://www.floodmapper.co.uk