

1st to 18th Aug 2022 (lagoon samples taken 17th)

Site: CHIDEOCK MILL LANE SEWAGE TREATMENT WORKS				
Telemetry Point: B76523				
Spill Logic: 50 Mins				
☐ Total Spill Count: 1				
	Spill Count: 1	(DD/MM/YY HH:MM:SS)	(DD/MM/YY HH:MM:SS)	(HH:MM:SS)
		16/08/22 15:12:26	16/08/22 15:14:38	00:02:12
		16/08/22 15:23:10	16/08/22 18:58:54	03:35:43

Site: CHIDEOCK SEATOWN SEWAGE PUMPING STATION				
Telemetry Point: B27528				
Spill Logic: 60 Mins				
☐ Total Spill Count: 1				
	Spill Count: 1	(DD/MM/YY HH:MM:SS)	(DD/MM/YY HH:MM:SS)	(HH:MM:SS)
		16/08/22 14:33:17	16/08/22 14:53:30	00:20:12

19/8/22

I am writing to update you on our position on storm overflows and bathing waters in Dorset following media coverage this week as the country experienced the first period of heavy rainfall since early June.

Storm overflows operate automatically as designed, to prevent flooding during very heavy rainfall and all operate within consents set by the Environment Agency. Most of our coastal overflows discharge well out to sea or into rivers upstream of the bathing water, and they discharge dilute screened sewage that is unlikely to have any significant impact on the bathing waters.

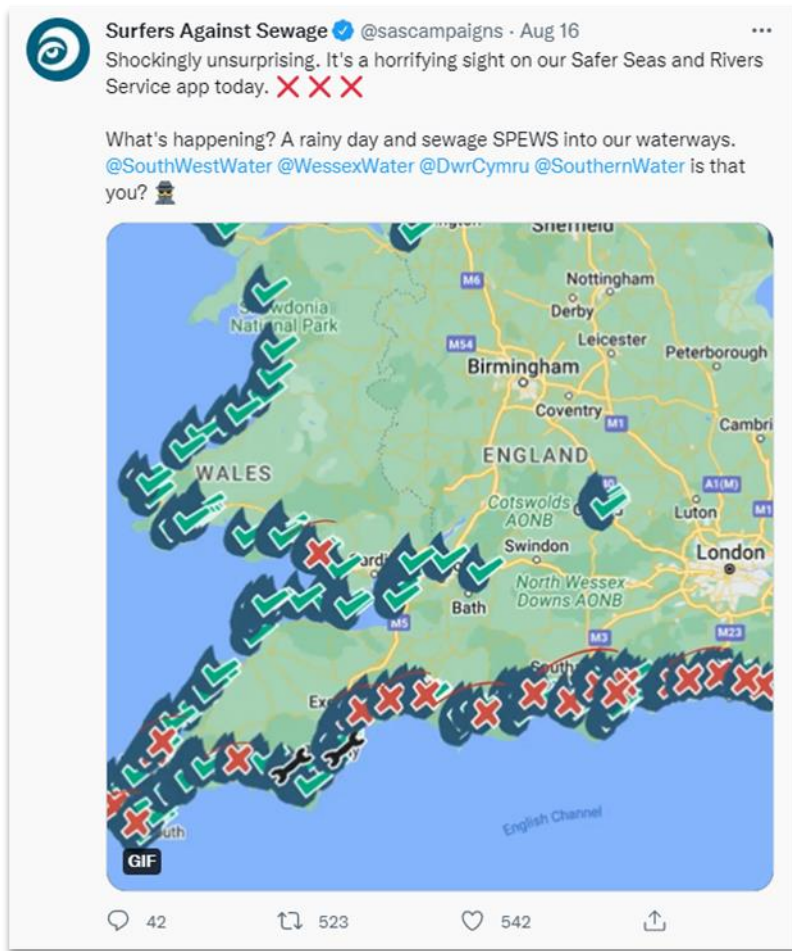
This week there was 32mm of rainfall recorded across short periods of time in Dorset, and therefore a small number of our coastal overflows did automatically operate on Tuesday 16 and Wednesday 17 August 2022.

Below is a table to show which bathing waters had an overflow in operation and for how long, in chronological order:

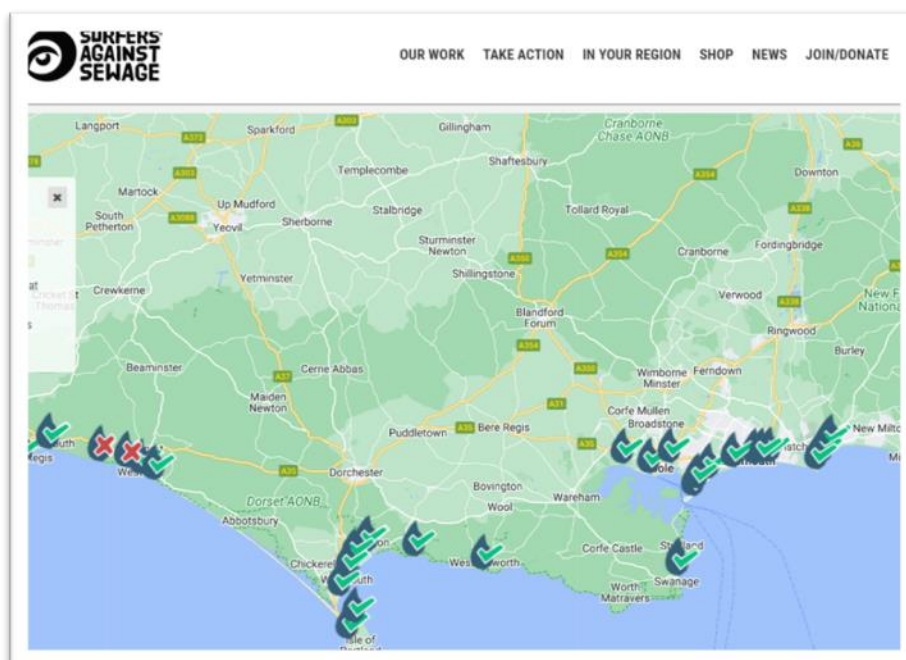
Bathing waters affected	Location	Discharge duration
Eyemouth and stream	Eype	16/08/22 14:40 – 15:52 (1 hr 12 mins)
Seatown and stream	Chideock	16/08/22 15:33 – 15:53 (20 mins)
Seatown and stream	Chideock	16/08/22 16:23 – 19:58 (3 hrs 35 mins)
West Bay and West Bay East	Bridport	17/08/22 06:57 – 07:30 (33 mins)
West Bay and West Bay East	Bridport	17/08/22 07:51 – 08:06 (15 mins)
West Bay and West Bay East	Bridport	17/08/22 08:19 – 10:38 (2 hrs 19 mins)
West Bay and West Bay East	Bridport	17/08/22 10:38 – 12:24 (1 hr 46 mins)
Avon Beach and Friars Cliff	Bournemouth	17/08/22 15:10 – 15:50 (40 mins)
Swanage Central and Ulwell stream	Swanage	17/08/22 15:17 – 15:38 (21 mins)
Hengistbury West, Bournemouth	Southbourne	17/08/22 15:47 – 16:32 (45 mins)
Swanage Central and Ulwell stream	Swanage	17/08/22 18:34 – 18:42 (8 mins)
Swanage Central	Swanage	17/08/22 19:04 – 19:12 (8 mins)

We feel it is important that people know when storm overflows have been used, so we provide real-time information on the [Coastwatch](#) feature of our website as well as sending it to local authorities and interested organisations such as Surfers Against Sewage, which publishes our data on its [website](#) and Safer Seas Service App.

However, sometimes this data can be presented in a way that is misleading and can unnecessarily put people off from visiting a beach. For example, overleaf you will see a tweet from the afternoon of Tuesday 16 August 2022 from Surfers Against Sewage, which generated significant local and national media interest.



But when you visit the Surfers Against Sewage website and zoom into this map further, it tells a different story showing that actually storm overflows at the majority of beaches along the Dorset coast had not been in use on Tuesday 16 August 2022:



Not only does this information have the potential to cause concern to residents and beachgoers in the county, but it also has the potential to affect tourism by putting people off visiting these beaches, by misleading them into thinking they are contaminated with sewage.

Additionally, sometimes there is confusion when the Environment Agency issues pollution risk forecasts, which can result in red flags being displayed on beaches. Often there is a perception that these forecasts are solely due to overflows being in use, when often there are other factors that have been considered such as tidal conditions and risk of pollution being washed off agricultural land into rivers and the sea during heavy rainfall.

We are working with beach managers and others involved in red flag decisions to work towards an effective and transparent policy governing when they are raised.

Out of the 37 designated bathing waters along the Dorset coastline, 34 achieved "Excellent" status in 2021, with the remaining three achieving "Good". These results are largely due to the investment carried out by Wessex Water following privatisation of the water sector.

What we are doing to tackle storm overflows and improve water quality

While storm overflows have always been part of the sewerage network in the UK, and even though it's rare for them to have any significant impact on bathing waters or cause pollution, we agree that they have no place in the 21st century, but it will take time and significant investment to progressively eliminate them.

We are currently investing £3 million every month to reduce storm overflows, starting with those which discharge most frequently, or which have any environmental impact.

In the long-term, we are committing to a further multimillion pound programme to tackle storm overflows. The following is planned for completion by the end of 2025:

- Sewage treatment will be upgraded at 42 of our sites to increase capacity and introduce more nature-based, low carbon treatment methods.
- We will make a 25% reduction in the number of hours of storm overflow discharges by 2025 and increase environmental and public health monitoring at key locations.
- Every overflow in the region will be monitored by 2023.
- More artificial intelligence will be used to manage the sewerage network and to provide real time bathing water information.
- Capacity is being increased at Wessex Water's two largest water recycling centres, serving Bristol and Bournemouth, to enable more stormwater to be stored and treated.

New storm tanks will be built and nature-based solutions, like wetlands and reed beds will be established in rural locations where land is available. Work will also be carried out to separate rainwater from the sewer system. We are also investing in artificial intelligence to provide real time water quality information at sites where people swim – a WebApp for Warleigh Weir, near Bath, is already being tested.

I hope you find this information helpful.

Yours sincerely

Colin

23/11/22

Thank you for contacting us. We are aware of the concerns and are hoping to host a site visit to Chideock Water Recycling Centre (WRC) for councillors in mid-January, to show them the treatment system and settled storm overflow, and to explain how it all works. Our contact is Sal Robinson, the Chideock Parish Clerk and we're just setting up a date now.

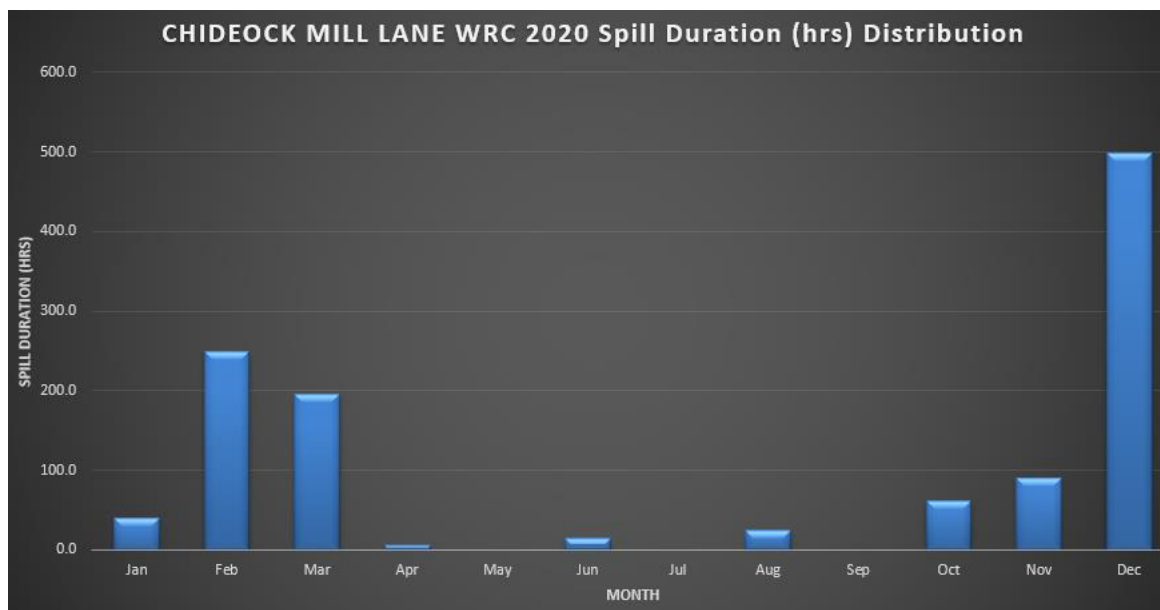
The WRC is a standard biological treatment works but with tertiary UV disinfection to kill bacteria. This produces a very high quality effluent with excellent permit compliance (the permit being issued to us by

EA). The effluent is discharged 24/7, 365 days a year. Flows up to 8 x the dry weather flow receive this treatment. In dry summers, the flow rate will be low; but in wet winters, or heavy rainfall, the flows will be high.

There are no known traders in the catchment so the incoming flows comprise domestic sewage only, i.e. unusual chemicals or toxins that are not derived from domestic properties should not be present.

Flows above 8 x the dry weather flow are spilled to storm storage tanks. If these fill, then a discharge of diluted, settled and fine-screened sewage is made to the river adjacent to the works. This is also permitted by EA.

Inflows to the works are influenced by infiltration into our sewer network during wet winter periods when the groundwater rises locally. This is demonstrated by the following graph, which shows settled storm overflow spills for 2020, a notably wet year, being predominantly during the winter months:



The storm tank discharge is usually of very weak storm sewage but it will carry a bacteriological load.

We have surveyed some of the catchment and identified some parts of the sewer network that need to be sealed, to reduce infiltration. This work is planned for 2023. Infiltration is a hard problem to solve and it is likely that additional work will be needed after the initial sealing is complete. You can see more on this problem using the link to a video here: <https://www.youtube.com/watch?v=7b4uaY4H1Tk>

The bathing water quality at Seatown is tested by EA using 20 random samples taken each year between May and September. The results consistently come back as 'Excellent' and the data can be viewed here: [Bathing water profile \(data.gov.uk\)](#) This is why improvements have not been required by EA in recent years. Despite this, we do plan to improve the settled storm overflow. These are the data shown for the overflow on our web pages:

2017	2018	2019	2020	2021		
Spill count	Spill count	Spill count	Spill count	Spill count	Total Duration (hours) of all spills	Monitoring operation %
42	61	70	77	62	700.0	99.9%

Using the EA's spill counting system, a single spill approximately equates to *any spill activity on one day*. As I've said earlier, these are predominantly winter spills. For example, this summer, the overflow spilled just once, i.e. on just one day, and that was due to heavy rainfall.

This is currently classed by EA as a frequently spilling overflow. Additionally, the revised Environment Act requires all overflows to spill no more than 10 times per year, and those close to bathing waters to spill no more than 3 times per summer. We are currently working up the first tranche of storm overflow improvements needed under the new Act, i.e. the work we will do between 2025 and 2030. Sometime in

the new year, we will be able to confirm if the WRC SSO is planned for spill reduction work in this 5-year period.

We increased the WRC storm tank storage capacity in 2003 under EA direction to reduce storm discharges but another round of improvements is needed now, and we acknowledge that.

We have a second storm overflow locally, from our Seatown Sewage Pumping Station (SPS), with statistics as follows. With spills between 5 and 25 per year, it will also require improvements under the new Environment Act:

2017	2018	2019	2020	2021		
Spill count	Spill count	Spill count	Spill count	Spill count	Total Duration (hours) of all spills	Monitoring operation %
5	25	12	14	6	16.5	99.1%

On the map below, the WRC is the red square, the SPS is the red triangle, and the EA's bathing water sampling point is the blue square:



It's important to note that as well as water company WRCs and storm overflows, there are four additional main sources of bacteria in our rivers and seas: private wastewater systems (septic tanks etc), agricultural run-off, surface water drainage systems and various wildlife (e.g. gull flocks). Our sites at Chideock and Seatown are not the only sources of bacteria in the catchment.

I'd be very interested to see the results of the Seatown lagoon water quality testing, if that could be arranged.

I hope this is helpful but do let me know if you have further questions.
Andy