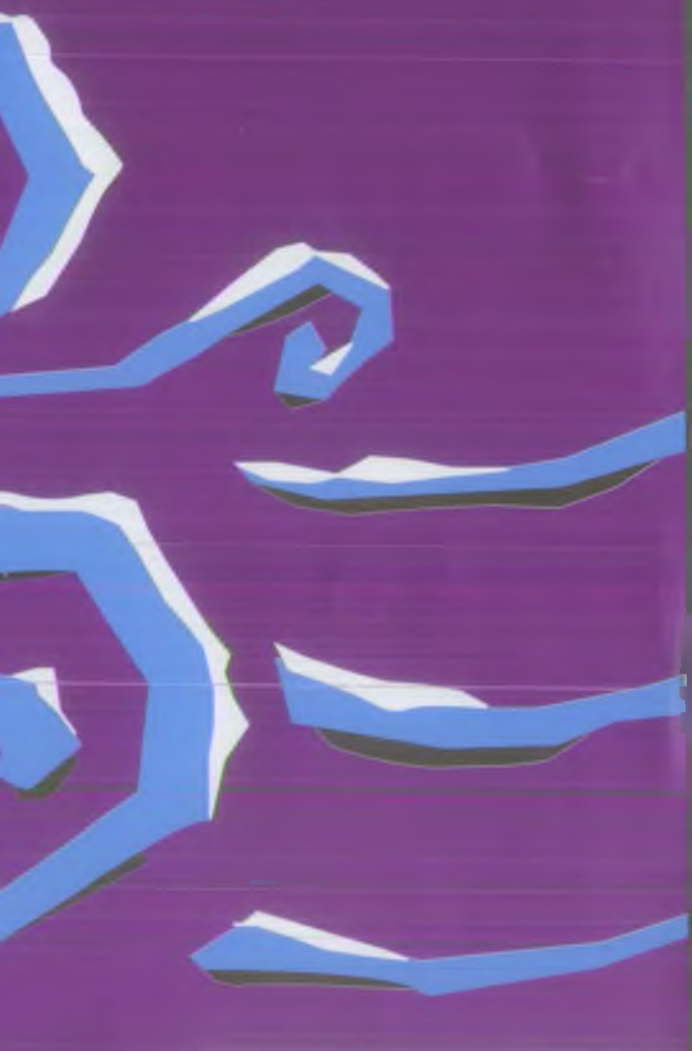


THE SEVERN

BO 1



996
ORE



NRA

National Rivers Authority

Guardians of
the Water Environment

THE SEVERN

BORE 1996



In common with a few other rivers, a tidal wave, or bore, occurs in the lower reaches of the River Severn during high tides. For a bore to form, a considerable rise in tide is needed in a converging channel with a rising bed, i.e. funnel shaped.

The Severn Estuary experiences the second highest tide anywhere in the world with a range which can be in excess of 14.5 metres (47.6 feet). Under the most favourable conditions, the Severn Bore may reach two metres (six feet) in height. Opposing winds or high freshwater levels can considerably reduce the height and delay the time of arrival, whereas a following wind can increase the height and advance the time.

The average speed of the bore is approximately 16 kilometres (10 miles) per hour. The true phenomena does not occur upstream of Gloucester because of

the presence of weirs on the twin armed channel near the city. High or spring tides occur on several days in each lunar cycle throughout the year and the following schedule lists only those which may result in spectacular bores.

Times are necessarily approximate and can vary by as much as 30 minutes either way. It is advisable to arrive early, particularly on weekends or holidays when local traffic congestion can be severe. The three preferred viewing points are shown on the map.

The view point, adjoining land and accesses at Minsterworth are all privately owned. Please keep strictly to the public footpath along the riverbank. A large bore will often attract large crowds of viewers. Please respect the resident population, particularly at Minsterworth. Park your car sensibly so as not to cause obstruction on either the main road or the narrow side roads. Also take care not to damage property or roadside verges.



SAFETY WARNING

Following the initial bore wave, there is a substantial rise in water level for a further hour or so. Please take particular care where you stand to watch the bore and also where you park your vehicle. There have been a number of instances of spectators and their vehicles becoming cut off by the rising waters often involving rescue by the Police. This problem is particularly acute in the vicinity of Stonebench.

Whilst not so spectacular, the incoming tide and nascent bore can be seen in the upper estuary at such places as Epney, Newnham and Fretherne, where times are 20, 60 and 85 minutes before Minsterworth respectively. High tide is approximately one hour after the bore has passed, so take particular care where you park your vehicle.

Further information can be obtained from "The Severn Bore" by F W Rowbotham (published by David and Charles). This book is now out of print but can be obtained at a local library.

TIMES

Approximate times of arrival. These are real times and have allowed for BST when in force.



	DATE	MINSTERWORTH	STONEBENCH	OVER BRIDGE	PROSPECT	
JANUARY	20 Sat	07.32	07.42	08.07	★★	
		19.58	20.08	20.33	★★	
	21 Sun	08.19	08.29	08.54	★★★★	
		20.45	20.55	21.20	★★★	
	22 Mon	09.05	09.15	09.40	★★★★	
FEBRUARY		21.30	21.40	22.05	★★★★	
	23 Tue	09.50	10.00	10.25	★★★★	
		22.12	22.22	22.47	★★★	
	24 Wed	10.31	10.41	11.06	★★★	
		22.50	23.00	23.25	★	
	25 Thu	11.09	11.19	11.44	★	
MARCH		18 Sun	07.20	07.40	08.05	★
			19.45	19.55	20.20	★★
	19 Mon	08.06	08.16	08.41	★★★★	
		20.30	20.40	21.05	★★★★	
	20 Tue	08.50	09.00	09.25	★★★★	
		21.12	21.22	21.47	★★★★	
	21 Wed	09.31	09.41	10.06	★★★★	
		21.52	22.02	22.27	★★★★	
	22 Thu	10.10	10.20	10.45	★★★★	
	22.26	22.36	23.01	★★		
	23 Fri	10.43	10.53	11.18	★	
APRIL		18 Mon	07.04	07.14	07.39	★
			19.28	19.38	20.03	★★
	19 Tue	07.48	07.58	08.23	★★★	
		21.10	21.20	21.45	★★★	
	20 Wed	08.30	08.40	09.05	★★★★	
		20.50	21.00	21.25	★★★★	
	21 Thu	09.09	09.19	09.44	★★★★	
	21.27	21.37	22.02	★★★		
	22 Fri	09.46	09.56	10.21	★★★	
		22.00	22.10	22.35	★	
MAY		17 Wed	08.25	08.35	09.00	★
			20.46	20.56	21.21	★★
	18 Thu	09.06	09.16	09.41	★★	
		21.05	21.15	21.40	★★	
	19 Fri	09.45	09.55	10.20	★★	
	22.00	22.10	22.35	★		
	20 Sat	10.21	10.31	10.56	★	
JUNE		4 Sat	21.41	21.51	22.16	★
		5 Sun	10.01	10.11	10.36	★
			22.21	22.31	22.56	★
	6 Mon	10.43	10.53	11.18	★	
			23.01	23.11	23.36	★
		1 Sat	20.38	20.48	21.13	★
	2 Sun	09.01	09.11	09.36	★	
		21.23	21.33	21.58	★★	
	3 Mon	09.46	09.56	10.21	★	
		22.07	22.17	22.42	★★	
	4 Tue	10.32	10.42	10.07	★	
		22.52	23.02	23.27	★★	
	5 Wed	11.17	11.27	11.52	★★	
		23.36	23.46		★	
	6 Thu			00.11	★	

Key:

- ★ Small
- ★★ Medium
- ★★★ Fairly Large
- ★★★★ Large

Key:

- ★ Small
- ★★ Medium
- ★★★ Early Large
- ★★★★ Large

Environment Agency
Information Centre
Head Office

Class No

Accession No

THE ENVIRONMENT AGENCY

In April 1996, the NRA will merge with Her Majesty's Inspectorate of Pollution and The Waste Regulation Authorities to form The Environment Agency. This new body will be responsible for the environmental protection of water, air and waste and will continue to seek to prevent and control pollution.



NRA

National Rivers Authority
Severn-Trent Region

Lower Severn Area:
Riversmeet House,
Newtown Industrial Estate,
Northway Lane, Tewkesbury
Gloucestershire GL20 7JG

	DATE	MINSTERWORTH	STONEBENCH	OVER BRIDGE	PROSPECT
JULY	1 Mon	08.45 21.08	08.55 21.18	09.20 21.43	★ ★★
	2 Tue	09.34 21.56	09.44 22.06	10.09 22.31	★★ ★★★
	3 Wed	10.22 22.42	10.32 22.52	10.57 23.17	★★ ★★★
	4 Thu	11.08 23.27	11.18 23.37	11.43	★★ ★★
	5 Fri	11.51	12.01	00.02	★
	6 Sat	00.10	00.20	00.45	★
	30 Tue	08.33 20.56	08.43 21.06	09.08 21.31	★ ★★★
31 Wed	09.21 21.45	09.31 21.53	09.56 22.18	★★★ ★★★★	
AUGUST	1 Thu	10.08 22.29	10.18 22.39	10.43 23.04	★★★ ★★★★
	2 Fri	10.53 23.12	11.03 23.22	11.28 23.47	★★★ ★★★★
	3 Sat	11.33 23.52	11.43	12.08	★ ★★
	4 Sun		00.02	00.27	★★
	28 Wed	08.19 20.42	08.29 20.52	08.54 21.17	★ ★★★
	29 Thu	09.06 21.27	09.16 21.37	09.41 22.02	★★★ ★★★★
	30 Fri	09.50 22.10	10.00 22.20	10.25 22.45	★★★★ ★★★★
31 Sat	10.32 22.51	10.42 23.01	11.07 23.26	★★★★ ★★★★	
SEPTEMBER	1 Sun	11.11 23.29	11.21 23.39	11.46	★★ ★★
	2 Mon			00.04	★★
	26 Thu	08.30 20.24	08.40 20.34	09.05 20.59	★ ★★★
	27 Fri	08.47 21.07	08.57 21.17	09.22 21.42	★★★ ★★★★
	28 Sat	09.28 21.48	09.38 21.58	10.03 22.23	★★★★ ★★★★
	29 Sun	10.08 22.28	10.18 22.38	10.43 23.03	★★★ ★★★
	30 Mon	10.45 23.03	10.55 23.13	11.20 23.38	★★ ★
OCTOBER	25 Fri	20.03	20.13	20.38	★★
	26 Sat	08.24 20.45	08.34 20.55	08.59 21.20	★★ ★★★
	27 Sun	08.05 20.26	08.15 20.36	08.40 21.01	★★★ ★★★
	28 Mon	08.43 21.04	08.53 21.14	09.18 21.39	★★ ★★
	29 Tue	09.20	09.30	09.55	★
NOVEMBER	24 Sun	19.23	19.33	19.58	★
	25 Mon	07.42 20.04	07.52 20.14	08.17 20.39	★ ★
	26 Tue	08.21	08.31	08.56	★
DECEMBER	11 Wed	08.03 20.26	08.13 20.36	08.38 21.01	★ ★
	12 Thu	08.46 21.10	08.56 21.20	09.21 21.45	★★ ★
	13 Fri	09.29 21.54	09.39 22.04	10.04 22.29	★★ ★
	14 Sat	10.13	10.23	10.48	★

ST-11/95 - 12K - D - AQHU

ENVIRONMENT AGENCY



055530