

Environment Agency's roles & responsibilities as regards Bathing Waters

January 2019

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(Senior Environment Officer)**

*Statute: This is the original version (as it was originally made). UK
Statutory Instruments are not carried in their revised form on this site.*

STATUTORY INSTRUMENTS

2013 No. 1675

WATER RESOURCES

The Bathing Water Regulations 2013

Made	- - - -	3rd July 2013
Laid before Parliament		9th July 2013
Laid before the National Assembly for Wales	- -	9th July 2013
Coming into force in accordance with regulation 1		

The Secretary of State is designated⁽¹⁾ for the purposes of section 2(2) of the European Communities Act 1972⁽²⁾ in relation to the environment, and the Welsh Ministers are designated⁽³⁾ for the purposes of that section, in relation to measures relating to water resources.

The Secretary of State in relation to England and Scotland⁽⁴⁾ and the Welsh Ministers in relation to Wales, make the following Regulations in exercise of the powers conferred by that section of that Act.

PART 1

GENERAL PROVISIONS

Citation, commencement and extent

- 1.—(1) These Regulations may be cited as the Bathing Water Regulations 2013.
- (2) The following provisions come into force on 31st July 2013—
- (a) this regulation and regulations 2 to 9;
 - (b) in regulation 14—
 - (i) paragraph (1) in so far as it relates to paragraphs (2) to (5);

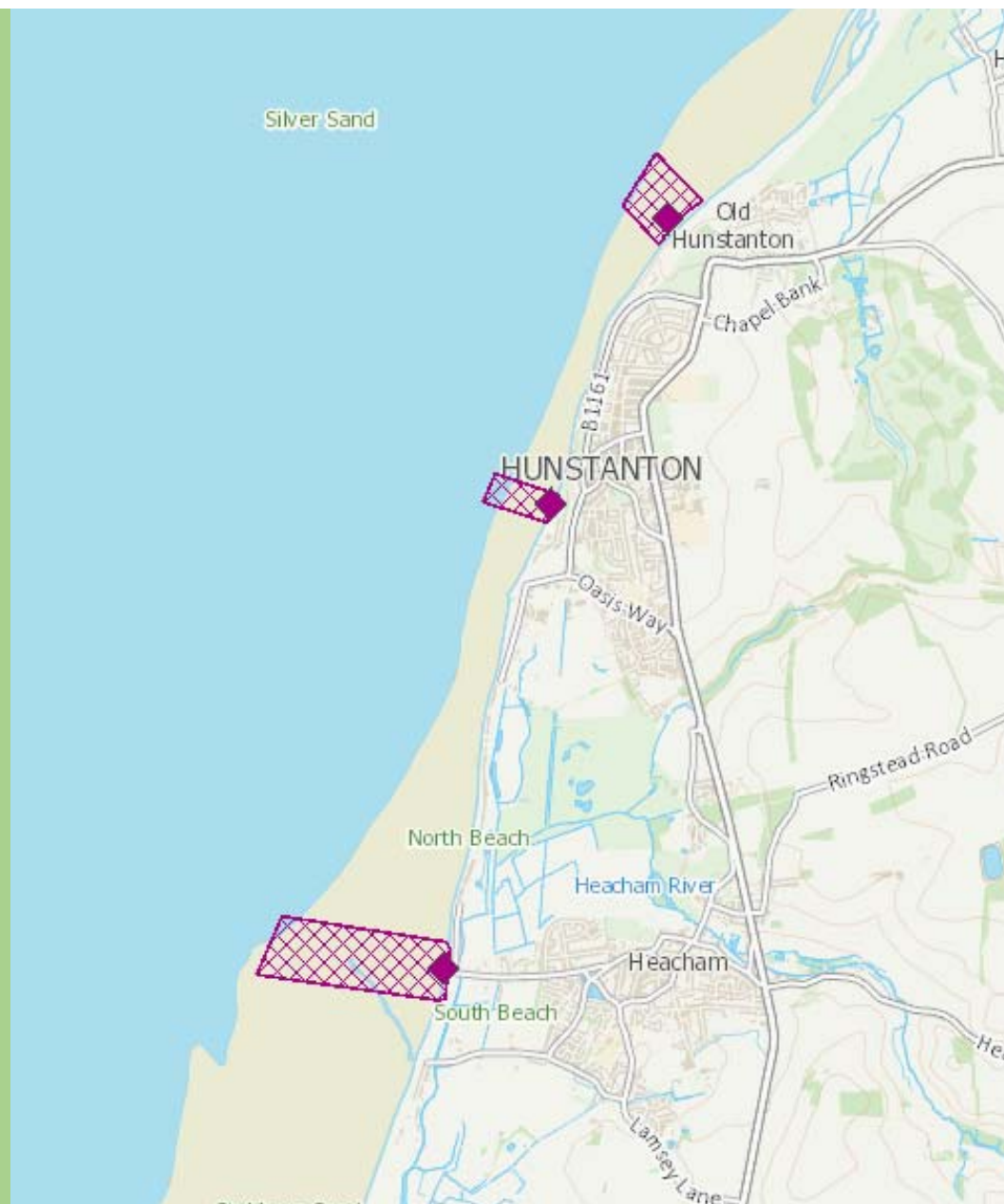
(1) S.I. 2008/2901.

(2) 1972 c. 68; section 2(2) was amended by section 27(1)(a) of the Legislative and Regulatory Reform Act 2006 (c. 51) and by Part 1 of the Schedule to the European Union (Amendment) Act 2008 (c. 7).

(3) See S.I. 2003/2901 for the designation conferred on the National Assembly for Wales. By virtue of sections 59 and 162 of, and paragraph 28 of Schedule 11 to, the Government of Wales Act 2006 (c. 32), that designation is now conferred on the Welsh Ministers.

(4) The power of the Secretary of State to make regulations in relation to matters as regards Scotland is preserved by section 57(1) of the Scotland Act 1988 (c. 46).

Main provisions are to protect public health and to provide information to beach users.



Designation process

- Local Authorities or private owners apply to Defra to have the beach designated
 - Evidence required – usage (surveys), facilities, local consultation
- Defra consult and, if agreeable, designate the bathing water
- Environment Agency samples and assesses compliance

Profiles

- Each bathing water has to have a profile published
 - <http://environment.data.gov.uk/bwq/profiles/index.html>
 - Web search “bathing waters”. Often top of the list.
- Provides information relating to:
 - Water quality and classification
 - Catchment description
 - Pollution risks
 - Sewage discharges
 - Agriculture
 - Algae & phytoplankton
 - Pollution management & investigations
 - “working with others” – local authorities, water companies, etc.
- Published by Environment Agency

2019 Bathing Water Profile for Heacham

Norfolk, England

Current water quality classification is **Sufficient**, based on samples taken from 2016 through to 2019. There are no water quality warnings in force today.



Sufficient bathing water quality



About

Heacham North Beach is part of an extensive beach line which stretches north from the mudflats at Snettisham, up the eastern side of the Wash and along the Norfolk coast. Heacham is a popular Norfolk coastal holiday resort, with a largely sandy beach. It is one of the few beaches in Norfolk to face west. The majority of beach exposed at low tide is very gently shelving. Tidal movement stirs up sand and sediment in the sea and makes it look cloudy.

Here you can see the recent results from water quality assessments under the Bathing Water Directive. For historical measurements, [view the detailed water quality data](#).



Water quality

Daily pollution update no warnings issued

Samples taken weekly between May 1st 2019 and Sep 30th 2019

Most recent sample was taken 57 days ago
Sep 23rd 2019 12:46



2019 classification ★☆☆ sufficient



2018 classification ★☆☆ sufficient



2017 classification ★☆☆ sufficient



2016 classification ★★☆☆ good



Site details

Local authority King's Lynn and West Norfolk

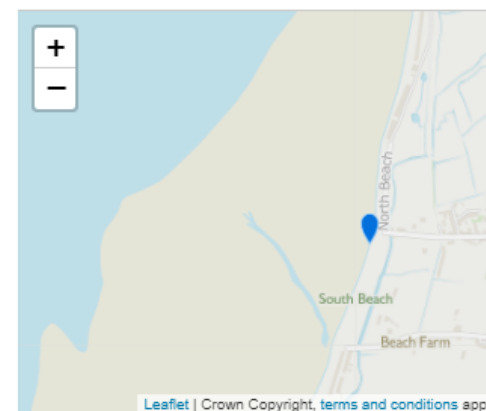
Bathing water controller King's Lynn and West Norfolk

Year of designation: 1988

Water sampling point lat, long: 52.91,0.4715,
location easting, northing: 566300,337500

Map links [Google Maps](#), [Bing Maps](#), [OpenStreetMap](#)

Nearby bathing waters [Hunstanton Main Beach](#), [Hunstanton \(Old Hunstanton\)](#), [Wells](#), [Skegness](#)



Bathing water sampling location



Environment
Agency

2019 Bathing Water Profile for Hunstanton Main Beach

Norfolk, England

Current water quality classification is **Sufficient**, based on samples taken from 2016 through to 2019. There are no water quality warnings in force today.



Sufficient bathing water quality



About

Hunstanton is a popular Norfolk coastal holiday resort with a largely sandy beach and is one of the few beaches in Norfolk to face west. The tide retreats to expose a wide sandy beach, with some stones and rock pools near the red and white striped cliffs at the north end. The majority of beach exposed at low tide is very gently shelving. Tidal movement stirs up sand and sediment in the sea and makes it look cloudy. The beach is backed by a promenade and the town.

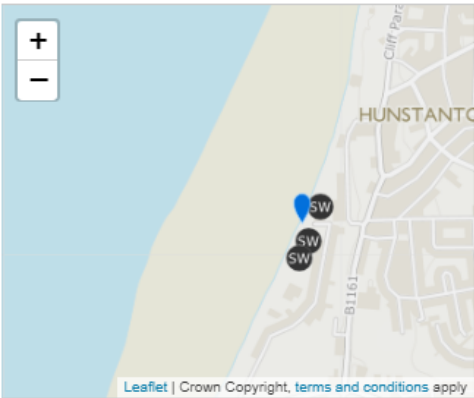
Here you can see the recent results from water quality assessments under the Bathing Water Directive. For historical measurements, [view the detailed water quality data](#).

Water quality

Daily pollution update	no warnings issued	
Samples taken	weekly between May 1st 2019 and Sep 30th 2019	
Most recent sample	was taken 57 days ago Sep 23rd 2019 12:20	
2019 classification	★☆☆ sufficient	
2018 classification	★☆☆ sufficient	
2017 classification	★☆☆ sufficient	
2016 classification	★★★ good	

Site details

Local authority	King's Lynn and West Norfolk	
Bathing water controller	King's Lynn and West Norfolk	
Year of designation:	1996	
Water sampling point location	lat, long: 52.94,0.4838, easting, northing: 567020,340600	
Map links	Google Maps , Bing Maps , OpenStreetMap	
Nearby bathing waters	Hunstanton (Old Hunstanton) , Heacham , Skegness , Wells	



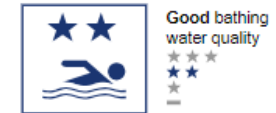
Bathing water sampling location

Surface Water Outfall

2019 Bathing Water Profile for Hunstanton (Old Hunstanton)

Norfolk, England

Current water quality classification is **Good**, based on samples taken from 2016 through to 2019. There are no water quality warnings in force today.



About

Hunstanton is a popular Norfolk coastal holiday resort. The Old Hunstanton beach is at the north end just outside of the town and is a quiet rural beach. The wide sandy beach has a row of colourful beach huts just behind the sand dunes.

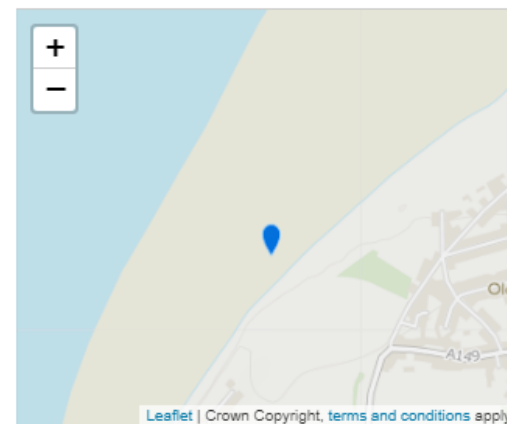
Here you can see the recent results from water quality assessments under the Bathing Water Directive. For historical measurements, [view the detailed water quality data](#).

Water quality

Daily pollution update	no warnings issued		
Samples taken	weekly between May 1st 2019 and Sep 30th 2019		
Most recent sample	was taken 57 days ago Sep 23rd 2019 12:01		
2019 classification	★★★	good	
2018 classification	★★★	good	
2017 classification	★★★	good	
2016 classification	★★★	good	

Site details

Local authority	King's Lynn and West Norfolk
Bathing water controller	King's Lynn and West Norfolk
Year of designation:	1988
Water sampling point location	lat, long: 52.95,0.4964, easting, northing: 567800,342500
Map links	Google Maps , Bing Maps , OpenStreetMap
Nearby bathing waters	Hunstanton Main Beach , Heacham , Skegness , Wells



Bathing water sampling location



Sampling

- Bathing season – 15th May to 30th September
- Generally 20 samples are taken through season (1 prior to 15th May)
 - Frequency can be reduced to 5, 10 or 15 depending on chance of classification change
- Samples should be taken across all tidal conditions and at weekends
 - Some beaches only sampled near high water – H&S or access
- Data also gathered about beach pollution – algae, litter, plastic & dog mess
- Samples analysed by EA National Laboratory Service within 24 hrs of sampling
- Samples analysed for E coli & Intestinal enterococci (FIOs)
- Results published on Bathing Water Explorer ASAP (about 5 days)

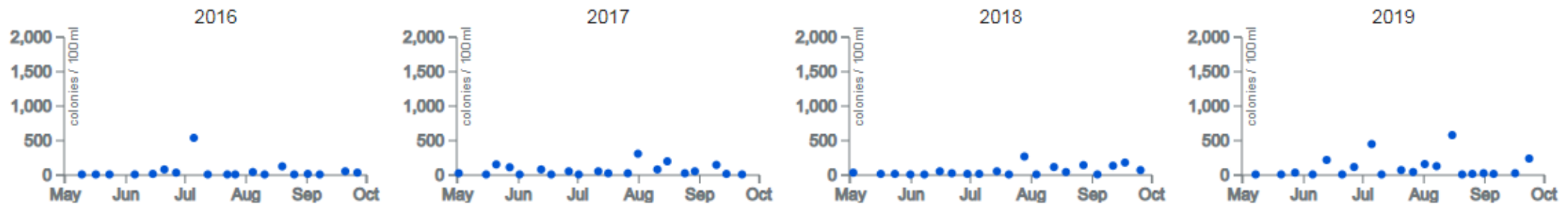


Results for Heacham from BW Explorer

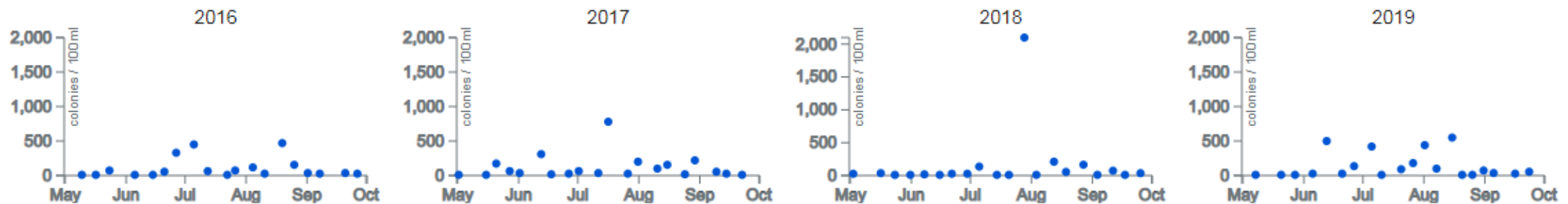
Water quality sample results

See the [help page](#) for additional information on interpreting these charts.

Intestinal Enterococci (IE)



Escherichia coli (EC)

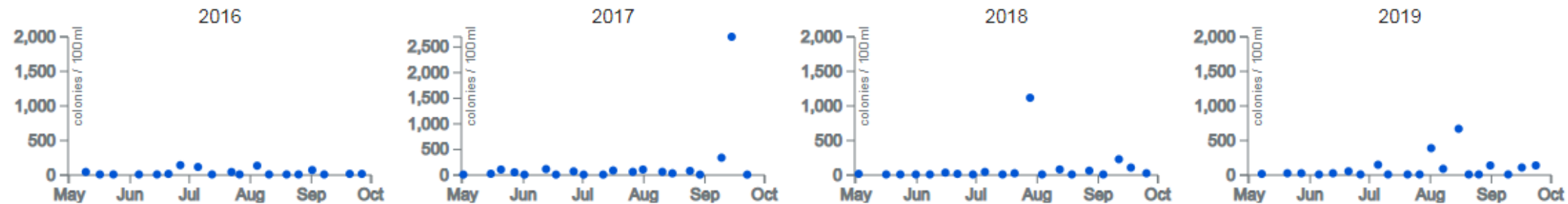


Results for Hunstanton Main from BW Explorer

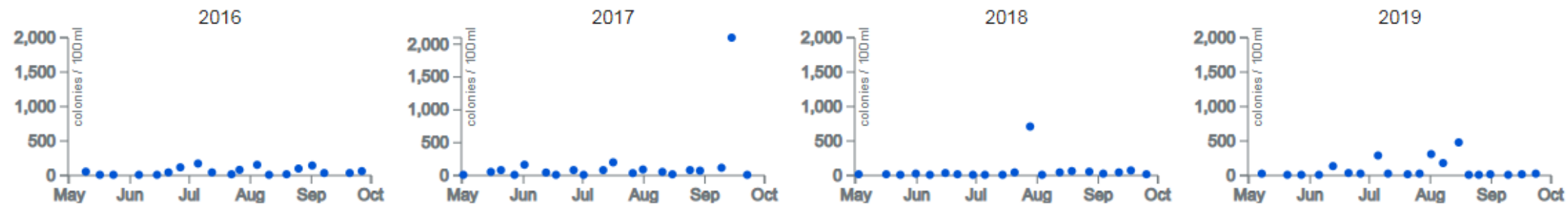
Water quality sample results

See the [help page](#) for additional information on interpreting these charts.

Intestinal Enterococci (IE)



Escherichia coli (EC)

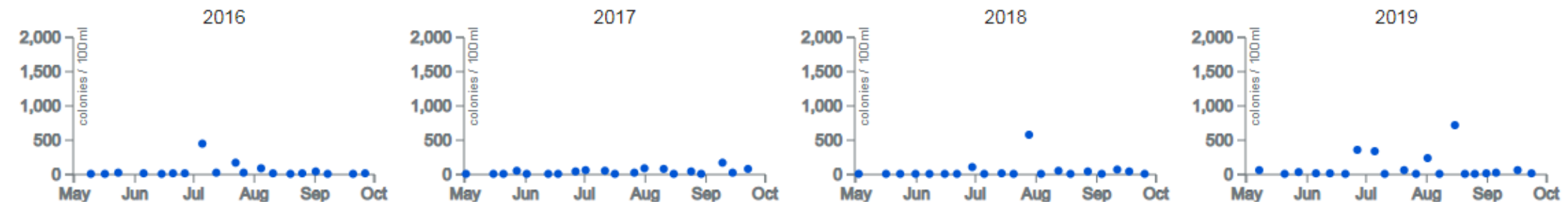


Results for Old Hunstanton from BW Explorer

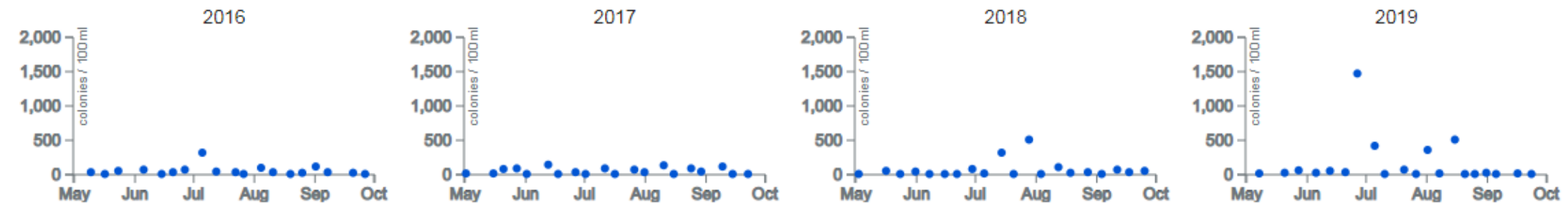
Water quality sample results

See the [help page](#) for additional information on interpreting these charts.

Intestinal Enterococci (IE)

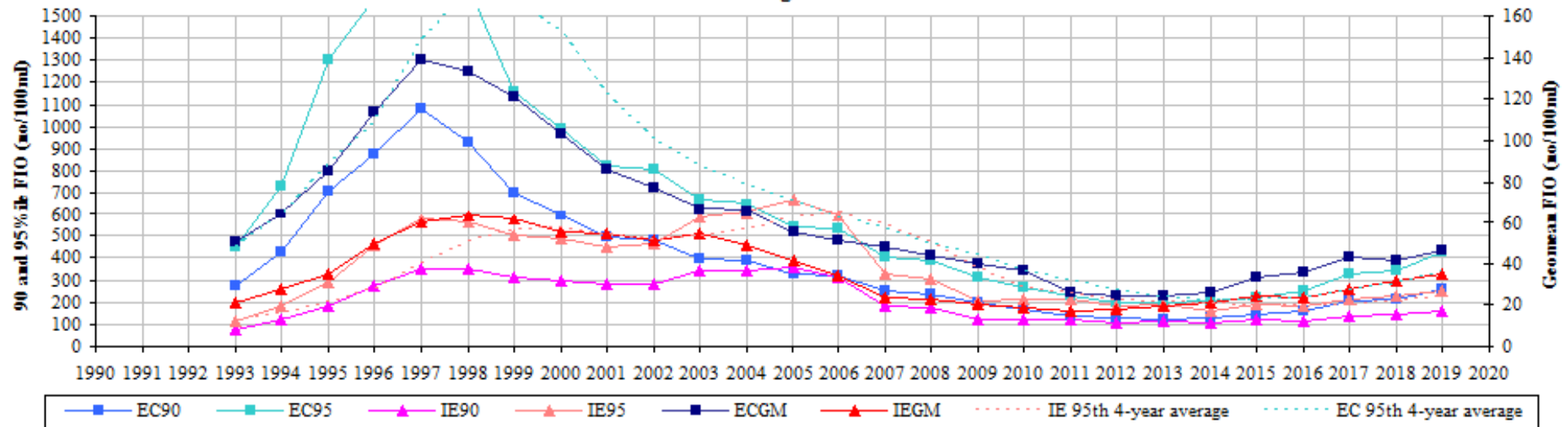


Escherichia coli (EC)

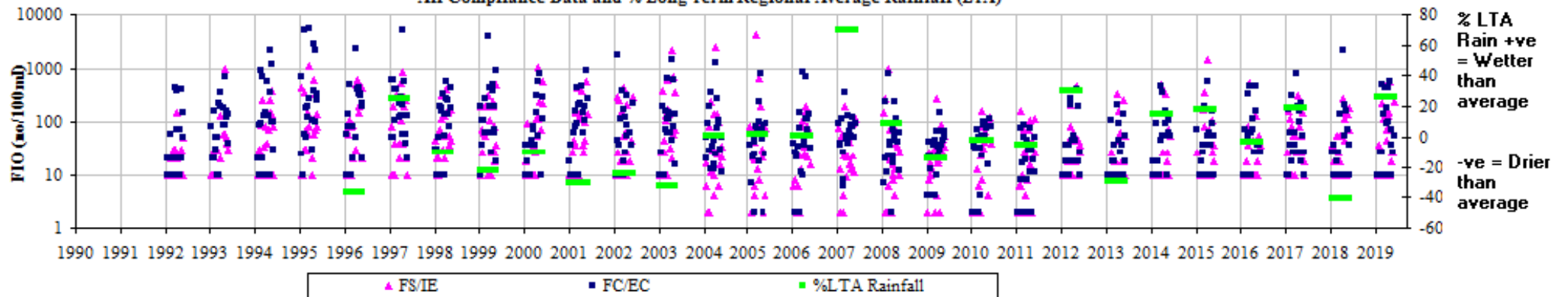


Heacham

Data trends - No discounting on %iles

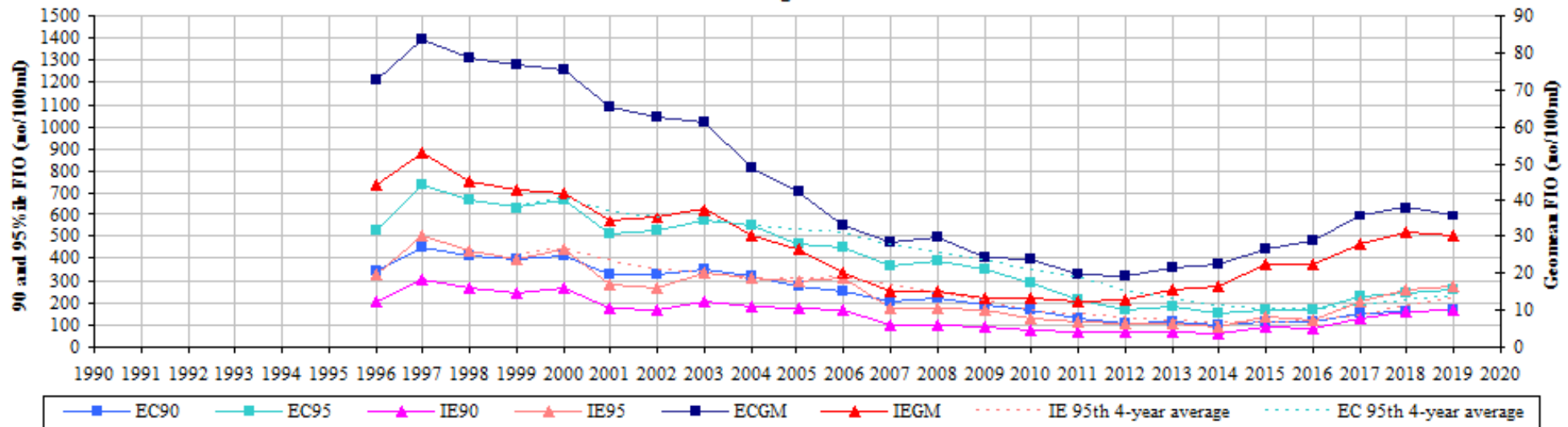


All Compliance Data and % Long Term Regional Average Rainfall (LTA)

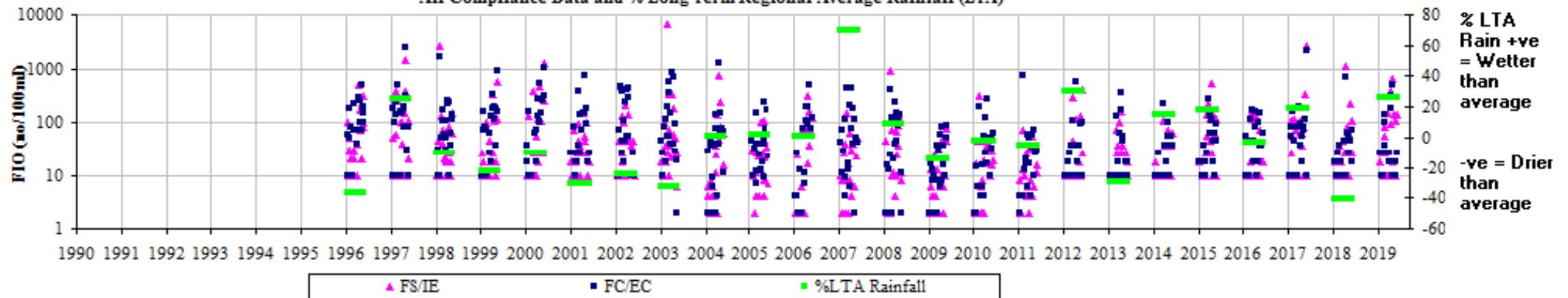


Hunstanton Main

Data trends - No discounting on %iles

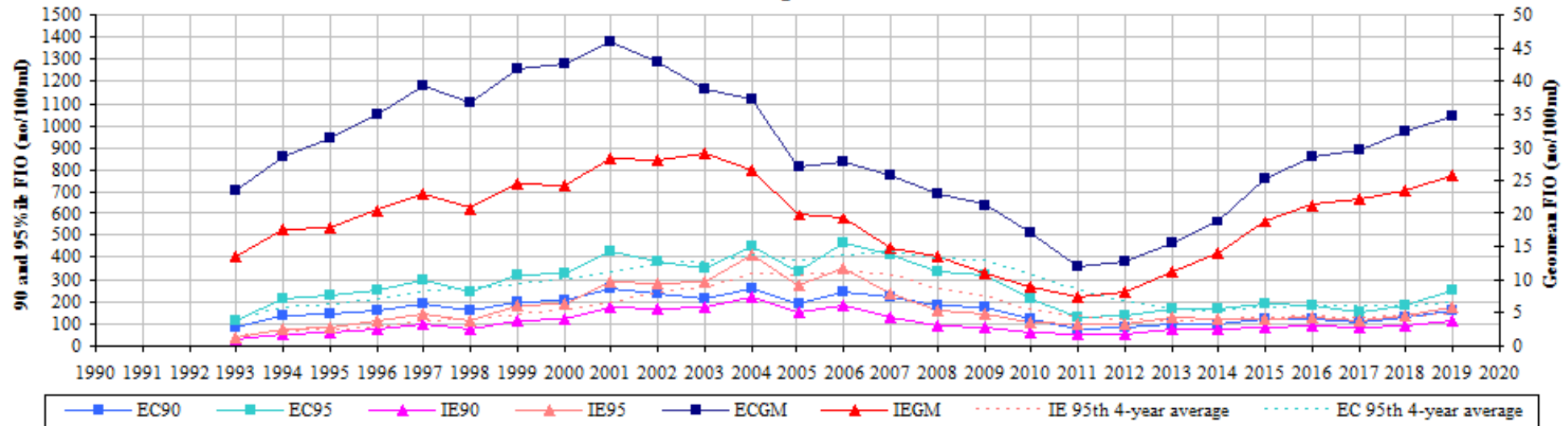


All Compliance Data and % Long Term Regional Average Rainfall (LTA)

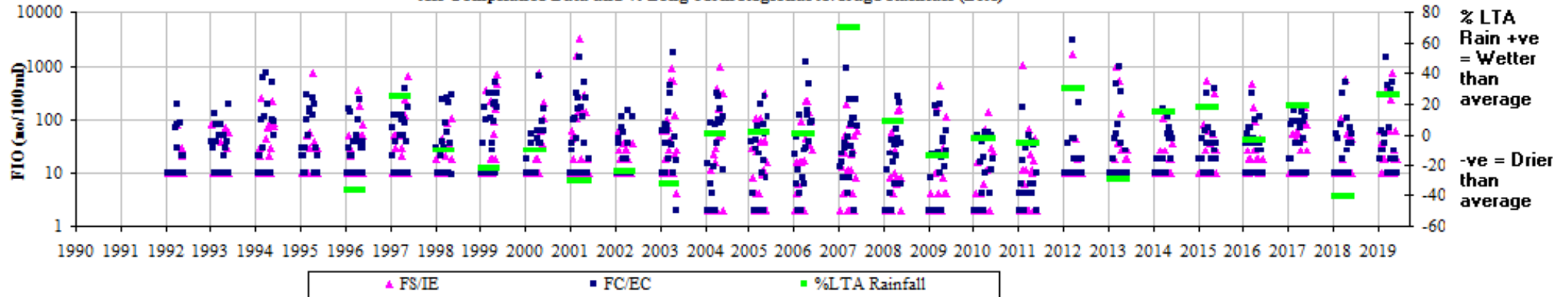


Old Hunstanton

Data trends - No discounting on %iles



All Compliance Data and % Long Term Regional Average Rainfall (LTA)



Classification

- Sample results gathered over 4 years
 - Number of samples range from 20 to 80 depending on sampling frequency
- Classification based on a percentile value (either 90th or 95th percentile)

Standards (Coastal Waters)

Classes

	Excellent	Good	Sufficient	Poor
E.coli (EC/100ml), must be <=	250	500	500	>500
IE (IE/100ml), must be <=	100	200	185	>185
	95th percentile	95th percentile	90th percentile	90th percentile

- Results are a national statistic and published by Defra in mid November

THE WASH N BEACH HEACHAM S SANDS CLUB

3) Results for each parameter

E.coli

Mean LOG=	1.661741974
Standard Deviation LOG =	0.585144168
95%ile =	424
90%ile =	258

Intestinal Enterococci

Mean LOG=	1.544881533
Standard Deviation LOG =	0.519929132
95%ile =	253
90%ile =	163

Number of results (ecoli)	79
Number of results (IE)	79

Discounted results	0
Number of results inc disc	79
Discounted percentage %	0

4) Classification and standards

Standards (Coastal Waters)

E.coli (EC/100ml), must be <= 250
IE (IE/100ml), must be <= 100

Classes

Excellent	Good	Sufficient	Poor
250	500	500	>500
100	200	185	>185
95th percentile	95th percentile	90th percentile	90th percentile

Classifications

E.coli	Good
Intestinal Enterococci	Sufficient

Overall Classification	Sufficient
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E WASH MAIN BEACH HUNSTANTON ADJACENT TO THE OASIS LEISURE CENTRE

3) Results for each parameter

E.coli

Mean LOG=	1.549489988
Standard Deviation LOG =	0.501757329
95%ile =	238
90%ile =	156

Intestinal Enterococci

Mean LOG=	1.482109412
Standard Deviation LOG =	0.551685771
95%ile =	247
90%ile =	155

Number of results (ecoli)

78

Number of results (IE)

78

Discounted results

1

Number of results inc disc

79

Discounted percentage %

1

4) Classification and standards

Standards (Coastal Waters)

E.coli (EC/100ml), must be <=

IE (IE/100ml), must be <=

Classes

Excellent	Good	Sufficient	Poor
250	500	500	>500
100	200	185	>185
95th percentile	95th percentile	90th percentile	90th percentile

Classifications

E.coli	Excellent
Intestinal Enterococci	Sufficient

Overall Classification	Sufficient
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THE WASH OLD HUNSTANTON BEACH CLIFF PATH

3) Results for each parameter

E.coli

Mean LOG=	1.540176328
Standard Deviation LOG =	0.518216285
95%ile =	248
90%ile =	160

Intestinal Enterococci

Mean LOG=	1.411757859
Standard Deviation LOG =	0.499845439
95%ile =	172
90%ile =	113

Number of results (ecoli)

79

Number of results (IE)

79

Discounted results

0

Number of results inc disc

79

Discounted percentage %

0

4) Classification and standards

Standards (Coastal Waters)

E.coli (EC/100ml), must be <= 250
IE (IE/100ml), must be <= 100

Classes

Excellent	Good	Sufficient	Poor
250	500	500	>500
100	200	185	>185
95th percentile	95th percentile	90th percentile	90th percentile

Classifications

E.coli	Excellent
Intestinal Enterococci	Good

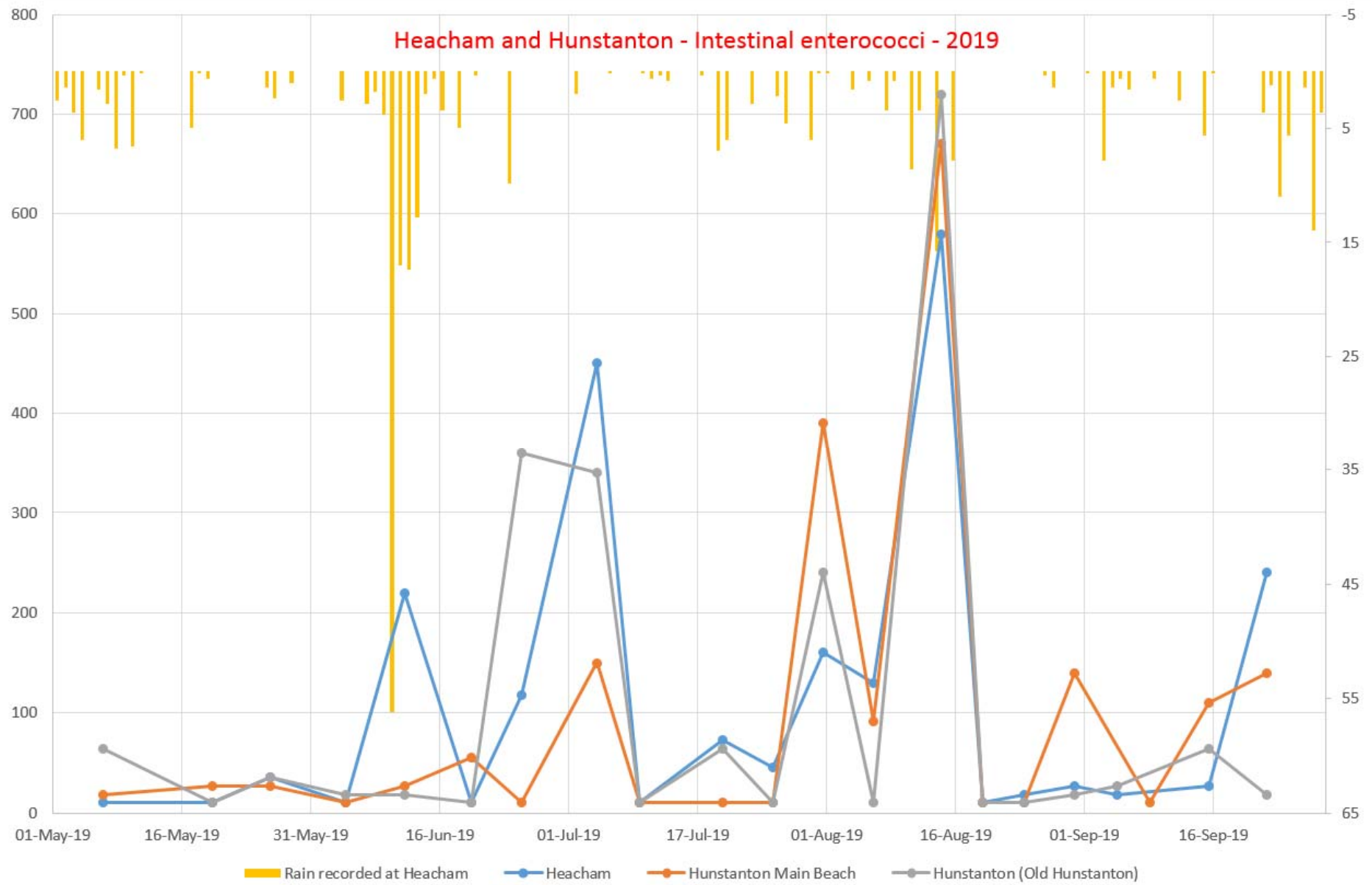
Overall Classification

Good

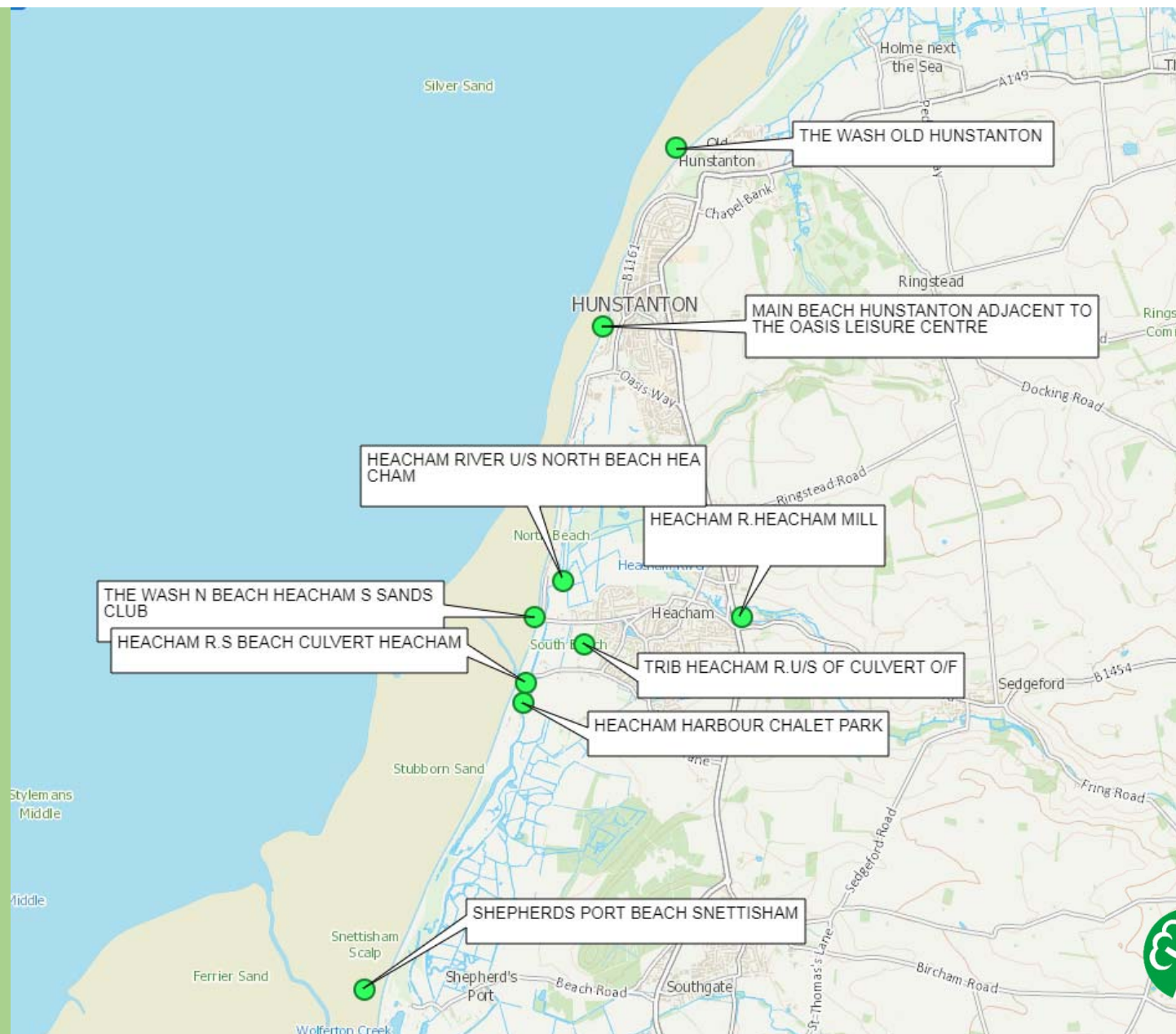
Classification record

Beach	Des_year	2011	2012	2013	2014	2015	2016	2017	2018	2019
Heacham	1988	Sufficient	Good	Good	Good	Good	Good	Sufficient	Sufficient	Sufficient
Hunstanton Main Beach	1996	Good	Good	Good	Excellent	Good	Good	Sufficient	Sufficient	Sufficient
Old Hunstanton	1988	Excellent	Excellent	Good	Good	Good	Good	Good	Good	Good

Heacham and Hunstanton - Intestinal enterococci - 2019



ment



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MST assessment from 2018 & 2019

BEACH	No of MST samples	HUMAN	SEABIRDS	RUMINANT	CANINE	AVIAN
THE WASH OLD HUNSTANTON BEACH CLIFF PATH	4	strong	strong	1 sample positive	none	none
THE WASH MAIN BEACH HUNSTANTON ADJACENT TO THE OASIS LEISURE CENTRE and off sailing club	6	weak	strong	1 sample positive	1 sample positive	none
THE WASH N BEACH HEACHAM S SANDS CLUB	3	moderate	strong	none	none	none
HEACHAM R.S BEACH CULVERT HEACHAM	4	1 sample positive	significant	strong	none	none
HEACHAM RIVER U/S NORTH BEACH HEACHAM	2	1 positive sample	weak	strong	none	none
HEACHAM HARBOUR CHALET PARK	4	moderate	weak	strong	v weak	none
TRIB HEACHAM R.U/S OF CULVERT O/F	4	strong	weak	v weak	none	none

Pollution Risk Forecasting

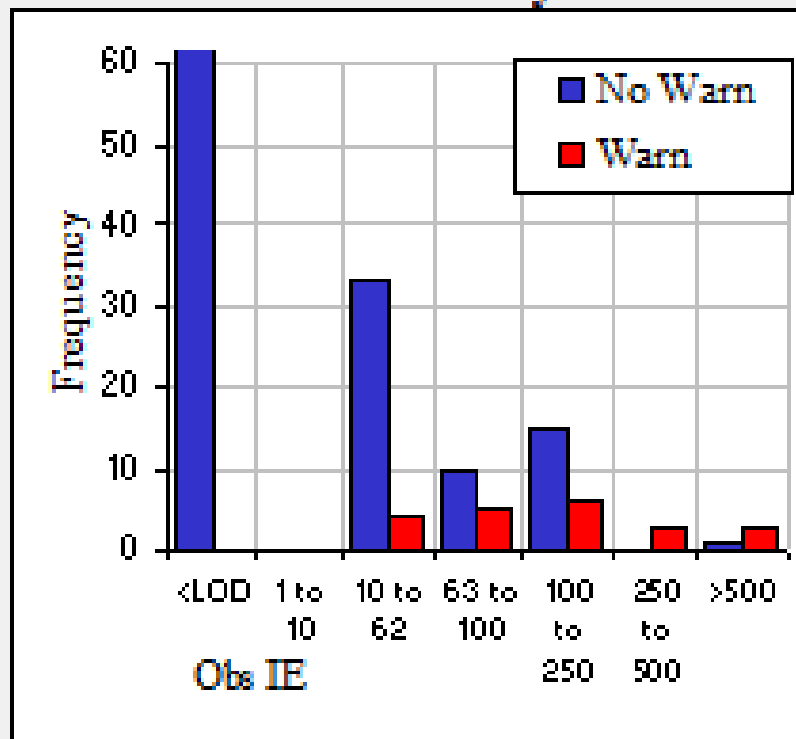
- Provides information to the public when it is possible to predict water quality
- Applies if there is a strong link between rainfall and bathing water quality
- A sign has to be posted throughout the season to inform the public
- Every morning (9am) during the BW season the EA uses measured rainfall (rain radar) in the catchment to determine the risk to water quality
- If it exceeds a predetermined threshold a warning is issued by email and/or text message
- A notice has to be posted at the beach (LA) by 10am and a message included on the BW Explorer advising that water quality may be poor
- If a warning is issued **and** a sign is posted at the beach **and** the EA sample the beach the sample result can be discounted from the annual classification.
- The forecast & warning applies for 24 hrs.

Scenario 5 Raw Data

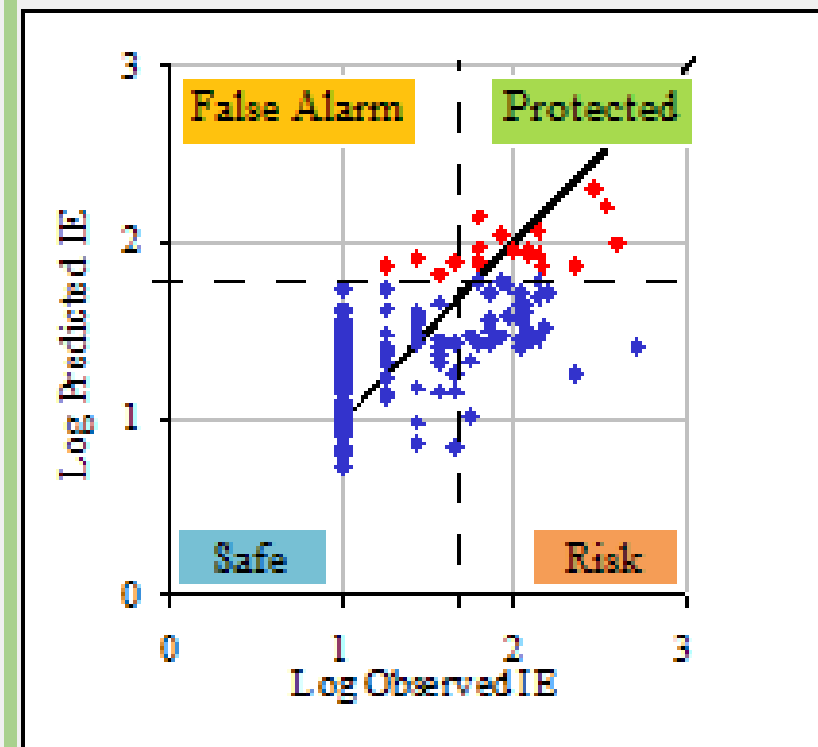
Sampling Date/Time	Pur p	Sample IE	MLR 70%
14/09/17 12:44	MS	2700	232
28/07/18 09:31	MS	1118	689
15/08/19 09:01	MS	670	470
14/08/15 09:25	MS	520	25
01/08/19 10:00	MS	390	96
09/09/17 09:31	MS	340	159
06/07/12 11:55	MS	294	198
11/09/18 09:53	MS	230	74
16/07/15 09:30	MS	230	17
10/08/13 11:25	MS	155	52
05/07/19 10:15	MS	150	33
26/06/16 10:45	MS	144	74
31/08/19 09:27	MS	140	49
23/09/19 12:20	MS	140	28
04/07/15 10:15	MS	136	117
19/08/15 10:31	MS	136	60
04/08/16 11:05	MS	136	83
10/09/12 14:05	MS	127	27
05/07/16 10:00	MS	118	87

PRF calculations for Hunstanton Main

Warn and Non Warn Days



Observed vs Predicted



Pollution Risk Forecasting

Beach	PRF in 2019	PRF in 2020	Likely number of warnings per season
Heacham	Yes	Yes	26
Hunstanton Main	Yes	Yes	20
Old Hunstanton	Yes	Yes	9

Pollution incidents

- Report to Environment Agency – 0800 80 70 60
- EA will investigate and determine impact, severity & probable duration
- Liaise with local authority and water company as appropriate
- Message (advice against swimming) may be published on Bathing Water Explorer
- The sampling programme could be suspended
- Local Authority may be required to place notices at the beach to advise against swimming.

If you see a problem:

Report it to 0800 80 70 60

Environment Agency 24hr hotline



Thank you

Any questions