

Nuisance Flood Plan – Monitoring Report

2022 Quarterly Threshold Review

Q1	Q2	Q3	Q4
<u>1</u> High Tide <u>2</u> Heavy Rainfall >1” <u>0 days <1’</u> Depth <u>1 day</u> Duration <u>avg</u> Extent <u>1/Qtr</u> Frequency 1 NF Event	<u> </u> High Tide <u> </u> Heavy Rainfall >1” <u> </u> Depth <u> </u> Duration <u> </u> avg Extent <u>/Qtr</u> Frequency NF Events	<u> </u> High Tide <u> </u> Heavy Rainfall >1” <u> </u> Depth <u> </u> Duration <u> </u> avg Extent <u>/Qtr</u> Frequency NF Events	<u> </u> High Tide <u> </u> Heavy Rainfall >1” <u> </u> Depth <u> </u> Duration <u> </u> avg Extent <u>/Qtr</u> Frequency NF Events

	Nuisance Flood Area (Tidal)	Special Flood Hazard Area (FEMA 100 year storm)
Frequency	3.7 times per year average	0.1 times per year average
Depth	1 foot	2 to 4+ feet
Duration	One tide cycle (2 to 3 hours)	Multiple tide cycles (1 to 3 days)
Extent	Area 72 acres Buildable % 4% Structures 450	Area 1,157 acres Buildable % 58% Structures 2,500

- Tracking the number of minor flooding days per year, and comparing prior years of data from the tide gauge provides an important planning tool to identify changing conditions. New community responses may be initiated when:

	2021 Annual
✓ FREQUENCY - Nuisance Flooding exceeds 10 to 12 events per year	11 events, only 3 events exceed the Nuisance Flooding threshold (2.3’ NAVD88) based on tidal influence
✓ DEPTH - Flood depths during nuisance flooding events reach 2 feet deep (moderate flooding) on a sustained annual basis	Tidal events do not exceed Minor Flooding, Additional study required for rainfall events
✓ DURATION - Nuisance flood duration regularly exceeds one tide cycle	Two extended events February 1-3, October 28-30
✓ EXTENT - When the extent of local nuisance flooding doubles in area, or exceeds 10% of the community buildable area	Typical Minor Flooding events only during this period, Additional study required for area comparison

- When any one or more annual threshold(s) are exceeded, the Nuisance Flood Plan work group will meet to evaluate the data and community concerns, and will present a report to the Mayor and City Council with recommendations for action.

Stage	NWS Elevation (MLLW datum)	FEMA Elevation (NAVD88 datum)
Major	6.0+ feet	4.3+ feet
Moderate	5.0 feet	3.3 feet
Minor	4.0 feet	2.3 feet
Action	3.5 feet	1.3 feet

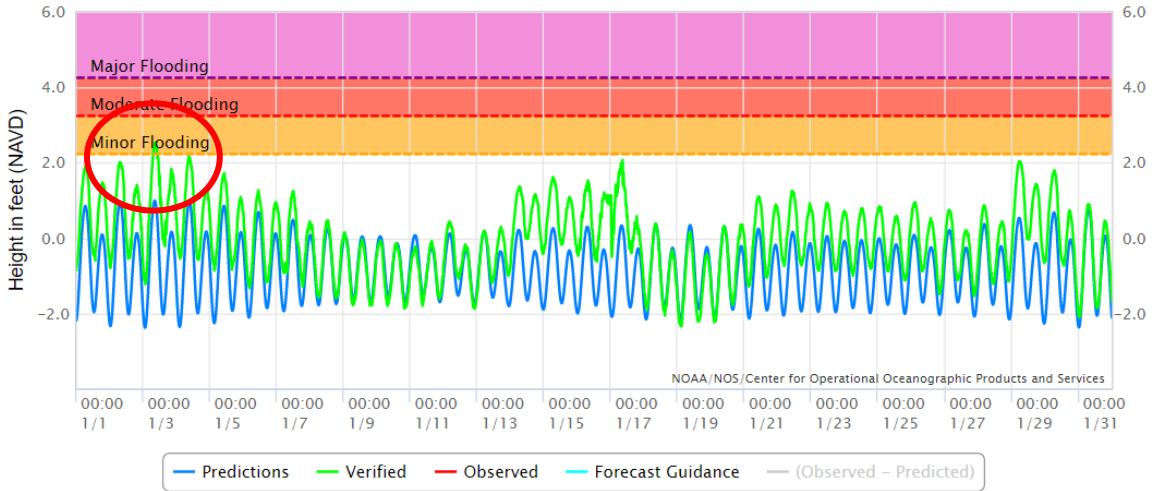
NWS	Elevation (Feet above MHHW)	Elevation (NAVD)	Event Date	Rainfall	Event Type	MyCoast
			3.12.2022	1.06		
		2.54	1.4.2022	1.46	Winter Storm	
		2.95	10/30/2021	1.14"	Coastal Low Pressure	*
		2.67	10/1/2021		King Tide and Wind	
			9/9/2021	1.91"	TS Ida (remnant)	
			8/2/2021	1.95"	TD Fred (remnant)	
			7/30/2021	1.02"	Thunderstorm	
			7/9/2021	0.8"+	TS Elsa	
			6/9/2021	1.3"	Thunderstorm	
			5/29/2021	0.79"	High Tide plus rainfall event (2")	
			4/25/2021	0.46"		
			3/18/2021	1.43"		
		2.71	2/1/2021	0.93"	Nor'easter WS Orlena	*
	3.94	2.21	12/17/2020		Winter Solstice High Tide	
	4.27	2.53	10/30/2020	1.98"	Rainfall	
	3.86	2.13	9/2/2020		H Teddy	*
	3.90	2.17	9/17/2020	1.38"	Coastal Flood Advisory	
	4.03	2.30	8/17/2020		Coastal Storm	
			8/4/2020	1.23"	TS Isaias 1.23" Rainfall Wind	
			7/10/2020	1.92"	TS Fay 5" Rainfall Event	
			7/7/2020	2.56"	Rainfall	*
	4.02	2.29	4/4/2020		Coastal Storm	*
	4.10	2.37	12/2/2019		Winter Storm	
	4.30	2.57	1/18/2019		Coastal Storm	
	4.72	2.99	10/12/2019		TS Melissa	
	4.89	3.16	10/1/2019		Coastal Storm	
	4.85	3.12	10/1/2019		Coastal Storm	
	4.64	2.91	10/10/2019		Coastal Storm	
	4.32	2.59	9/6/2019	1.63"	H Dorian 1.63" Rainfall	
	4.27	2.54	10/27/2018		Noreaster	
	4.06	2.33	10/12/2018		TS Michael	
	4.58	2.85	9/9/2018		H Florence/Isaac/Helene	
			6/9/2018	7.5"	7.5" Rainfall Event	
	4.01	2.28	3/2/2018		Noreaster	
	4.35	2.62	3/7/2018		Noreaster, TS Riley	
	4.09	2.36	1/8/2017		Winter Storm	
	4.47	2.74	9/19/2017		TS Jose	
			7/28/2017	1.76"	1.76" Rainfall	

Minor Flooding

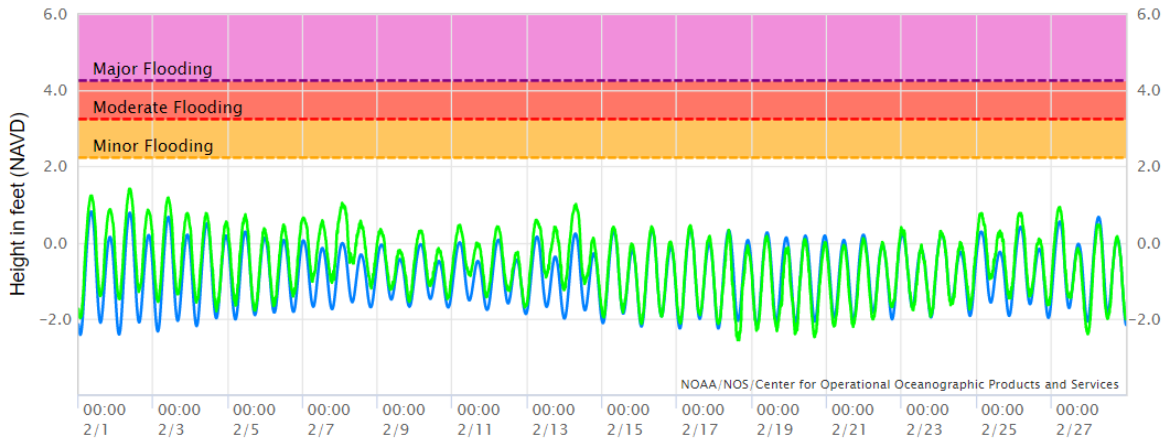
Nuisance Flood Plan – Monitoring Report

2022 Tide Elevations Q1

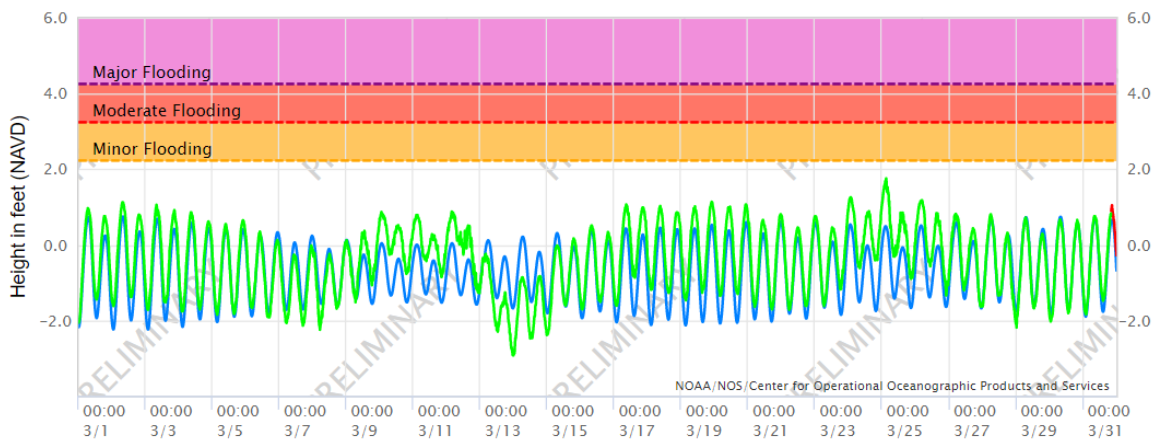
NOAA/NOS/CO-OPS
 Observed Water Levels at 8570283, Ocean City Inlet MD
 From 2022/01/01 00:00 LST/LDT to 2022/01/31 23:59 LST/LDT



NOAA/NOS/CO-OPS
 Observed Water Levels at 8570283, Ocean City Inlet MD
 From 2022/02/01 00:00 LST/LDT to 2022/02/28 23:59 LST/LDT

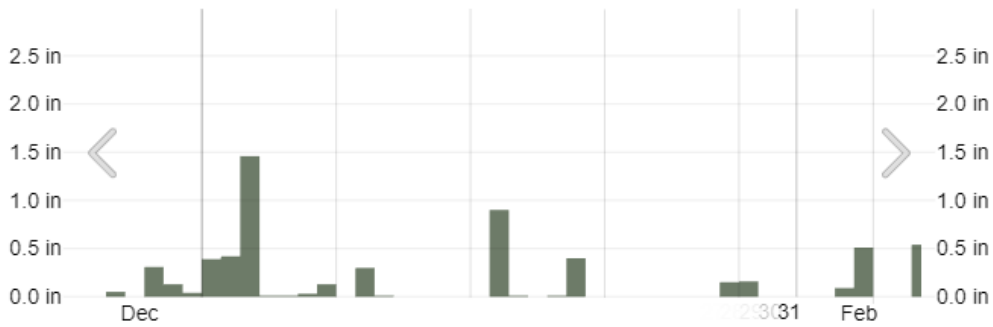


NOAA/NOS/CO-OPS
 Observed Water Levels at 8570283, Ocean City Inlet MD
 From 2022/03/01 00:00 LST/LDT to 2022/03/31 23:59 LST/LDT



Nuisance Flood Plan – Monitoring Report

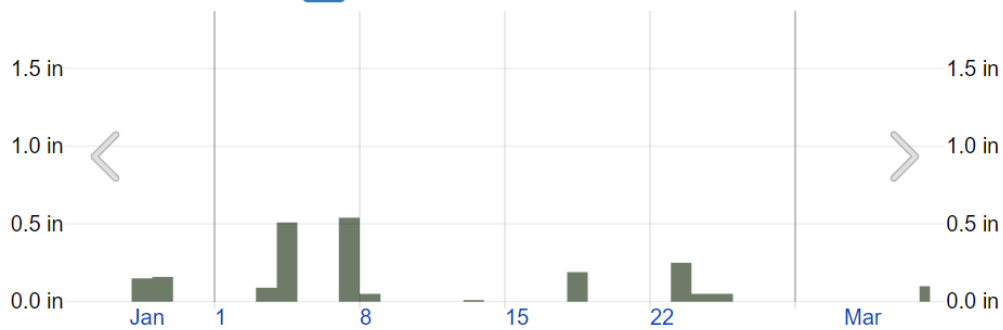
2022 Rainfall Events Q1



January 2022 Rainfall (OC Airport) © WeatherSpark.com 1.3.22 / 1.46 in.

Daily Precipitation in February 2022 in Ocean City

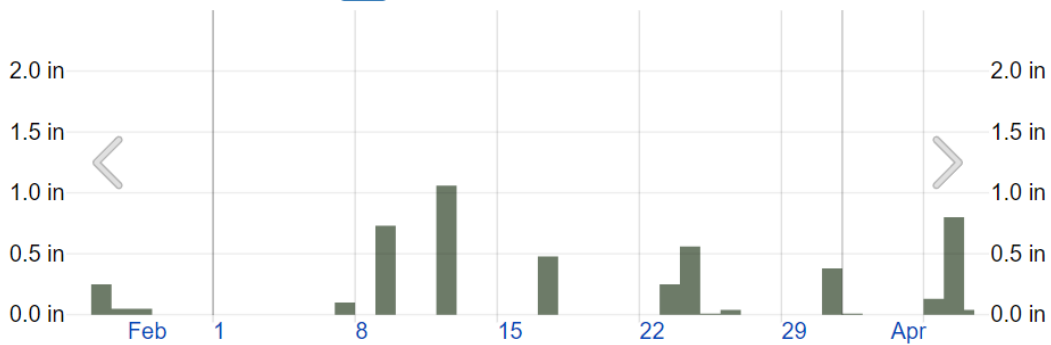
[← Winter 2022](#)
[Link](#)
[Download](#)
[Compare](#)
[Averages](#)
 History: J **Feb** M A M J J A S O N D 2021 2020 2019 2018



February 2022 Rainfall © WeatherSpark.com

Daily Precipitation in March 2022 in Ocean City

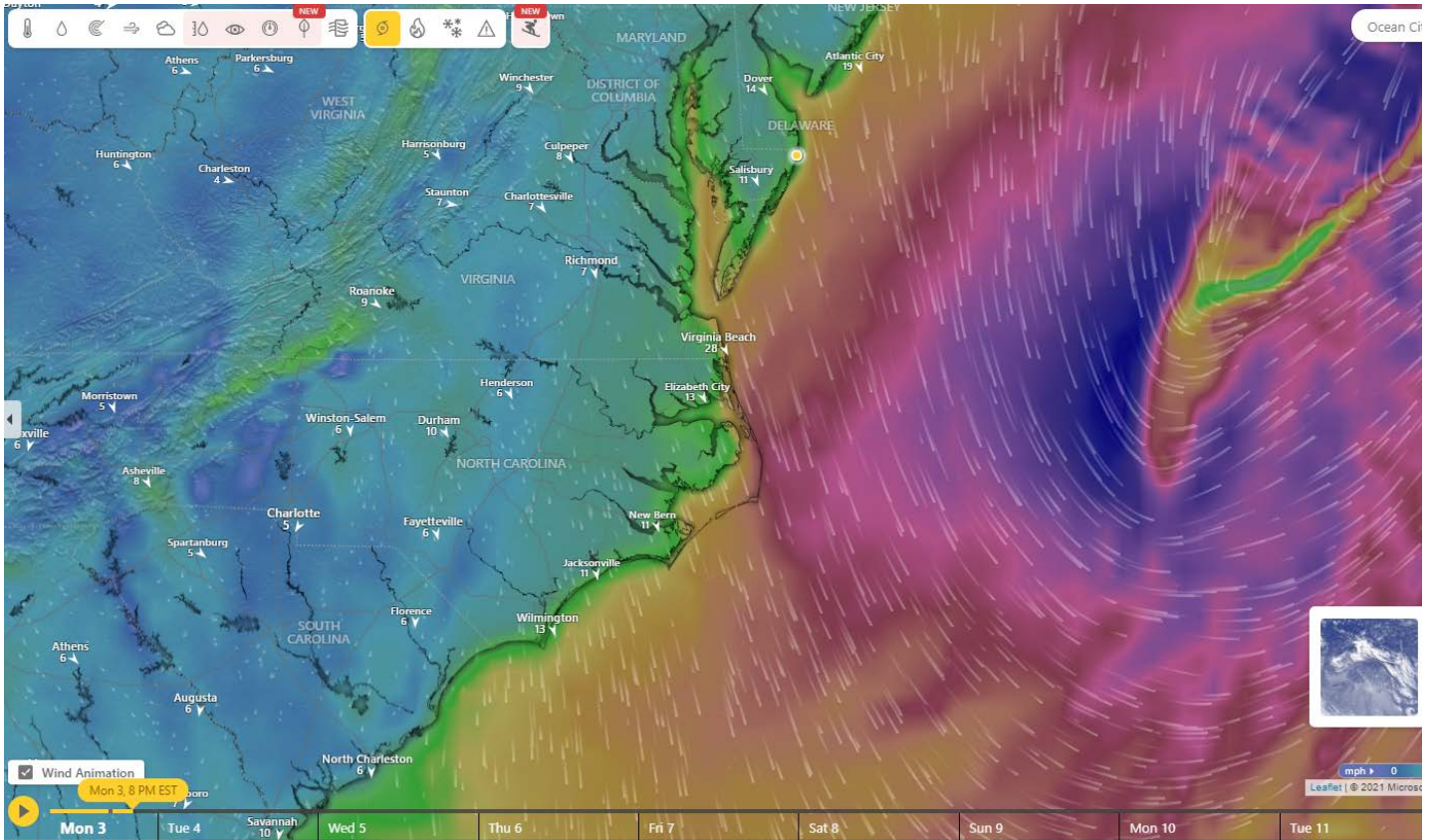
[← Spring 2022](#)
[Link](#)
[Download](#)
[Compare](#)
[Averages](#)
 History: J F **Mar** A M J J A S O N D 2021 2020 2019 2018



March 2022 Rainfall (OC Airport) © WeatherSpark.com 3.12.22 / 1.06"

Nuisance Tidal Flooding Report

No MyCoast reports from January to March 2022



Storm Warning

URGENT - MARINE WEATHER MESSAGE
 National Weather Service Wakefield VA
 346 PM EST Mon Jan 3 2022

ANZ650-652-654-040300-
 /O.CON.KAKQ.SR.W.0001.000000T0000Z-220104T0300Z/
 Coastal waters from Fenwick Island DE to Chincoteague VA out
 20 nm-
 Coastal waters from Chincoteague to Parramore Island VA out 20 nm-
 Coastal waters from Parramore Island to Cape Charles Light VA out
 20 nm-
 346 PM EST Mon Jan 3 2022

...STORM WARNING REMAINS IN EFFECT UNTIL 10 PM EST THIS EVENING...

* WHAT...North winds 30 to 40 kt with gusts up to 55 kt and seas 7

to 12 ft.

* WHERE...Coastal waters from Fenwick Island DE to Chincoteague VA out 20 nm, Coastal waters from Chincoteague to Parramore Island VA out 20 nm and Coastal waters from Parramore Island to Cape Charles Light VA out 20 nm.

* WHEN...Until 10 PM EST this evening.

* IMPACTS...Very strong winds will cause hazardous seas which could capsize or damage vessels and reduce visibility.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Mariners should remain in port, alter course, and/or secure the vessel for severe conditions.

Coastal Flood Advisory

Coastal Hazard Message
National Weather Service Wakefield VA
631 AM EST Tue Jan 4 2022

MDZ024-025-041800-
/O.CON.KAKQ.CF.Y.0003.000000T0000Z-220104T1800Z/
Inland Worcester-Maryland Beaches-
631 AM EST Tue Jan 4 2022

...COASTAL FLOOD ADVISORY REMAINS IN EFFECT UNTIL 1 PM EST THIS AFTERNOON...

* WHAT...Up to one foot of inundation above ground level expected in low-lying areas near shorelines and tidal waterways.

* WHERE...Inland Worcester County and the Maryland Beaches.

* WHEN...Until 1 PM EST this afternoon.

* IMPACTS...Shallow flooding is expected in the most vulnerable locations near the waterfront and shoreline resulting in a low threat of property damage. Expect up to one foot of water above ground level in low lying, vulnerable areas. Some roads and low lying property including parking lots, parks and lawns near the waterfront will experience shallow flooding.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

If travel is required, allow extra time as some roads may be closed. Do not drive around barricades or through water of unknown depth. Take the necessary actions to protect flood-prone property.

&&

Time of high total tides are approximate to the nearest hour.

OCEAN CITY INLET MD
MLLW CATEGORIES - MINOR 4.0 FT, MODERATE 5.0 FT, MAJOR 6.0 FT

MHHW CATEGORIES - MINOR 1.5 FT, MODERATE 2.5 FT, MAJOR 3.5 FT

DAY/TIME	TOTAL		TOTAL		DEPARTURE	FLOOD
	TIDE	TIDE	TIDE	FROM NORM	WAVES	
FT MLLW	FT MHHW	FT	FT	FT	IMPACT	
04/09 AM	4.0	1.5	1.3	6	MINOR	
04/09 PM	3.0	0.5	1.1	3-4	NONE	
05/10 AM	3.5	1.0	0.9	3-4	NONE	
05/10 PM	2.3	-0.2	0.4	3	NONE	
06/10 AM	2.4	-0.1	0.0	2-3	NONE	
06/11 PM	2.9	0.4	1.0	2	NONE	

&&