

Weekend Storm Briefing

Prepared by National Weather Service Wakefield, VA

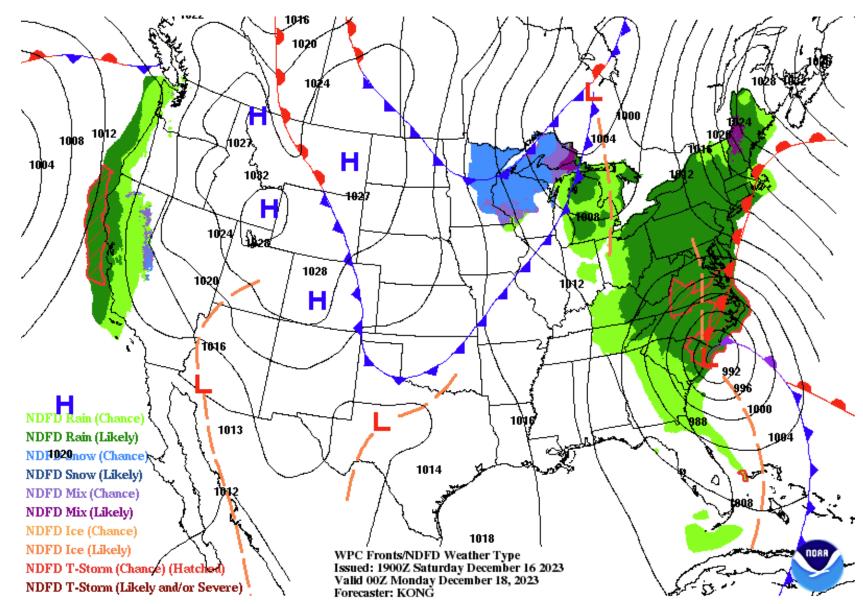
Decision Support Briefing #3

→ As of 6:00 PM EST Saturday, December 16, 2023



Important Updates

- → A Flood Watch has been issued from the I-95 corridor to the coast
- → Wind Advisories have been expanded to include the western shore of the Chesapeake Bay
- → Coastal Flood Advisories are in effect for coastal areas that are not currently under a Coastal Flood Watch



Disclaimer: Information may become outdated after briefing time. Consult weather.gov/wakefield for the latest information.



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Key Messages

- Moderate to heavy rain is expected Sunday through Monday morning with a widespread 2-3" (locally higher) of accumulation expected. This may lead to localized flooding, especially in urban areas and areas with poor drainage.
- Strong southeast winds expected Sunday afternoon through Monday. Strongest wind gusts will be Sunday evening with 45-55 mph gusts expected near the coast and 25-40 mph gusts expected inland. Wind advisories have been expanded to include the western shore of the Chesapeake Bay. Localized power outages possible.
- Potential for moderate coastal flooding in the middle/upper Chesapeake Bay and nuisance to minor flooding elsewhere. Highest tide would be Monday morning.
- Marine: Gale Warnings are in effect across all marine zones Sunday afternoon into early Monday afternoon. Strong southeast winds will gust 40-50 kt Sunday evening-Sunday night. Winds become west on Monday with 35-40 kt gusts expected. Seas build to 12-18 ft.





Summary of Greatest Impacts

Hazard	Impacts	Location	
Heavy Rain	Rainfall of 2-3" (locally higher) may lead to localized flooding, especially in urban areas	Entire forecast area	Sun
High Wind	Gusts of 45 to 55 mph may result in localized power outages	Near/along the coast	Su mor
Severe Thunderstorms	There is a chance of a few thunderstorms, some of which may become severe with wind gusts in excess of 60 mph.	Southeast Virginia and Northeast North Carolina	Sunda
Coastal Flooding	Moderate tidal flooding (inundation of 1- 2 ft AGL in vulnerable areas). Localized beach/dune erosion possible.	Middle and upper Chesapeake Bay (Lewisetta, VA - Cambridge, MD) North side of the Albemarle Sound. Atlantic coast for beach erosion.	Sunda
Marine	Strong SE winds with gusts of 40-50 kt and seas 12-18 ft	All waters coastal and nearshore waters	Su mo
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Timing

unday morning through Monday morning

Sunday afternoon into Monday orning. Highest Sunday evening

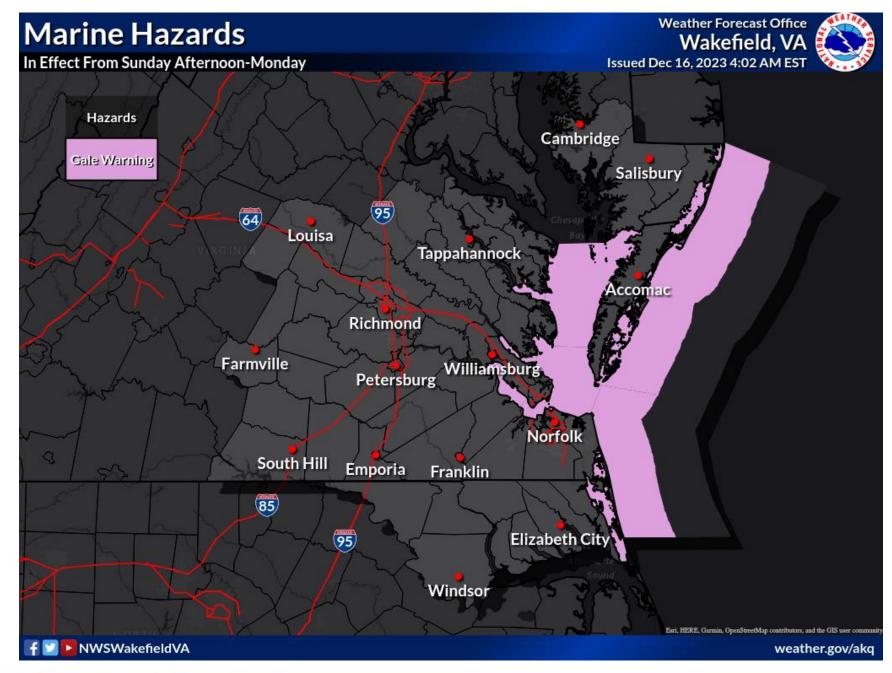
day evening through early Monday morning

lay night through Monday morning

Sunday afternoon into Monday norning. Highest winds Sunday evening.



Marine Wind Hazard Overview





National Oceanic and Atmospheric Administration for all marine zones.

night. Winds become W on expected.

See <u>www.weather.gov/akq</u> for the latest information

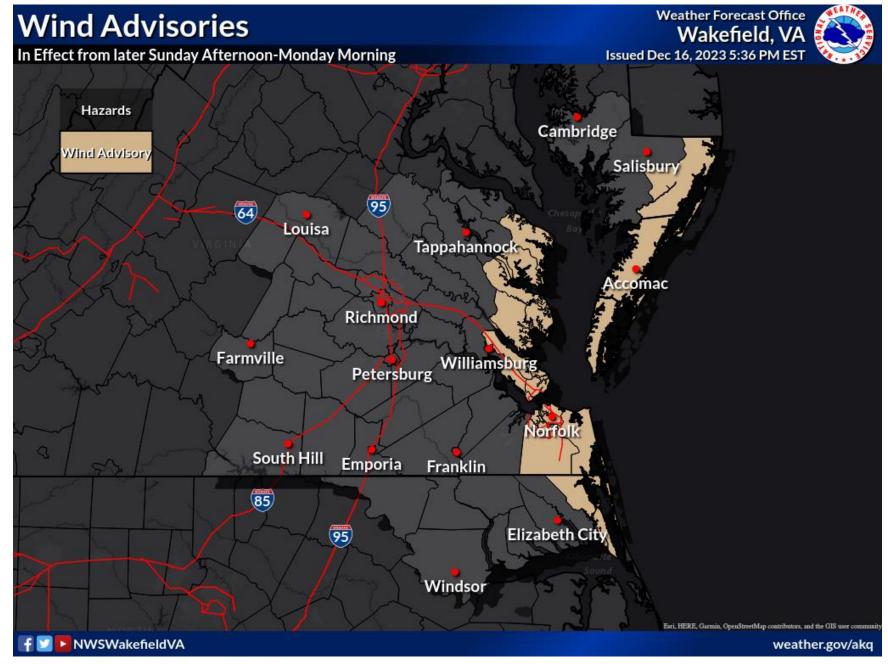
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• Gale Warnings remain in effect

• Expect SE winds to gust to 40-50 kt Sunday evening-Sunday Monday, with gusts of 35-40 kt



Land Wind Hazard Overview



 Wind Advisories have been expanded to include the western shore of the Chesapeake Bay.

• SE winds will gust to 45-55 mph in the advisory area.

the latest information



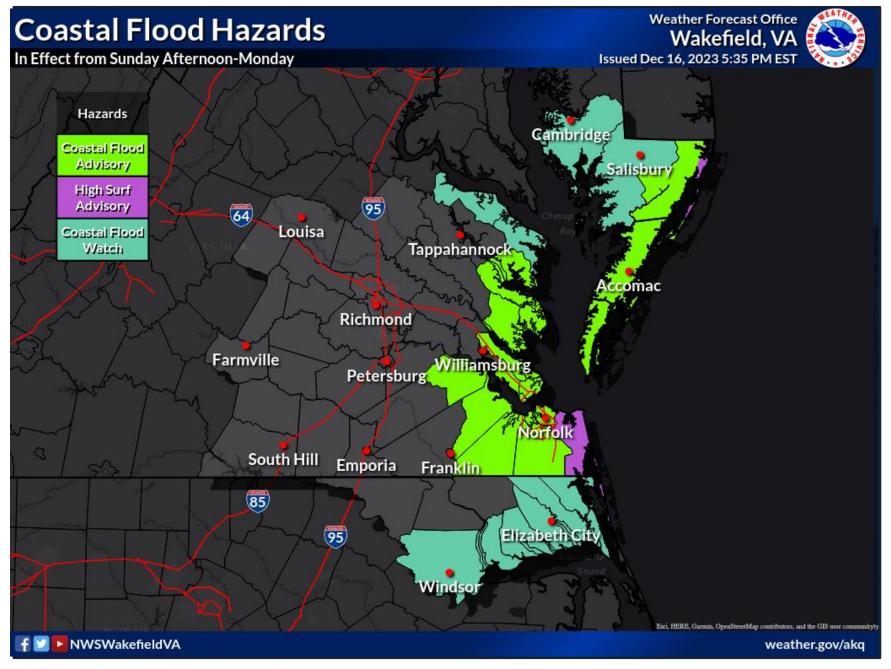
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• See <u>www.weather.gov/akq</u> for



Coastal Flood Hazard Overview





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 Coastal Flood Watches remain in effect for areas along the Albemarle Sound and bay side of the MD Eastern Shore. High Surf Advisories are in effect along the Atlantic coast.

 Coastal Flood Advisories have been added for the remaining coastal areas.

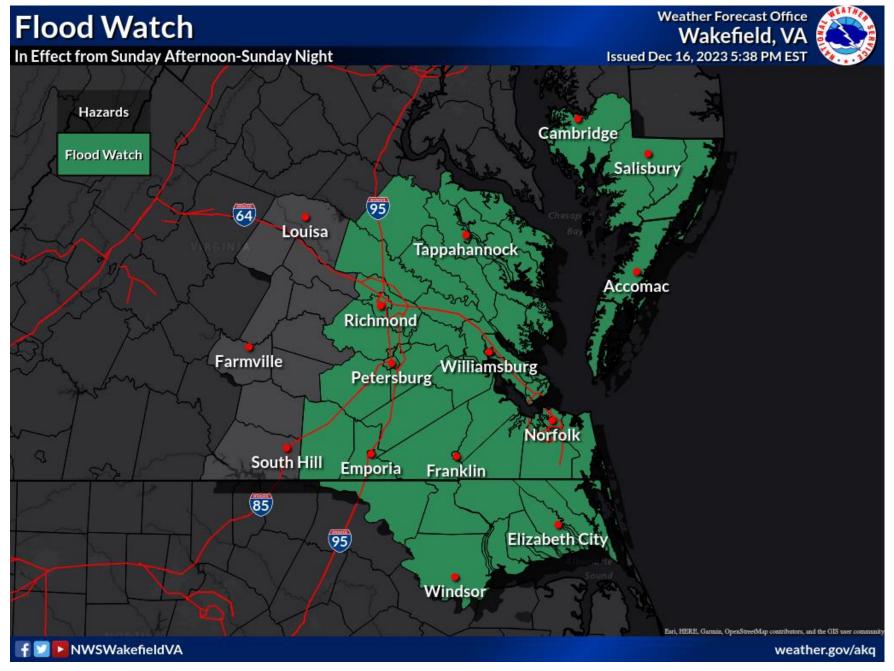
• Up to 2 feet of inundation above ground level is possible

in flood prone areas.

 See <u>www.weather.gov/akq</u> for the latest information



Flood Watch



- with locally higher amounts.
- Rain will move in early Sunday
- Periods of heavy rain may limit in vulnerable areas.



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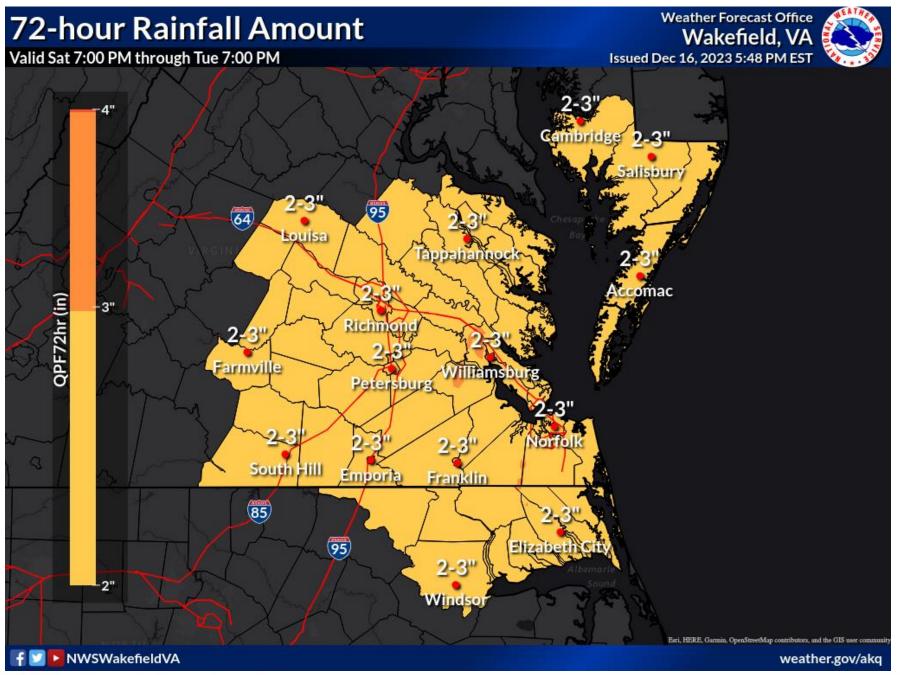
Widespread 2 to 3 inches of rain

morning and continue into Monday morning. Heaviest rain will likely be Sunday evening/Sunday night.

visibility, especially combined with 30-40 mph wind gusts. Heavy rain may also lead to localized flooding



Expected Rainfall Forecast



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 Widespread 2 to 3 inches of rain with locally higher amounts.

• Rain will move in early Sunday morning and continue into Monday morning. Heaviest rain will likely be Sunday evening/Sunday night.

• Periods of heavy rain may limit visibility, especially combined with 30-40 mph wind gusts. Heavy rain may also lead to localized flooding in vulnerable areas.

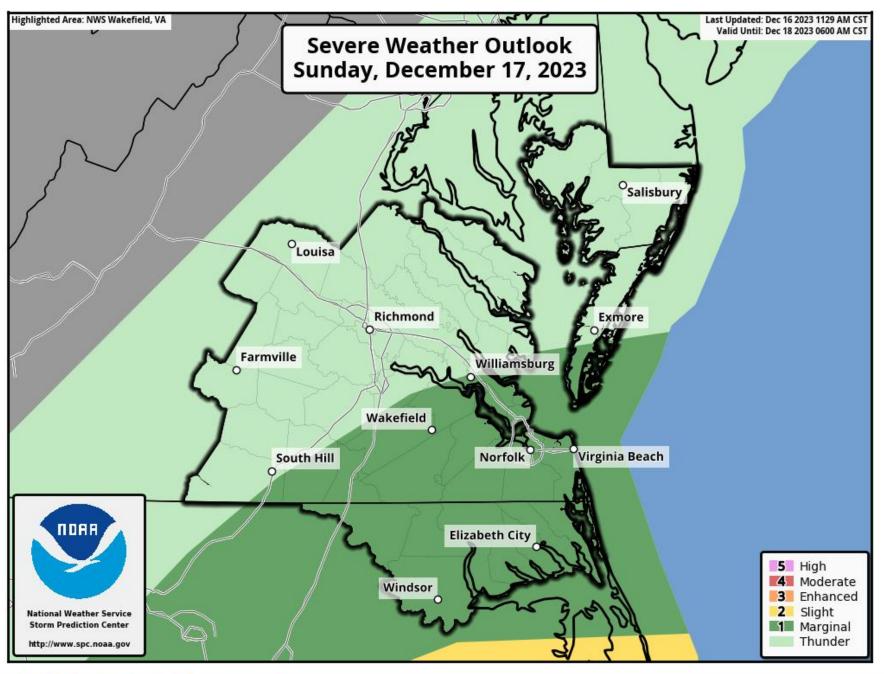


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Severe Threat - Sunday Evening



- and southeast Virginia and northeast North Carolina Sunday evening.
- isolated tornado.

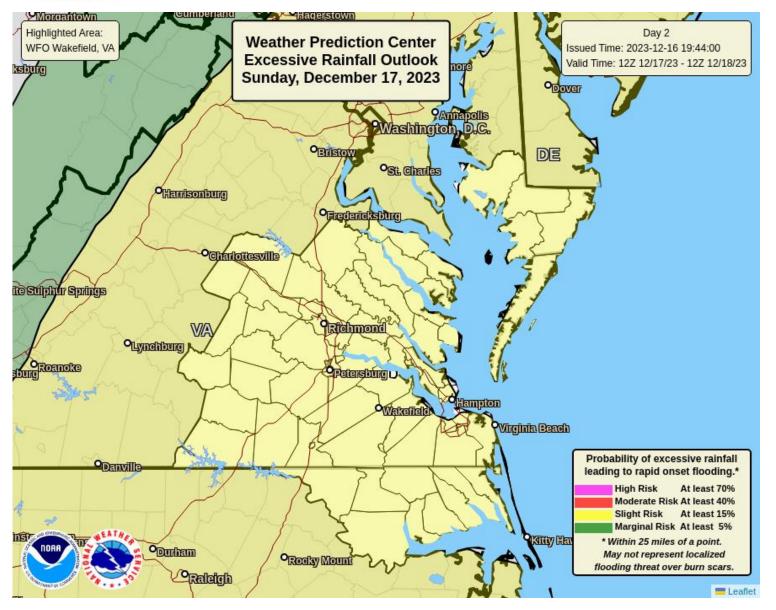
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There is a marginal risk for a few isolated severe thunderstorms across southern

The main threat is damaging wind gusts to 60+ mph. However, cannot rule out an



Flood Threat - Sunday



- There is a slight risk for flash flooding across the entire area Sunday
- Urban areas will be at greatest risk for flooding.

MARGINAL	<u>SLIGHT</u>	MOD
Isolated	Scattered	Num
flash floods	flash floods	flash
possible	possible	lik



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ERATE

erous floods elv

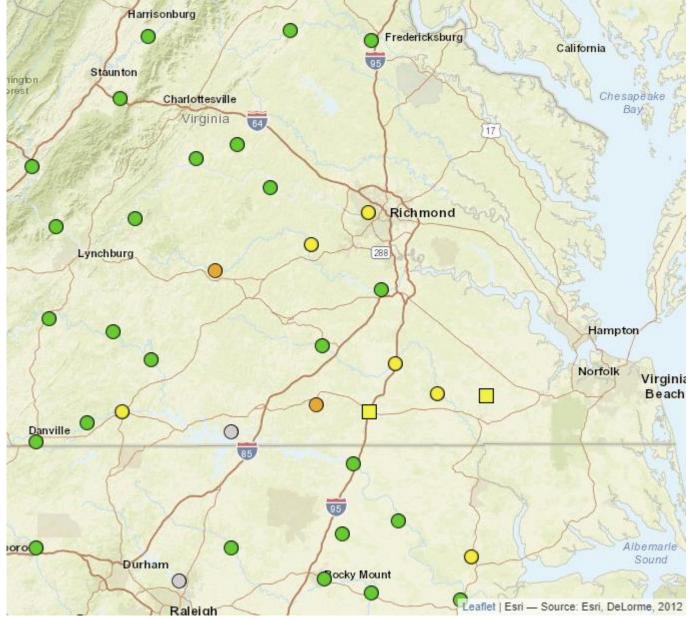
HIGH

Widespread flash floods expected



Minor River Flooding Possible

Probability of River Flooding



- River points highlighted in yellow and orange have the potential to see nuisance to minor flooding from the upcoming rainfall.
- Nuisance to minor flooding is also possible for portions of the Blackwater River and Chickahominy River (near Providence Forge).

	Chance of Exceedance	
30%	Level	70%
0	Action	
0	Minor Flood	
•	Moderate Flood	
	Major Flood	
🔵 = less th	nan 30% chance of reaching Action	level



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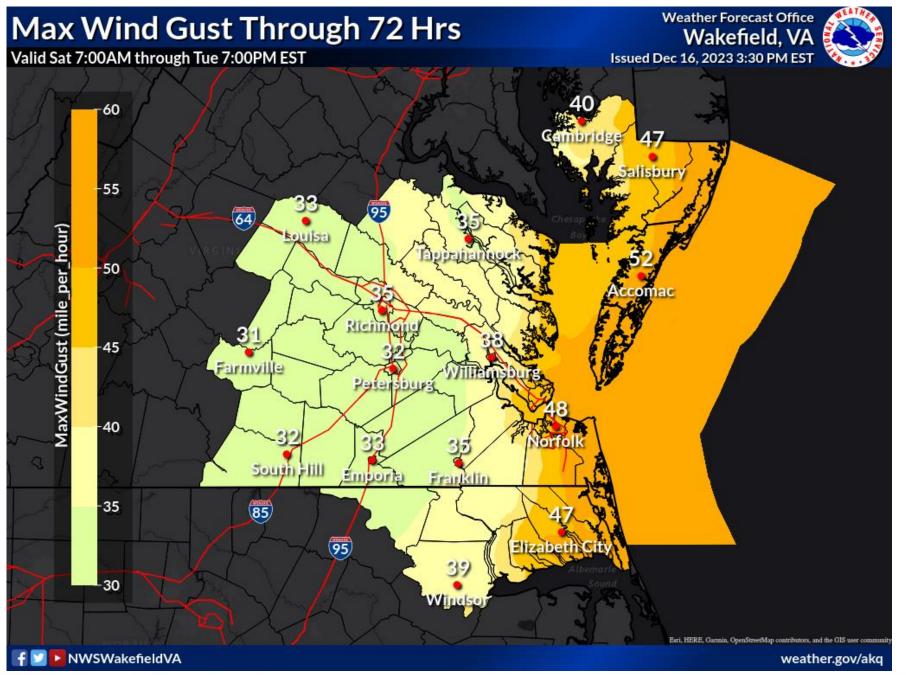


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High Wind Potential



- Gusty southeast winds are expected Sunday afternoon through Monday morning, gusty Monday
- the Chesapeake Bay.
- Downed tree limbs/power lines power outages

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becoming westerly and remaining

• Highest wind gusts (45-55 mph) are expected along the coast Sunday evening-early Monday morning. Wind Advisories have been issued in areas along the coast, and the western shore of

could result in isolated to scattered



Timing of Wind and Rain (wind in mph)

		V	Vinc	d Gi	ıst F	For	eca	st										Ra	in F	or	eca	st						
	I	12	/17			1	2/18				12	2/19						12	/17		1	12	/18		· ·	12/1	9	
		S	un			1	Mon				Т	ue						S	un			М	on			Tue		
	12am	6am	12pm	n 6pm	12ar	m 6a	m 12p	0 m 6	pm	12am	16an	n12p	m 6p	m	Maximum		1am	n 7am	1pm	7pn	n 1an	n 7am	1pm	7pm	1am	7am	1pm	Total
Accomac	8	124	21	33	46	<mark>•</mark> 29	* 39	→ 2	1	22	29	35	26	5 🛳	46	Accomac	0	0.02	2 0.52	1.2	3 0.5	1 0.20	0	0	0.01	0	0	2.49
Ahoski	5	8	22	33	23	28	→ 31	→ 1	7->	17	20	25	1 3	3994	33	Ahoski	0	0.28	8 0.96	1.2	3 0.3	7 0.03	0	0.01	0	0	0	2.88
Bowling Green	2	3	12	204	224	25	* 32	≯ 1	8⇒	15	17	29	1 6	524		Bowling Green		_	_		_	9 0.03		0	0	0	0	2.58
Cambridge	6	104	17	224	38	• 26	~ 39	⇒ 2	2⇒	20	25	35	26	5 🛳	39	Cambridge		_	-		_	50.23		0	0.01	0	0	2.28
Cape Charles	10	15	24	38	43	3 5	7 37	→ 2	3→	26	32	33	3 0)🐿	40	Cape Charles		_	_		_	20.15			0.01	0	0	2.72
Corolla	13	174	30	46 *	47	38	× 37	➡ 2	4	25	32	31	25	5 🐿	47	Corolla		_	_					0.01	0.01	0	0	2.17
Deltaville	6	8	17	304	35	• 25	* 32	→ 2	0-	20→	22	A 30	21	*	35	Deltaville					_	40.11		0	0	0	0	2.82
Edenton	6	104	234	37	304	30	➡ 31 [•]	→ 1	7-7	18	21	24	1 4	194	57	Edenton	0	0.26	60.93	1.1:	2 0.3	9 0.03	0	0.01	0.01	0	0	2.75
Elizabeth City	7#	13	25	40	354	32	× 33	→ 1	8-	17	22	28	1 6	; *	40	Elizabeth City	0	0.15	50.84	1.0	7 0.6	1 0.05	0	0.01	0.01	0	0	2.74
Emporia	34	7#	17	254	21	26	> 30	→ 1	8⇒	20	20	25	1 3	3994	30	Emporia	0	0.25	51.01	1.14	4 0.3	6 0.02	0	0	0	0	0	2.78
Farmville	3 🖉	6#	14	21	20	26	> 29	⇒ 2	0→	18	18	23	1 3	3***	29	Farmville	0	0.17	0.89	1.1	0.2	2 0.01	0	0	0	0	0	2.39
Hampton / Newport News	8	12	21	36	35	29	× 33	→ 2	.1-	22→	25	30	20)🐿	36	Hampton / Newport News		_	_	_	_	0.11		0	0	0	0	2.94
Louisa	3 🕊	64	12	18	20	26	× 30	▶ 2	0→	16	17	24	1 3	320	30	Louisa						50.03		0	0	0	0	2.67
Norfolk / Portsmouth	74	12	23	39	37	• 30	× 35	→ 2	0-	21→	24	30	× 21	-	39	Norfolk / Portsmouth		_	_		_	40.10		0	0	0	0	2.96
Ocean City	12	15	20	29	51	37	1 41	→ 2	3-	22	28	35	28	3 🛳	51	Ocean City					_	6 0.27		0	0.01	0	0	2.17
Petersburg	3 📽	7#	15	24	214	26	> 30	⇒ 2	0→	17→	17	25	▶ 14	-	30	Petersburg			-		_	7 0.03		0	0	0	0	2.64
Richmond	5	7#	15	234	224	28	* 31	⇒ 2	0-	16	17	29	≥ 15	5 1	31	Richmond			_			6 0.03		0	0	0	0	2.73
Salisbury	5	10	18	26	44	29	1 41	→ 2	.1→	15	22	33	23	3 🛸	44	Salisbury	_		_			20.25		0	0.01	0	0	2.34
South Hill	3	7#	17#	24	21	26	> 30	→ 1	8->	21→	21	24	≥ 14		30	South Hill			-			6 0.02		0	0	0	0	2.43
Suffolk	3	64	21	36	30	28	× 32	→ 1	8-	18	20	26	1 5	5 1	36	Suffolk					_	2 0.09		0	0	0	0	2.96
Tappahannock	2	5	14	224	26	23	→ 31 ⁴	→ 1	7⇒	15→	16	28	1 7	-	31	Tappahannock		_		-	_	2 0.08		0	0	0	0	2.76
Virginia Beach	10+		25				_								44	Virginia Beach	0	0.05	50.84	1.0	7 0.4	70.10	0	0	0.01	0	0	2.54
Williamsburg	_		18					_							32	Williamsburg *Table values in inches	0	0.06	0.81	1.29	9 0.7	2 0.09	0	0	0	0	0	2.97

williamsburg *Table values in mph

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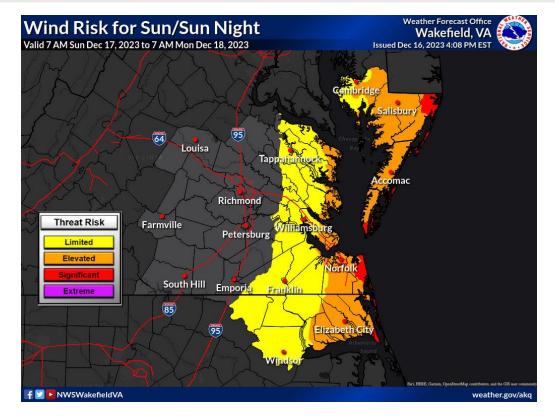
*Table values in inches **Created: 4 pm EST Sat 12/16/2023

***Values are accumulations over the period beginning at the time shown.

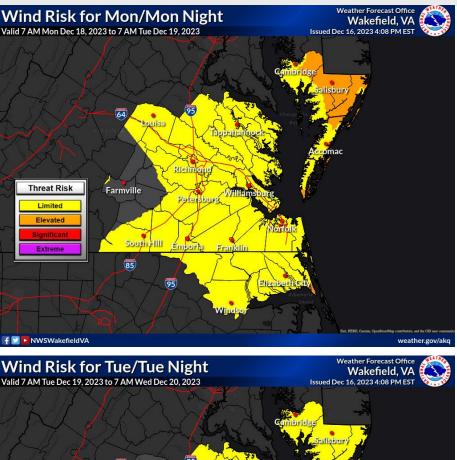
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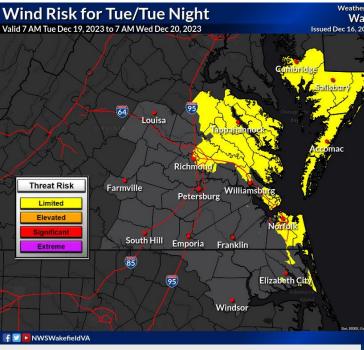


High Wind Potential - Sun to Tue



Limited	Breezy conditions with 30 to 40 mph wind gusts could blow around unsecured items and result in hazardous driving conditions for high- profile vehicles.
Elevated	Windy conditions with 40 to 50 mph wind gusts could damage light outdoor items, cause isolated power outages and result in hazardous driving conditions for high-profile vehicles.
Significant	Very windy conditions with 50 to 60 mph wind gusts could blow down trees, result in some property damage and cause power outages.
Extreme	Extremely windy conditions with wind gusts greater than 60 mph will damage numerous trees, cause property damage in addition to widespread power outages.





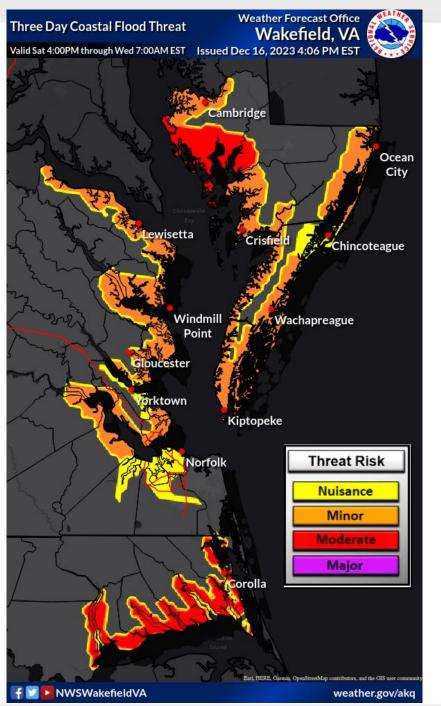


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Tidal Flooding Overview



- Nuisance to minor tidal flooding is possible in most areas during the high tide cycles Sunday evening and again Monday morning.
- Moderate tidal flooding (inundation of 1-2 ft AGL in vulnerable areas) is possible during the Monday morning high tide cycle in the red highlighted area from Lewisetta, VA-Cambridge, MD).
- Minor to moderate tidal flooding is also possible on the north side of the Albemarle Sound.

Coastal Flood Webpage

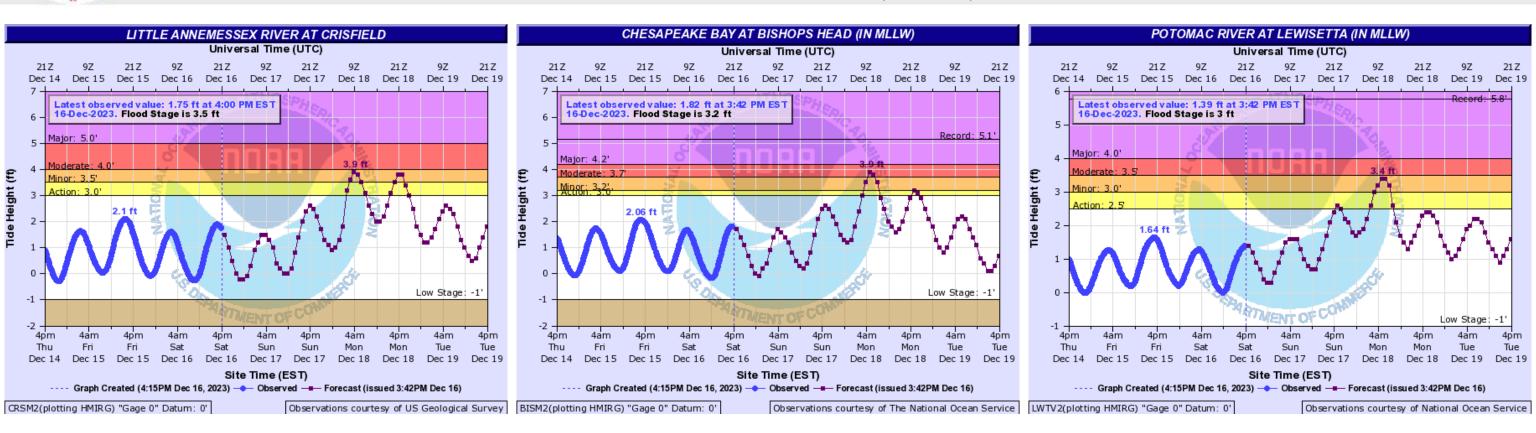


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Note: All forecasts reference Mean Lower Low Water (MLLW).



Summary of Tidal Trends

- Minor to moderate tidal flooding is possible early-mid Monday morning. This corresponds to inundation of 1-2 feet above ground level in vulnerable areas.
- Widespread flooding of vulnerable areas may result in an elevated threat of property damage.

Coastal Flood Webpage

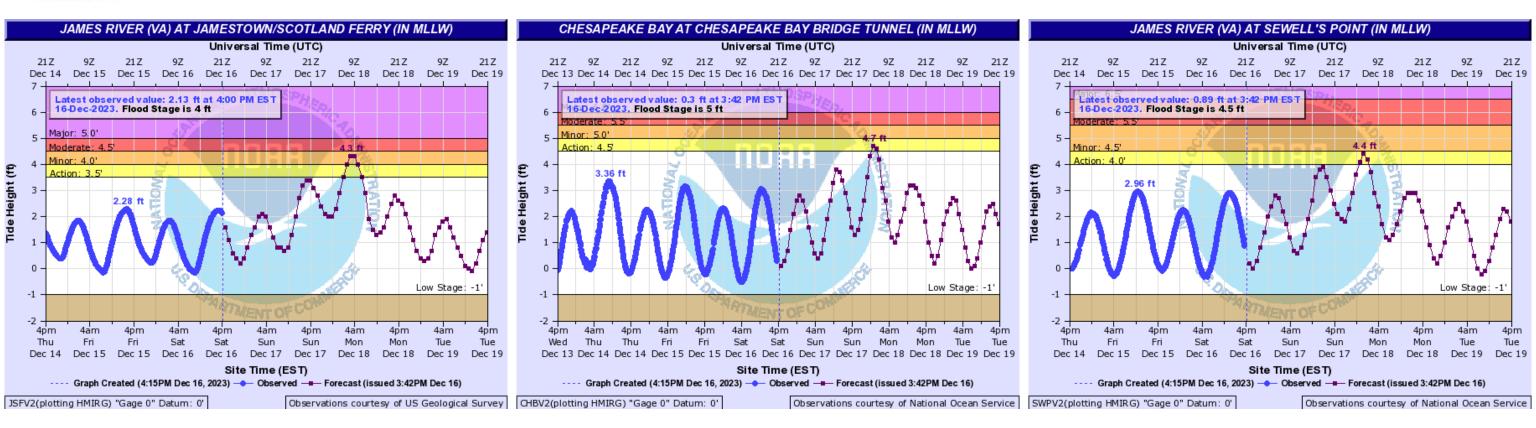


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Note: All forecasts reference Mean Lower Low Water (MLLW).



Summary of Tidal Trends

- Nuisance to minor tidal flooding is possible Sunday evening and again early Monday morning. This corresponds to inundation of up to 1 foot above ground level in vulnerable areas.
- Shallow flooding in the most vulnerable locations near the waterfront and shoreline resulting in a low threat of property damage.

Coastal Flood Webpage

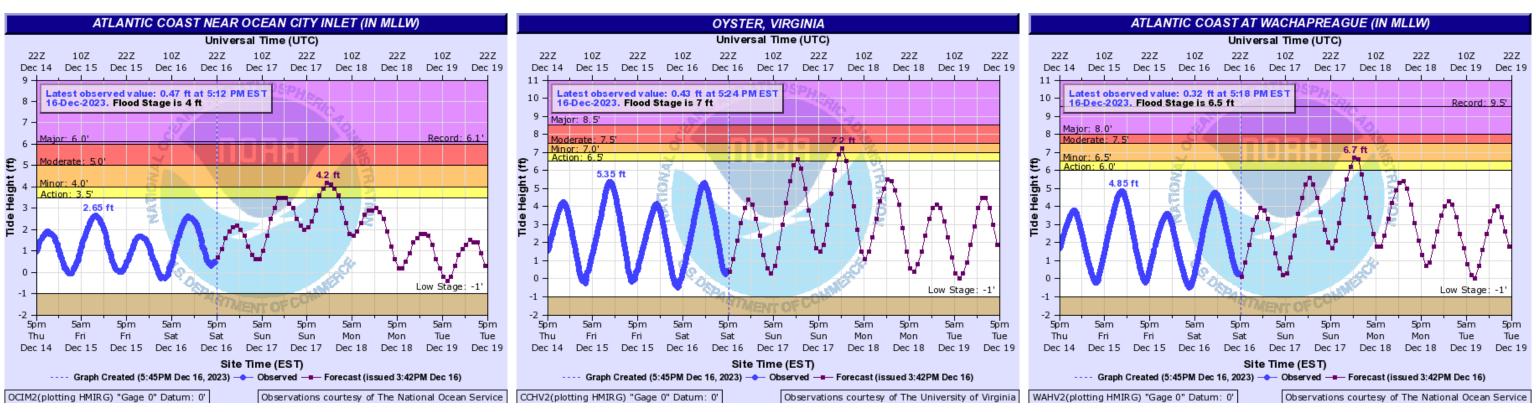


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Tidal Overview - Ocean

Note: All forecasts reference Mean Lower Low Water (MLLW).



Summary of Tidal Trends

- Nuisance to minor tidal flooding is possible Sunday evening and again early Monday morning. This corresponds to inundation of up to 1 foot above ground level in vulnerable areas.
- Shallow flooding in the most vulnerable locations near the waterfront and shoreline resulting in a low threat of property damage.

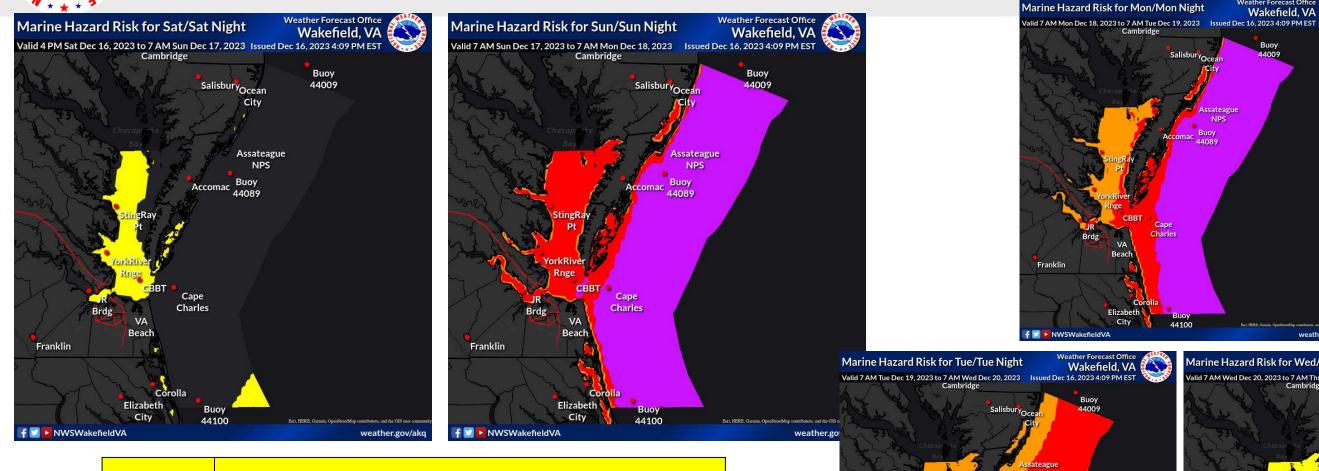
Coastal Flood Webpage



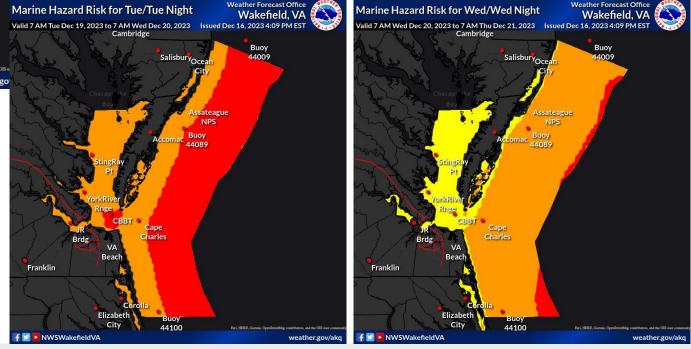
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Marine Threat Potential - Next 5 Days



Limited	Wind Gusts >= 20 knots (15 kt Bay & rivers) and/or Waves >= 4 feet (2 ft Bay & rivers).
Elevated	Wind Gusts >= 25 knots (20 kt Bay & rivers) and/or Waves >= 5 feet (>=4 ft Bay & rivers).
Significant	Wind Gusts >= 34 knots and/or Waves >= 8 feet (>= 5 ft Bay & rivers).
Extreme	Wind Gusts >= 48 knots and/or Waves >= 12 feet (>= 8 ft Bay & rivers).





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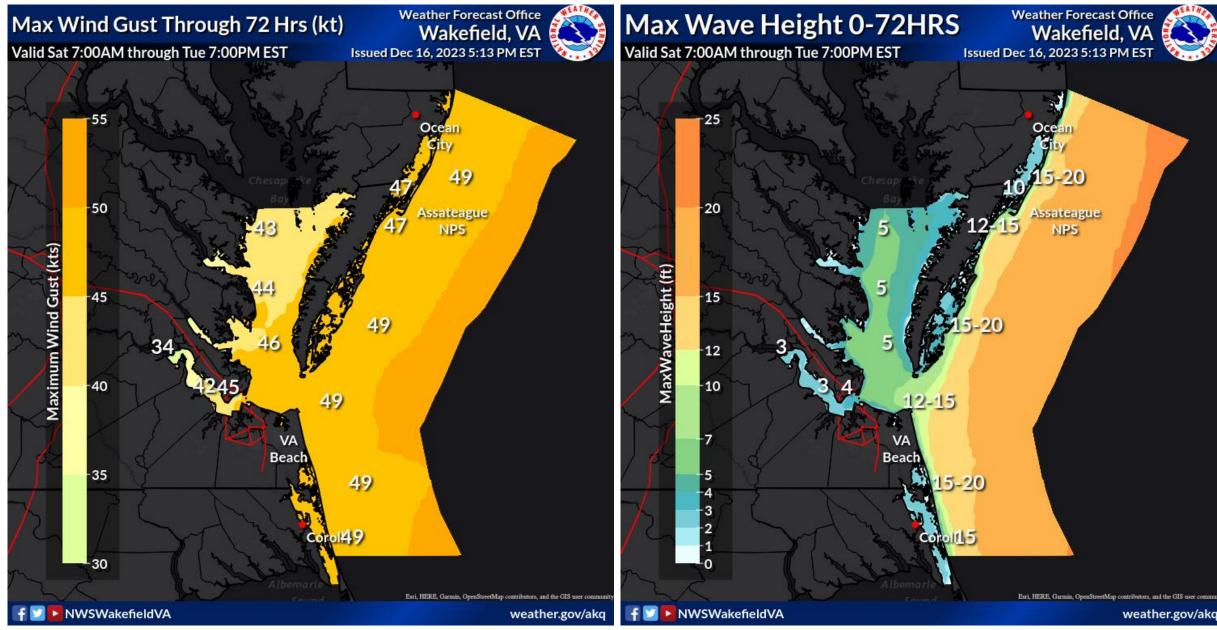
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Marine Wind and Waves



For Port specific forecast information visit: <u>https://www.weather.gov/akq/dss_port</u>



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- Sub-advisory conditions are expected through tonight.
- Southeast winds will quickly increase on Sunday. Gusts to 40 to 50 kt are expected Sunday afternoon-Sunday night.
- Dangerous seas of 12-18 feet are expected from Sunday-Monday AM.

Regional Marine Forecasts (wind in kt)

N	Maximum Wind Gust Forecast														Wave Height Forecast											
		12/	/17				12	/19			12/17					12/	/18		12/19							
	Sun			Mon				Tue						Sun				M	on		Tue					
	12am	6am	12pm	6pm	n 12am 6am 12pm 6pm			12am 6am 12pm 6pm			n 6pm		12am	16am	12pm	6pm	12am	6am	12pm	6pm	12am	6am î	12pm	6pm		
CBBT	16	20	34	44	36 🖡	34	32	25	30*	31	28	27	CBBT	2.0	3.0	6.0	7.0	8.0	6.0	5.0	5.0	5.0	5.0	4.0	4.0	
Cape Henry	16	21	34	45	39	34	32	25	30≯	31	29	28	Cape Henry	2.0	3.0	7.0	13.0	13.0	10.0	9.0	7.0	7.0	7.0	6.0	6.0	
Chesapeake Light	15	20	34	47%	45	37→	35	25	30*	32	30	29	Chesapeake Light	3.0	4.0	9.0	16.0	18.0	14.0	11.0	9.0	9.0	8.0	8.0	7.0	
Chincoteague Shoal	15	17	28	43	44	35⇒	35	22	27*	30	31	29	Chincoteague Shoal	3.0	3.0	6.0	14.0	16.0	14.0	13.0	10.0	8.0	7.0	7.0	6.0	
Duck, NC	15	22	36	46	41	34	31+	21+	28*	29	27	23	Duck, NC	3.0	4.0	8.0	13.0	13.0	11.0	8.0	7.0	7.0	6.0	6.0	6.0	
Fenwick Shoal	13	17	22	43 🖡	48	381	36🗭	24	24	31	31	27	Fenwick Shoal	3.0	3.0	5.0	12.0	16.0	16.0	14.0	12.0	10.0	8.0	8.0	7.0	
HRBT	13	18	31	38	34	34	32	21	26	26	26	21	HRBT	2.0	3.0	4.0	4.0	4.0	3.0	3.0	2.0	2.0	3.0	3.0	2.0	
JRB	12	17	30	38	32	32→	31→	22	25	26	26	20	JRB	1.0	2.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	
New Point Comfort	13	17	29	41	34	33	31→	22	27*	27	27	25	New Point Comfort	2.0	3.0	4.0	6.0	6.0	4.0	3.0	3.0	3.0	3.0	2.0	2.0	
Parramore Banks	14	17	29	44	42	35⇒	34	22	28*	30	32	29	Parramore Banks	3.0	4.0	6.0	14.0	15.0	13.0	12.0	10.0	8.0	7.0	7.0	6.0	
Rappahannock Light	12	17	26	39	35	33	31→	21→	28*	29	30	27	Rappahannock Light	t 2.0	2.0	3.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	
Tangier	13	17	26	39	36	33*	32→	21	30*	32	32	30	Tangier	2.0	2.0	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	
Thimble Shoal	16	20	33	42	34	33→	31→	25	30*	30	27	26	Thimble Shoal	2.0	3.0	5.0	6.0	7.0	6.0	4.0	4.0	5.0	5.0	4.0	4.0	

*Table values in kt

**Created: 4 pm EST Sat 12/16/2023

***Values are maximums over the period beginning at the time shown.

Peak wind gusts will likely reach 50 kt Sunday evening into early Monday morning



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*Table values in feet

***Values are maximums over the period beginning at the time shown.

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Key Messages

- Moderate to heavy rain is expected Sunday through Monday morning with a widespread 2-3" (locally higher) of accumulation expected. This may lead to localized flooding, especially in urban areas and areas with poor drainage.
- Strong southeast winds expected Sunday afternoon through Monday. Strongest wind gusts will be Sunday evening with 45-55 mph gusts expected near the coast and 25-40 mph gusts expected inland. Wind advisories have been expanded to include the western shore of the Chesapeake Bay. Localized power outages possible.
- Potential for moderate coastal flooding in the middle/upper Chesapeake Bay and nuisance to minor flooding elsewhere. Highest tide would be Monday morning.
- Marine: Gale Warnings are in effect across all marine zones Sunday afternoon into early Monday afternoon. Strong southeast winds will gust 40-50 kt Sunday evening-Sunday night. Winds become west on Monday with 35-40 kt gusts expected. Seas build to 12-18 ft.





Contact and Next Briefing Information

For NWS Wakefield, Virginia



→ NWS Wakefield Briefing



- → By 9:00 AM EST, Sunday, December 17
- → Method: Email

Disclaimer

- → Information contained in this briefing is time-sensitive
- → See <u>www.weather.gov/akg</u> for the latest information

Contact Information

Web

→ weather.gov/wakefield

Phone

→ (757) 899-4200

Email

→ <u>akq-report@noaa.gov</u>

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