

Weekend Storm Briefing

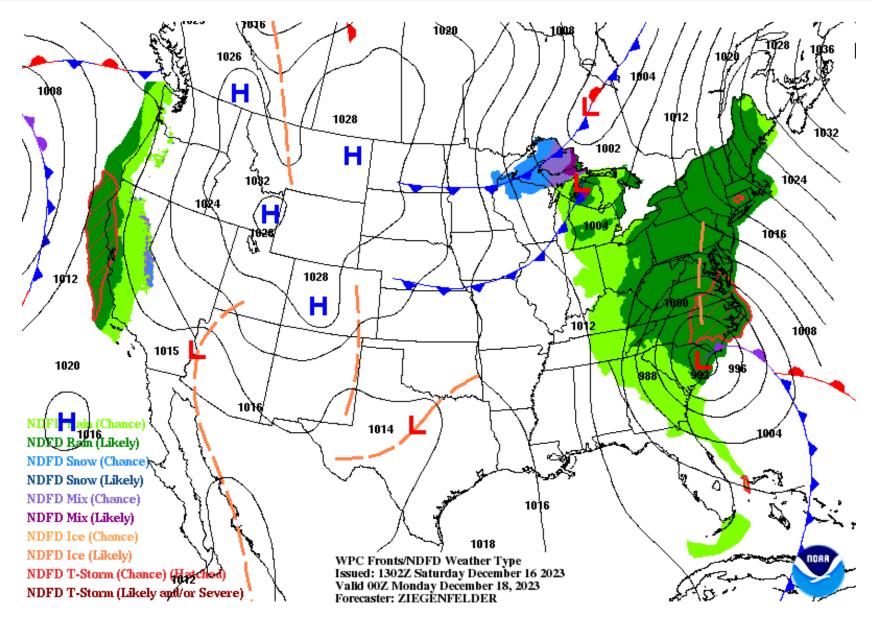
Prepared by National Weather Service Wakefield, VA

Decision Support Briefing #2

→ As of 8:35 AM EST Saturday, December 16, 2023

NEW Important Updates

- → Gale Watches have been upgraded to Gale Warnings in all marine zones
- → Wind Advisories have been issued along the coast
- → Coastal Flood Watches are in effect for areas along the Albemarle Sound in addition to the bay side of the MD Eastern Shore
- → High Surf Advisories have been issued along the Atlantic coast



Disclaimer: Information may become outdated after briefing time.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





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 issued in areas along the coast (and may need to be expanded inland). 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

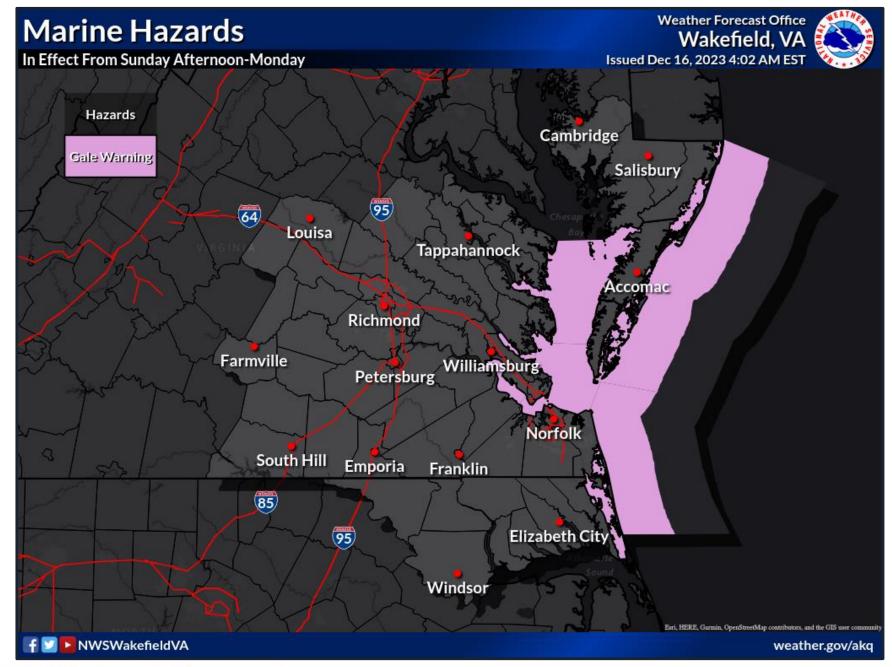
Hazard	Impacts	Location	Timing			
Heavy Rain	Rainfall of 2-3" (locally higher) may lead to localized flooding, especially in urban areas	Entire forecast area	Sunday morning through Monday morning			
High Wind	Gusts of 45 to 55 mph may result in localized power outages	Near/along the coast	Sunday afternoon into Monday morning. Highest Sunday evening			
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	Sunday evening through early Monday morning			
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.	Sunday night through Monday morning			
Marine	Strong SE winds with gusts of 40-50 kt and seas 12-18 ft	All waters coastal and nearshore waters	Sunday afternoon into Monday morning. Highest winds Sunday evening.			



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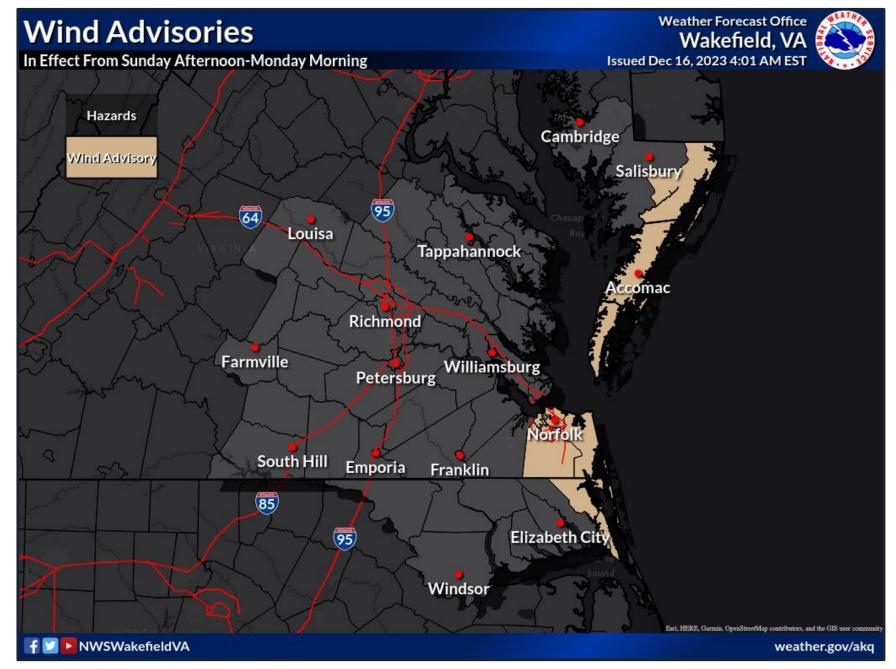
Marine Wind Hazard Overview



- Gale Watches have been upgraded to Gale Warnings for all marine zones.
- Expect SE winds to gust to 40-50 kt Sunday evening-Sunday night. Winds become W on Monday, with gusts of 35-40 kt expected.
- See <u>www.weather.gov/akq</u> for the latest information



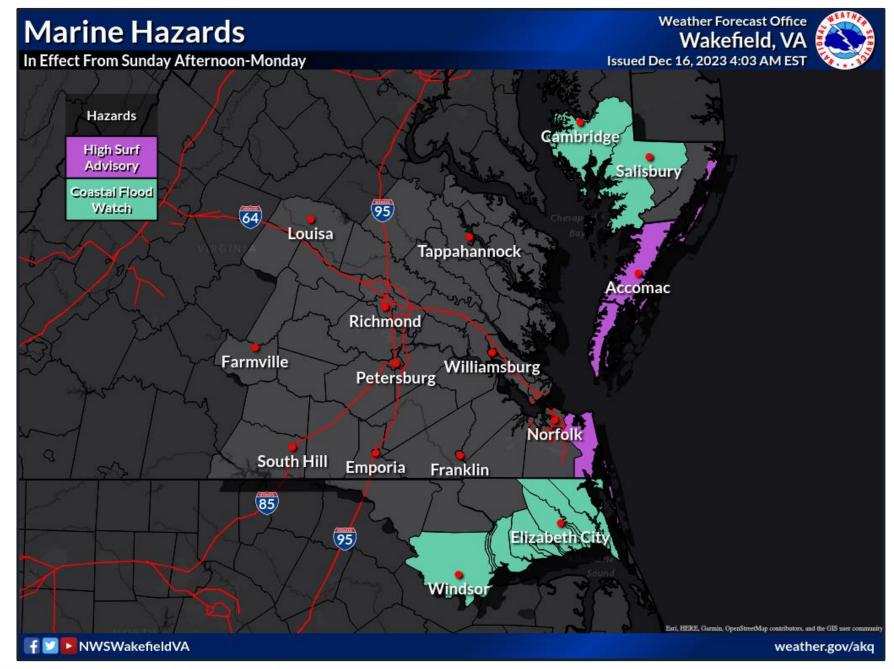
Land Wind Hazard Overview



- Wind Advisories have been issued along the coast from Sunday afternoon-Sunday night.
- SE winds will gust to 45-55 mph in the advisory area.
- Advisories may need to be expanded farther inland with later updates.
- See <u>www.weather.gov/akq</u> for the latest information



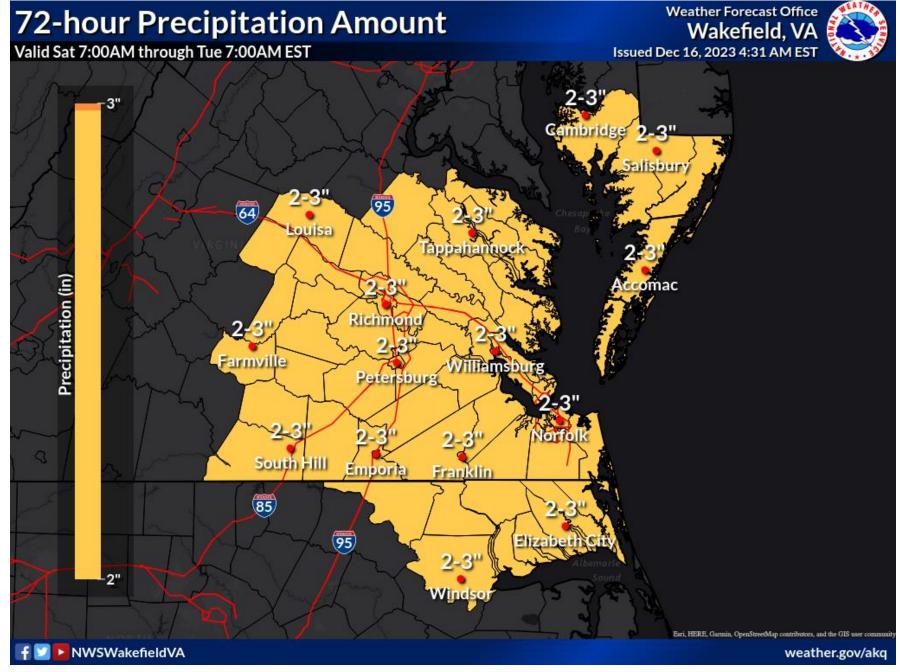
Coastal Flood Hazard Overview



- Coastal Flood Watches are 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.
- Watches / Advisories may need to be expanded across a larger portion of the Bay and tidal rivers.
- 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



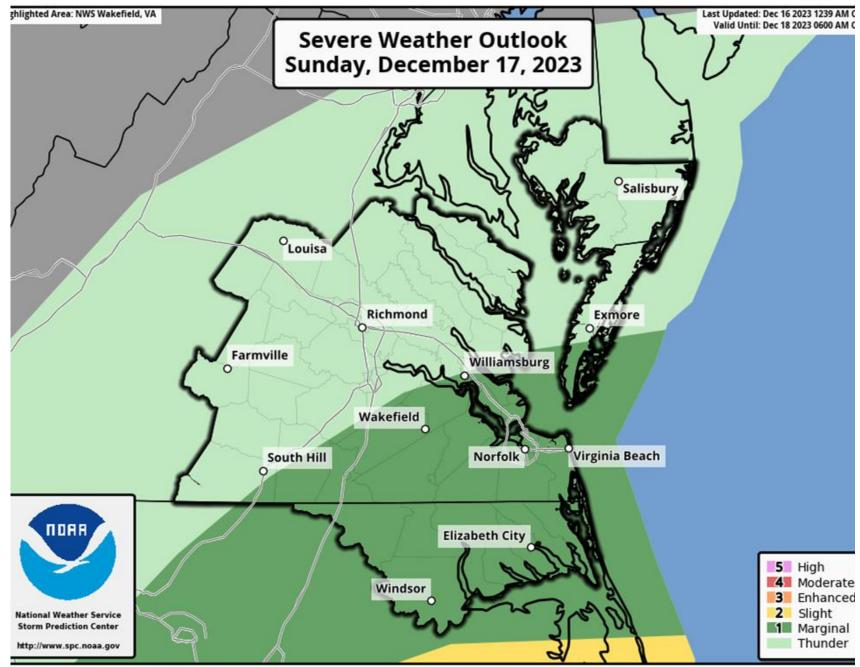
Expected Rainfall Forecast



- 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.



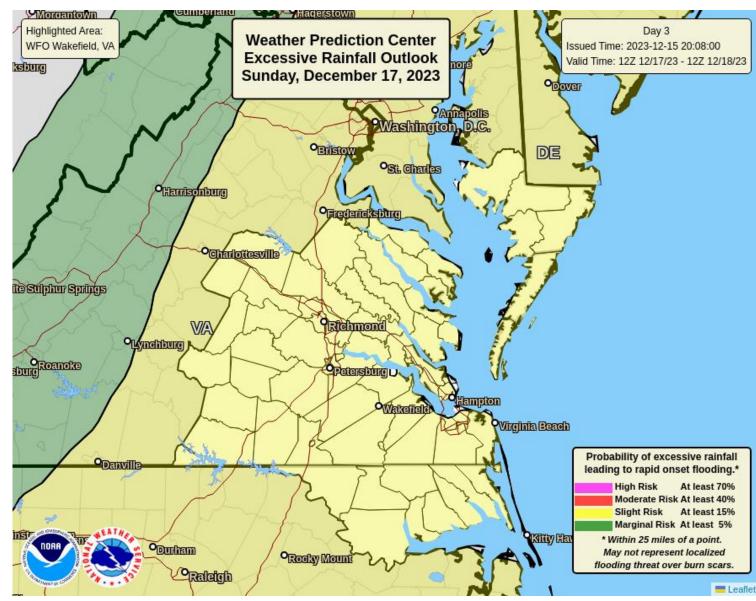
Severe Threat - Sunday Evening



- There is a marginal risk for a few isolated severe thunderstorms across southern and southeast Virginia and northeast North Carolina Sunday evening.
- The main threat is damaging wind gusts to 60+ mph. However, cannot rule out an isolated tornado.

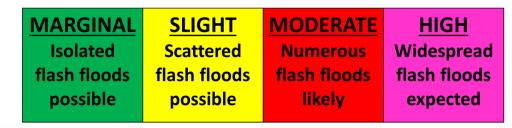


Flood Threat - Sunday



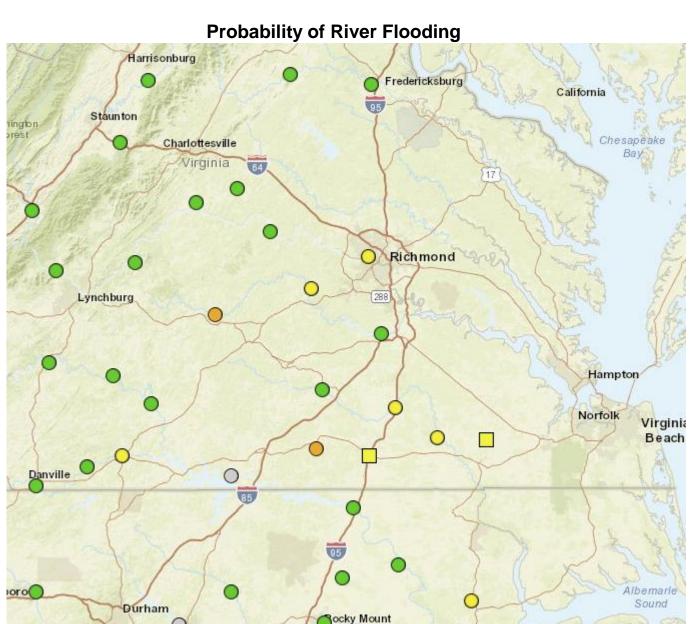
 There is a slight risk for flash flooding across the entire area Sunday

Urban areas will be at greatest risk for flooding.





Minor River Flooding Possible

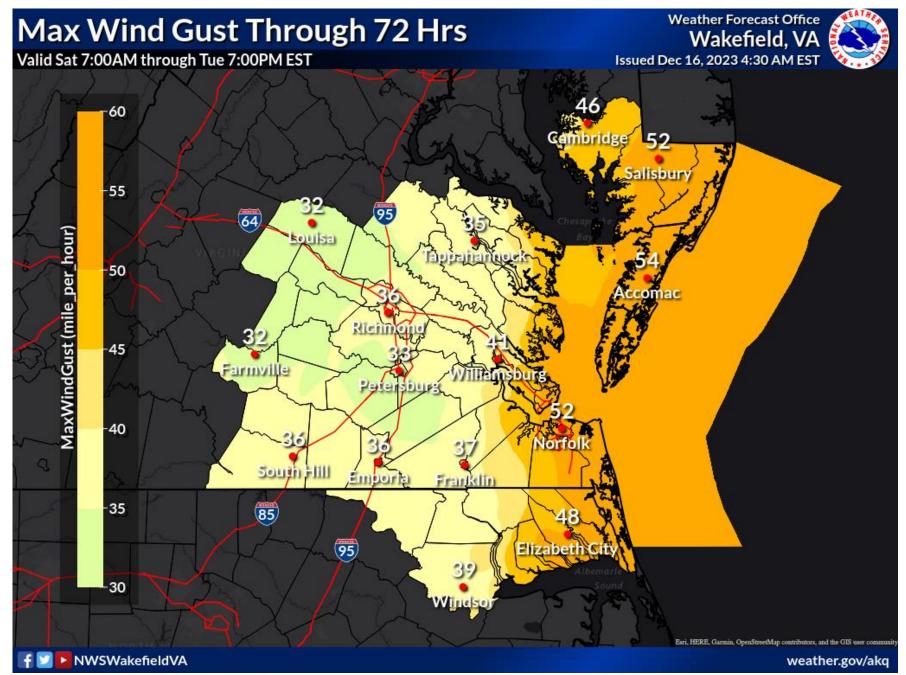


- River points highlighted in yellow and orange have the potential to see nuisance to minor flooding from the upcoming rainfall.
- Nuisance to minor flooding is also possible for portions of the Blackwater River and Chickahominy River (near Providence Forge).

Chance of Exceedance									
30%	Level	70%							
0	Action								
0	Minor Flood								
	Moderate Flood								
	Major Flood								
= less than 30% chance of reaching Action level									



High Wind Potential



- Gusty southeast winds are expected Sunday afternoon through Monday morning, becoming westerly and remaining gusty Monday
- 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 may need to be expanded inland.
- Downed tree limbs/power lines could result in isolated to scattered power outages



Timing of Wind and Rain (wind in mph)

Maximum Wind Gust Forecast													
	12/17					12/	/18		12/19				
		Sı	ın		Mon				Tue				
	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	
Accomac	13	18	29	48 %	51	44➡	41→	26	31	35	35	31	
Ahoski	12	21	31	37	32	35→	33➡	21→	22*	24	25	15	
Cambridge	12	16	21	39	43	43 →	39❤	25➡	28	32	35 ⁴	29	
Corolla	17	28	43	52 %	49	39₹	35❖	26❤	31*	30	29	26	
Elizabeth City	12*	23	38	46 %	43	36	35➡	22	26*	25	28	21	
Emporia	91	16	24	25	30*	33❤	31➡	24➡	24	24	24	16	
Farmville	7	13	18≢	22🗷	30\$	30	30❤	24❤	22*	21	22	15	
Louisa	64	10≠	16	21🕏	30\$	30	30❤	22	21*	22	24	15	
Norfolk / Portsmouth	12**	21	35 ←	48 %	45	39 →	36➡	23	26*	29	30	24	
Ocean City	15	18	26	47 %	51 %	41🗪	40→	26🗪	29*	32	33*	30	
Richmond	7#	13	21	25	31	35❤	33❤	24➡	22**	24	25	18	
Salisbury	10	17	24	45 %	48 %	44➡	43➡	25➡	28	32	35	28	
South Hill	9*	16	24	24	31	33	31❤	24❤	24*	24	24	15	
Tappahannock	7	13	20	33	31	31❤	31❤	21➡	21*	24	28	20	
Virginia Beach	16	24	38	51 %	51	40→	37➡	26❤	31*	32	31	28	
Williamsburg	94	16	28	41	38록	33	32❤	22	23**	26	29	20	

^{*}Table values in mph

Probability of Precipitation Forecast													
		12	/17		12/18				12/19				
		Sı	un		Mon				Tue				
	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am 6am 12pm 6pm				
Accomac	5	50	85	100	100	85	60	20	25	25	10	0	
Ahoski	20	90	100	100	85	75	35	10	10	10	0	0	
Cambridge	5	45	90	100	100	95	70	20	20	20	5	0	
Corolla	10	75	95	95	95	75	45	15	20	20	10	5	
Elizabeth City	15	80	95	95	95	75	40	15	15	15	0	0	
Emporia	20	85	100	100	95	90	35	10	10	10	0	0	
Farmville	20	85	100	100	95	85	30	5	10	10	0	0	
Louisa	10	80	95	95	95	90	35	10	20	20	0	0	
Norfolk / Portsmouth	10	75	95	95	95	80	45	20	20	20	5	0	
Ocean City	5	35	80	100	100	90	65	20	25	25	10	5	
Richmond	15	80	95	100	100	95	40	15	15	15	0	0	
Salisbury	5	45	90	100	100	90	70	20	25	25	5	0	
South Hill	25	85	100	100	90	85	25	10	10	10	0	0	
Tappahannock	10	65	95	100	100	95	50	20	20	20	0	0	
Virginia Beach	10	70	95	100	100	80	45	20	20	20	10	0	
Williamsburg	10	70	95	100	100	90	45	20	20	20	0	0	

Drobability of Draginitation Forecast



^{**}Created: 8 am EST Sat 12/16/2023

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

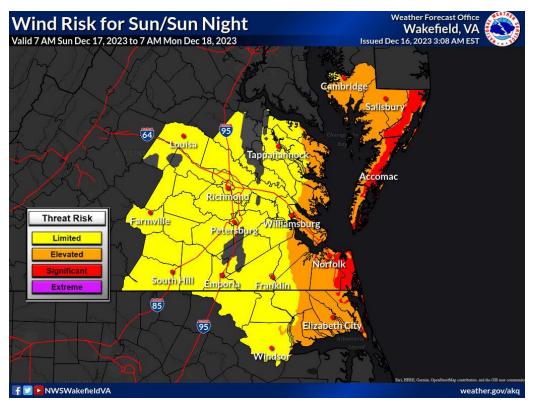
^{*}Table values in %

^{**}Created: 8 am EST Sat 12/16/2023

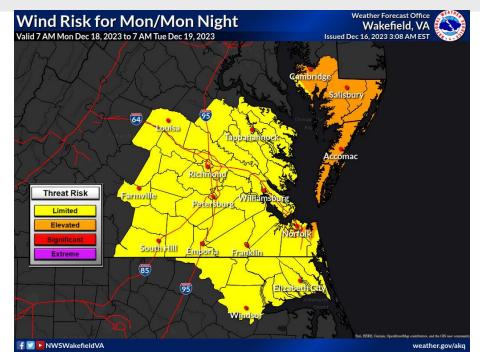
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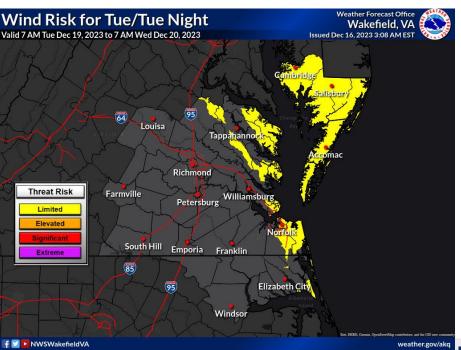


High Wind Potential - Sun to Tue



Limited	Breezy conditions with 30 to 40 mph wind gusts could blow around unsecured items and result in hazardous driving conditions for high-
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.

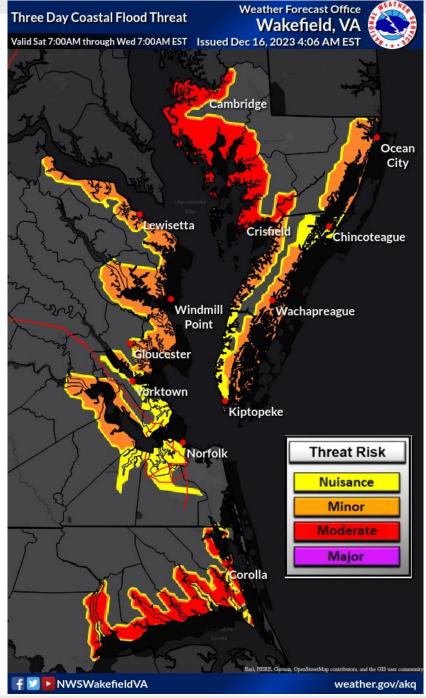








Tidal Flooding Overview



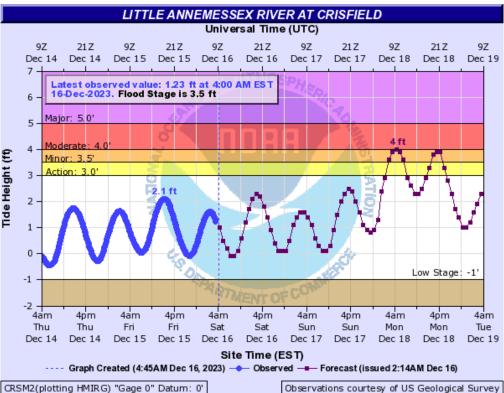
- Nuisance to minor tidal flooding is possible in most areas during the high tide cycles Sunday evening and again Monday morning.
- Moderate tidal flooding (inundation of 1-2 ft AGL in vulnerable areas) is possible during the Monday morning high tide cycle in the red highlighted area from Lewisetta,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

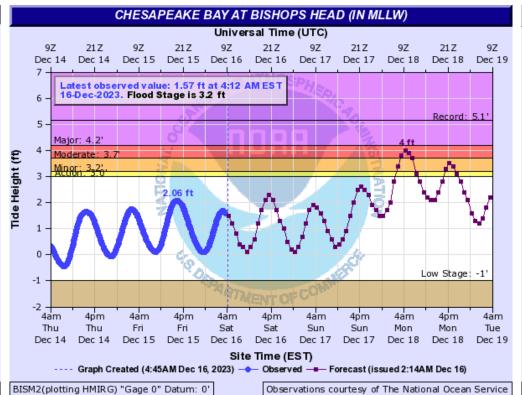


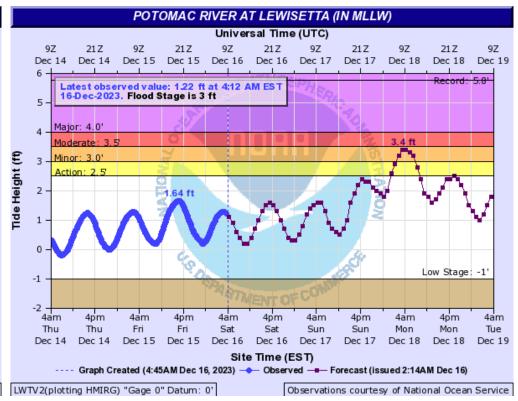


Tidal Overview - Upper Bay

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







Summary of Tidal Trends

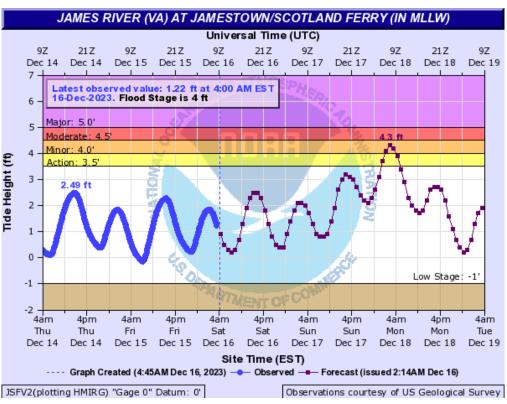
- Minor to moderate tidal flooding is possible early-mid Monday morning. This corresponds to inundation of 1-2 feet above ground level in vulnerable areas.
- Widespread flooding of vulnerable areas may result in an elevated threat of property damage.

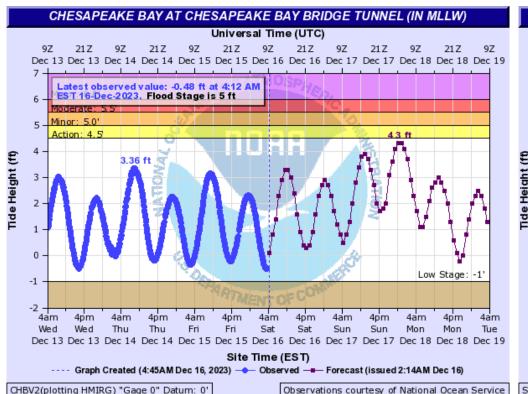


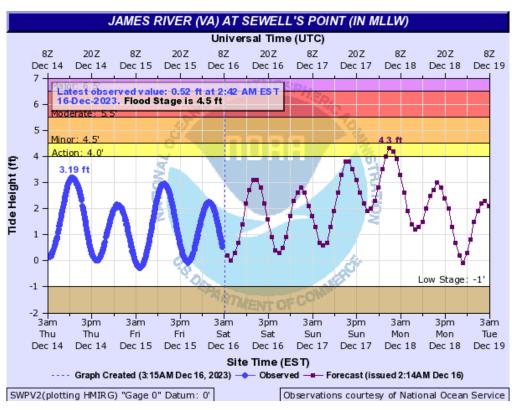


Tidal Overview - Lower Bay/James

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.



Low Stage: -1

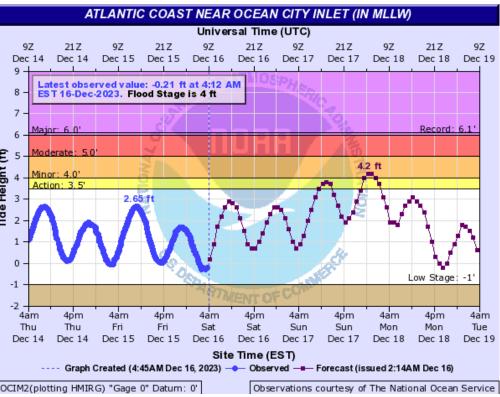
ATLANTIC COAST AT WACHAPREAGUE (IN MLLW)

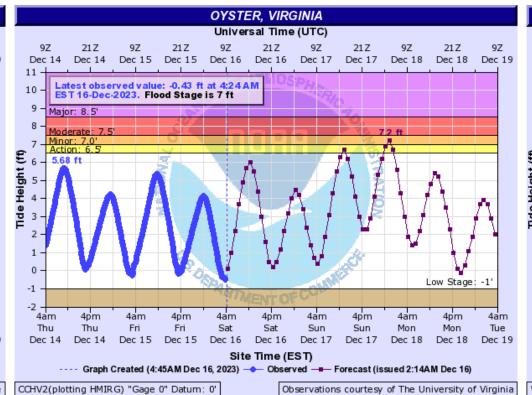
Latest observed value: -0.44 ft at 4:18 AN EST 16-Dec-2023. Flood Stage is 6.5 ft



Tidal Overview - Ocean

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





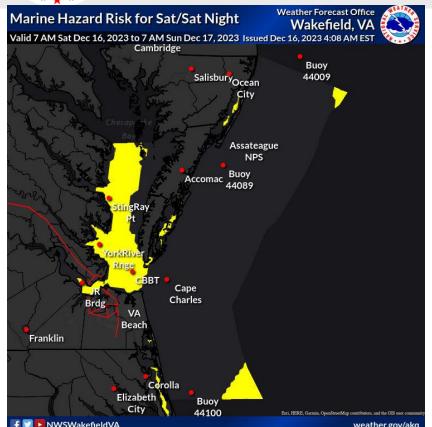


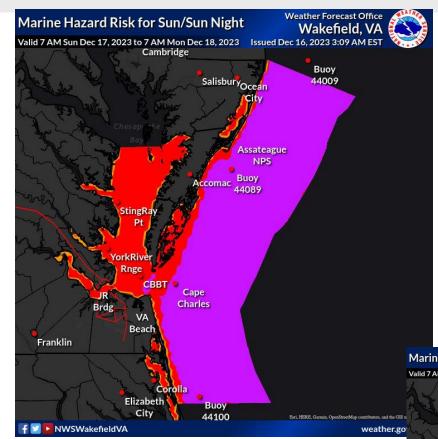
- Nuisance to minor tidal flooding is possible Sunday evening and again early Monday morning. This corresponds to inundation of up to 1 foot above ground level in vulnerable areas.
- Shallow flooding in the most vulnerable locations near the waterfront and shoreline resulting in a low threat of property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



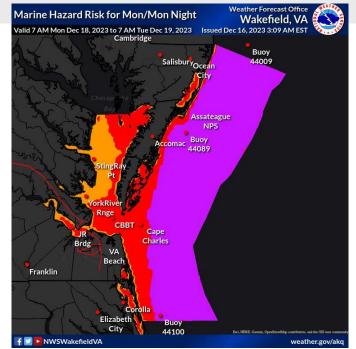


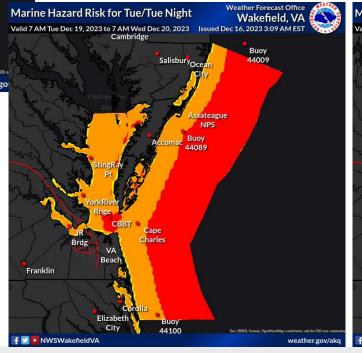
Marine Threat Potential - Next 5 Days

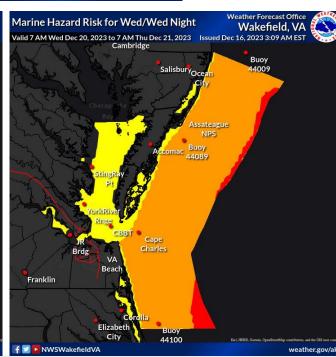










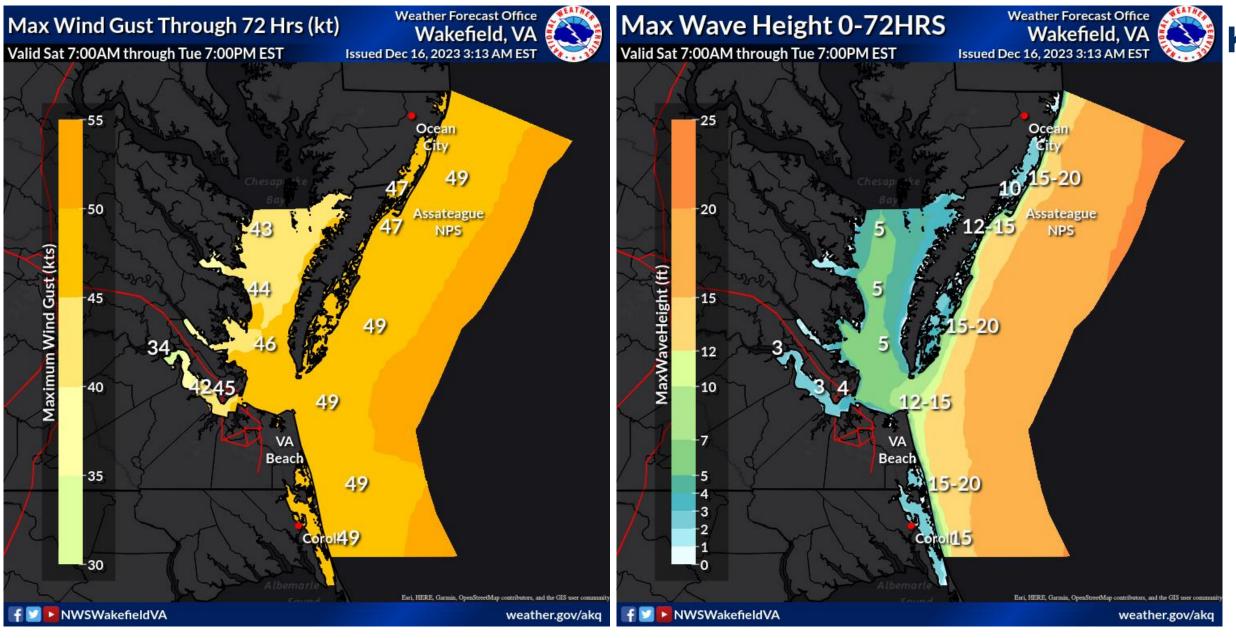




National Weather Service Wakefield, VA



Marine Wind and Waves



Key Points:

- Sub-advisory conditions are expected through Saturday night.
- 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.

For Port specific forecast information visit: https://www.weather.gov/akq/dss port





Regional Marine Forecasts (wind in kt)

Maximum	Wind	Gust Forecast	Gust Forecas
12/17		12/10	12/10

		17	12/18				12/19					
	Sun				Mon				Tue			
	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm
CBBT	15**	21	34 ∽	45 %	43	35❖	31→	26❤	31*	33	26	24
Cape Henry	16❤	23	35	45 %	44	35	31➡	26	31*	33*	26	25
Chesapeake Light	15**	22	34	46 %	46 %	36₹	33♣	28	33*	33	29	28
Chincoteague Shoal	15*	17	27	42 %	44	35➡	34❖	25	30	32	29	27
Duck, NC	15	23	36┺	46 %	44	35₹	29❖	24❤	28	28	25	22
Fenwick Shoal	15	19	28	42 %	45 %	35♠	37🗪	25	28	31*	31	28
HRBT	16**	20	32	42 %	39ጜ	34➡	30→	24➡	27*	28	25	22
JRB	15**	19	31	39ቚ	38록	35❤	30→	26	27*	28	26	20
New Point Comfort	14**	19	29	42	42 %	33❤	30→	25❤	27*	29	26	22
Parramore Banks	14	18	28	43 %	45 %	36➡	33➡	26❤	31	33*	30	27
Rappahannock Light	13	16	26	40 %	40ጜ	33❤	29➡	25	29	30	28	24
Tangier	14	17 ←	26	40 %	40ጜ	34❤	32➡	27	32	33**	29	27
Thimble Shoal	15*	21	33	44	41	35➡	31➡	26❤	30*	31	25	23

^{*}Table values in kt

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

Wave Height Forecast													
		12/	/17		12/18				12/19				
		Sı	ın		Mon				Tue				
	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am 6am 12pm 6pm				
CBBT	3.0	4.0	6.0	7.0	7.0	6.0	5.0	5.0	5.0	5.0	4.0	4.0	
Cape Henry	2.0	3.0	8.0	11.0	11.0	10.0	9.0	7.0	7.0	6.0	6.0	6.0	
Chesapeake Light	3.0	4.0	9.0	15.0	16.0	13.0	11.0	9.0	9.0	8.0	8.0	7.0	
Chincoteague Shoal	3.0	3.0	6.0	13.0	14.0	13.0	12.0	10.0	8.0	7.0	6.0	6.0	
Duck, NC	3.0	4.0	9.0	12.0	12.0	10.0	9.0	7.0	7.0	6.0	6.0	6.0	
Fenwick Shoal	2.0	3.0	5.0	12.0	16.0	16.0	14.0	12.0	10.0	8.0	7.0	7.0	
HRBT	2.0	3.0	4.0	4.0	4.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	
JRB	1.0	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	
New Point Comfort	2.0	3.0	3.0	6.0	6.0	3.0	3.0	2.0	3.0	3.0	2.0	2.0	
Parramore Banks	3.0	4.0	7.0	12.0	13.0	12.0	11.0	9.0	8.0	7.0	6.0	6.0	
Rappahannock Light	2.0	2.0	3.0	5.0	5.0	4.0	4.0	3.0	4.0	4.0	4.0	3.0	
Tangier	2.0	2.0	2.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	4.0	3.0	
Thimble Shoal	2.0	3.0	5.0	6.0	6.0	5.0	4.0	4.0	5.0	5.0	4.0	3.0	

^{*}Table values in feet

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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.
- 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 issued in areas along the coast (and may need to be expanded inland). 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 5:30 PM EST, Saturday, December 16
- → Method: Email



Disclaimer

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



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