

Heavy Rain/Storm Briefing

Prepared by National Weather Service Wakefield, VA

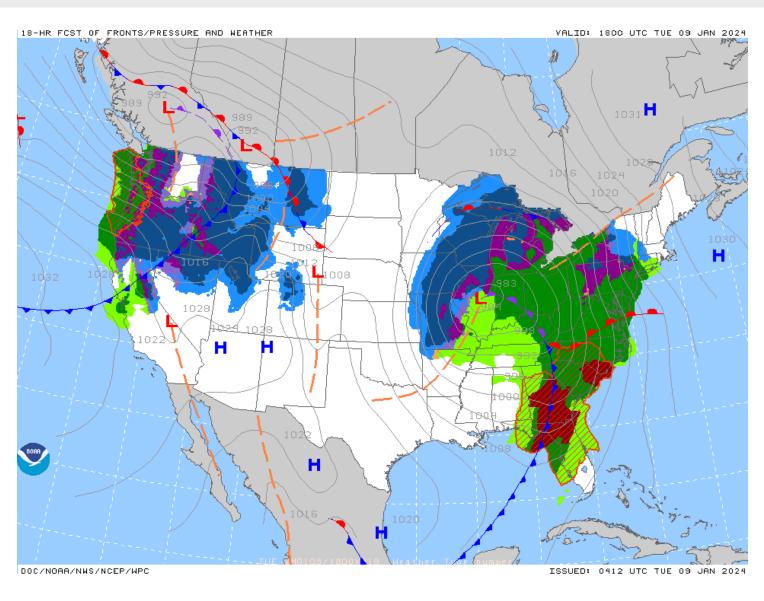
Decision Support Briefing #4

→ As of 3:00 PM EST Tuesday, January 9, 2024



Important Updates

- Storm Warnings remain in effect for the ocean, Chesapeake Bay, lower James River, and Currituck Sound. Gale Warnings in effect for the upper tidal rivers.
- → Coastal Flood Warnings remain in effect for the bay-side of the MD Eastern Shore, the southern shore of the tidal Potomac, and for the northern shore and adjacent waterways of the Albemarle Sound
- → High Wind Warnings are in effect for most of the Eastern Shore, the western shore of the Chesapeake Bay, and the coasts of Southeast VA and Northeast NC. Wind Advisories in effect elsewhere except far western counties.
- → A Flood Watch is in effect for all local VA and MD counties



Disclaimer: Information may become outdated after briefing time.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





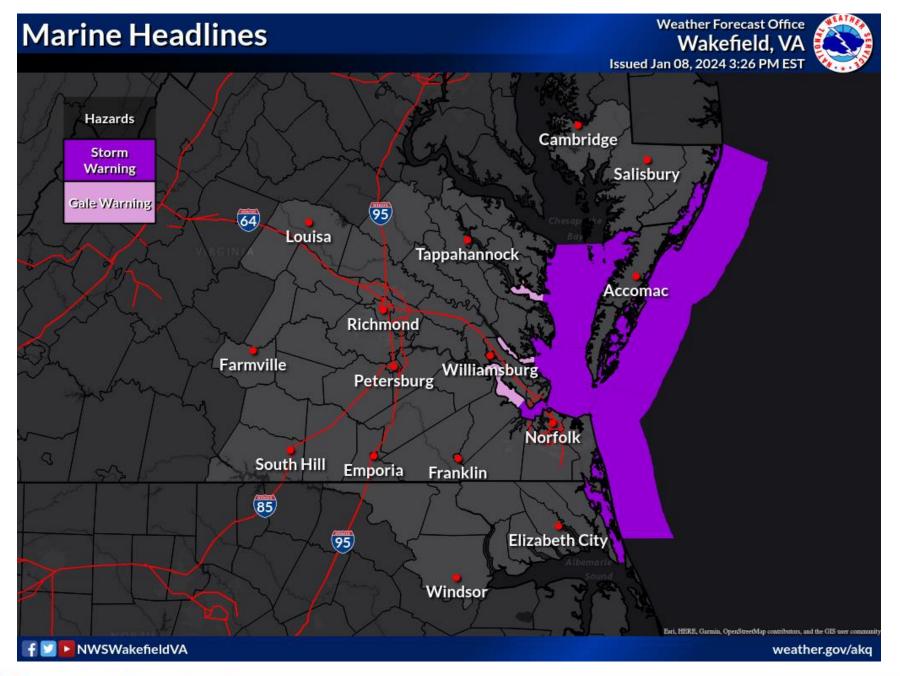
Key Messages

- Strong low pressure and a cold front will track from the Appalachian Mountains this evening to off the Mid-Atlantic coast tonight.
- Moderate to heavy rain and strong winds will persist across the area this this evening and into tonight.
- Rain will persist this evening and exit the region late tonight. The heaviest rain will occur between 3 pm and midnight.
- Winds continue to increase late this afternoon peaking from 5 pm until midnight.
- There is a risk for strong to severe storms across northeast North Carolina and Southeast Virginia this evening. Strong, damaging wind gusts are the main threat, but there is also a potential for tornadoes.
- There will be the potential for localized power outages from wind and flooding from rainfall in addition to tidal flooding.





Hazard Overview

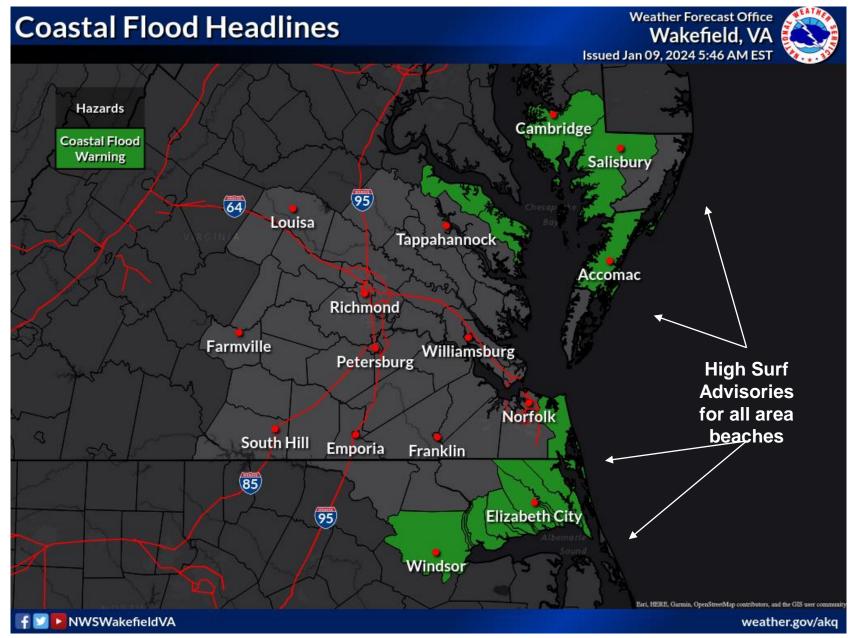


- A Storm Warning is in effect for the Chesapeake Bay, Atlantic Ocean, Currituck Sound, and lower James River this morning into tonight
- A Gale Warning is in effect for the Rappahannock, York, and upper James River this afternoon into tonight
- Hazardous marine conditions will continue into Wednesday
- See <u>www.weather.gov/akq</u> for the latest information





Hazard Overview

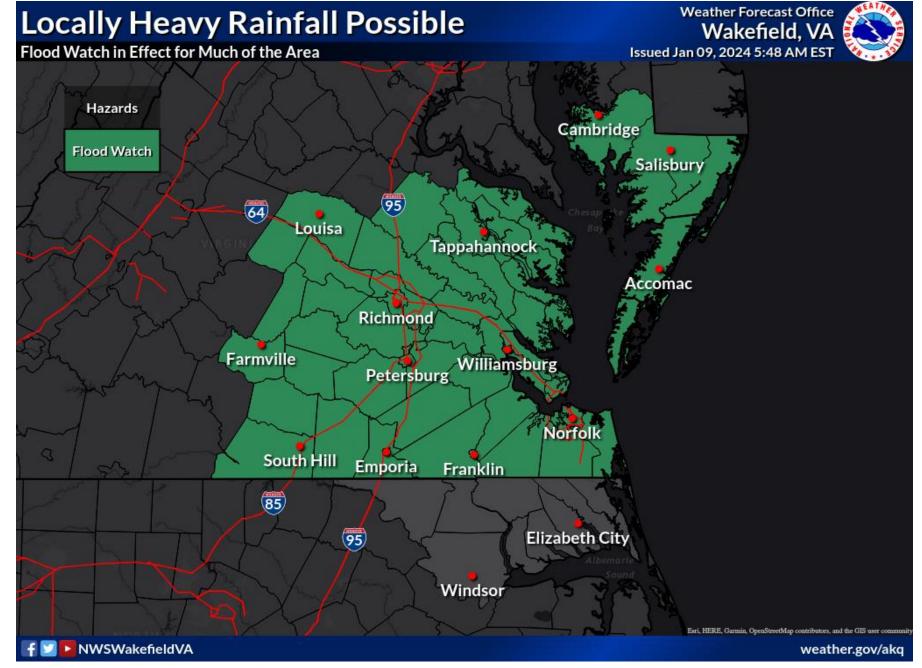


- Coastal Flood Warnings are in effect for the bay-side of the MD Eastern Shore, the southern shore of the tidal Potomac, and the northern shore of the Albemarle Sound and adjacent waterways
- High Surf Advisories are in effect for all area beaches
- Moderate to Major tidal flooding is possible tonight into Wednesday morning
- Large breaking waves will result in dangerous surf conditions and possible beach erosion
- See <u>www.weather.gov/akq</u> for the latest information





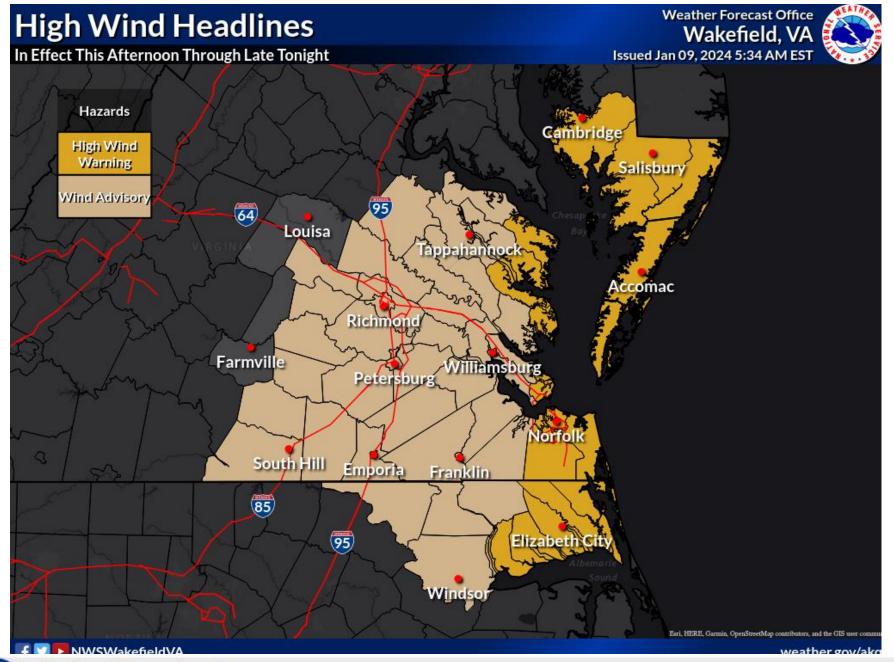
Hazard Overview



- A Flood Watch is in effect this afternoon through early Wednesday morning for all local VA and MD counties
- Localized flash flooding is possible due to wet soil conditions. In addition, minor to moderate river flooding is likely
- See <u>www.weather.gov/akq</u> for the latest information



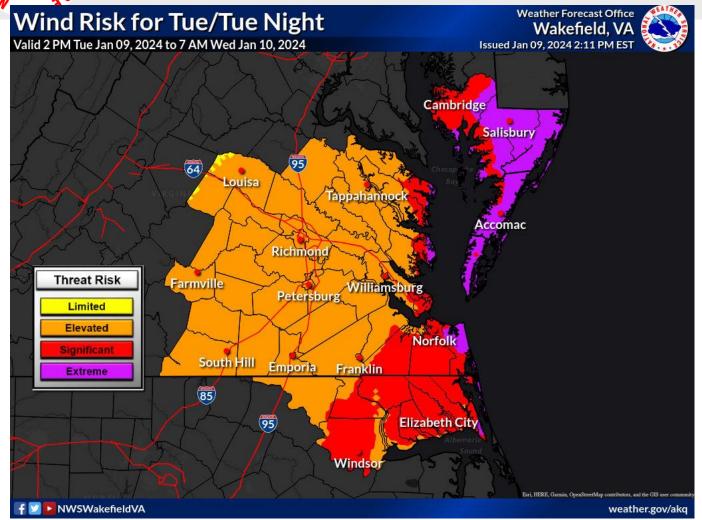
High Wind Headlines

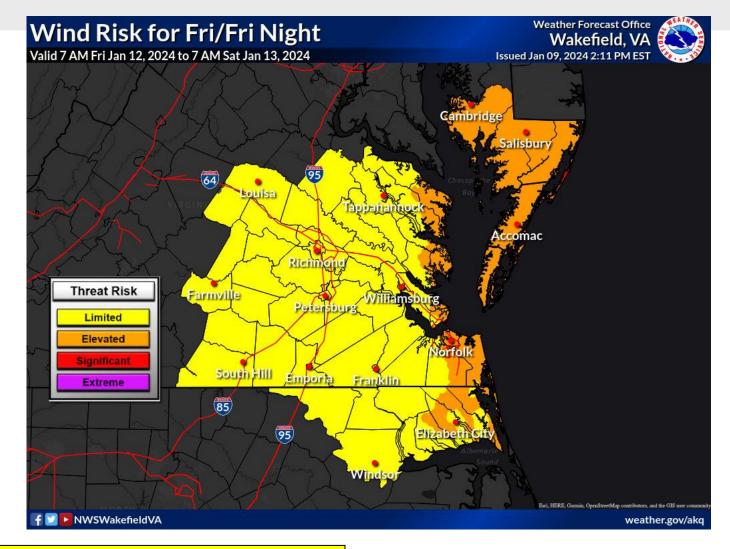


- High Wind Warnings are in effect for locations near the Chesapeake Bay, Atlantic Ocean, and Albemarle Sound this afternoon into tonight
- Wind Advisories are in effect for inland counties to just west of the I-95/I-85 corridor.
- See <u>www.weather.gov/akq</u> for the latest information



High Wind This Evening & Fri Night



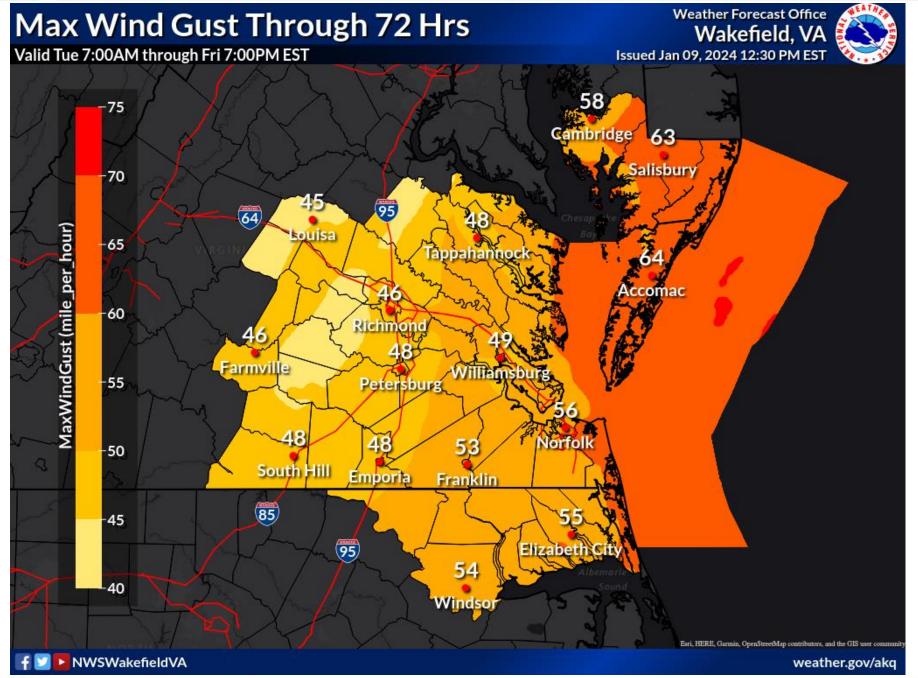


Limited	Breezy conditions with 30 to 40 mph wind gusts could blow around unsecured items and result in hazardous driving conditions for high-profile vehicles.
Elevated	Windy conditions with 40 to 50 mph wind gusts could damage light outdoor items, cause isolated power outages and result in hazardous 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.





High Wind Forecst



- A strong southeast, then south, wind is expected this afternoon into tonight
- The wind will be highest from the I-95 corridor to the coast, and strongest (potentially damaging) near the coast
- Localized higher wind gusts are possible due to isolated thunderstorms across southeast VA and northeast NC



Regional Winds Forecast Summary

Maximum Wind Gust Forecast

	1/9			1/9 1/10 1/11 1/12						1/13				1/14									
	Tue			Wed			Thu			Fri			Sat			Sun							
	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm
Accomac	29	52	601	44	43	41 →	24	16	15	17.7	15	9 >	15	25	44	51	41 . *	44	40❖	37 →	29♣	25→	18
Ahoski	25	46	51	31.	36	36❖	15	72	10	13	10	6	12	22	32 ★	35♠	35	38♣	35	24	21	22	13
Cambridge	26	47	54	37 ≯	38	38	22*	13	14	16.7	15	9>	13	21	39	47	38≯	40~	38♣	32➡	25→	25➡	18 →
Corolla	33	54	60	41₹	45	40孝	25🗪	20-	17	17-7	13	12	16	26	40 1	45 1	38₹	39	38	33♣	29 →	24➡	20-
Elizabeth City	29	49	55	37₹	40❖	38♣	187	10	14	16~	13	7->	15	25	37🕇	40 ★	38₹	40→	37 孝	28	24➡	24➡	15
Emporia	22	44	45	29.	36	33-	15	67	10	12	9.	6	12*	21	31🛊	35♠	33	37❖	35	24	21 →	23-	12
Farmville	22	43	391	24	35	33	16	72	12	15~	13	7-	10%	18	28 ★	31	33	37 →	35	25	22	23-	14
Louisa	21	41	38	23.	35	36❖	17	9.4	13	15.7	15	7-	9%	16	291	331	32	38 孝	35	24	21	23-	13
Norfolk / Portsmouth	28	49	53	38₽	39	38♣	21🗪	13	14	16	14	7.	16	25	38	411	38₹	39	37❖	29	25→	25➡	17
Ocean City	31	48	611	47 ★	40❖	39❖	24	18→	16	18.7	16	12	14	23	41	48	41 ≯	41	38	36➡	28 →	25→	20→
Richmond	24	43	43	29.	37	38♣	18	9.7	13	15	13	7-	12	20	32	37 ★	35	38♣	36	24	22	24	15
Salisbury	25	48	59 1	44	41 ~	41 →	23🗪	12	14	16.7	16	9 >	14	22	40	48	39≯	45	38♣	33♣	26➡	26➡	18
South Hill	24	45₹	44 1	29.	35	33	15	7.	10	13	10~	5	12	21%	31 ★	35≯	33	38♣	35	24	22	23	13
Tappahannock	24	41	44	28	33	35	17	9.7	12	14	13	6	12	20	31	37 ★	31	35	32	23	21	22	15
Virginia Beach	32	54	594	39₽	41	39	23🗪	16	15	16~	13	8	16	26	41	45 1	37₹	38	37 孝	31	25	24	18
Williamsburg	23	44*	47	31	37 →	37❖	17	9.	13	16	13	6	13*	21	33	381	35	38	36❖	26	22	22	13

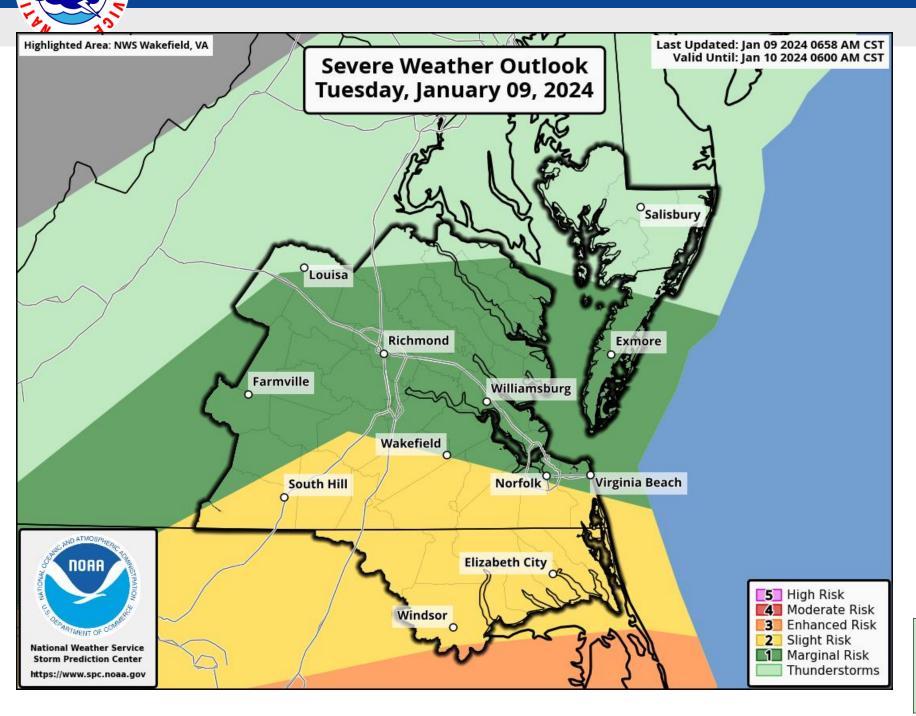
^{*}Table values in mph

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



^{**}Created: 2 pm EST Tue 1/9/2024

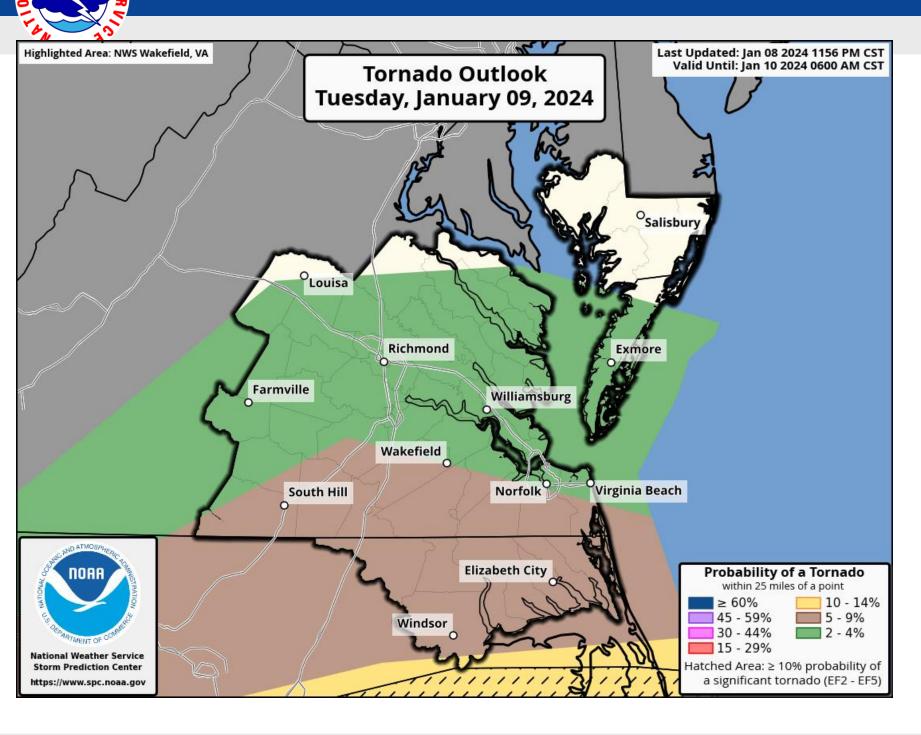
Severe Weather Outlook



- Timing: This evening into the early overnight hours
- Potential Impacts: Damaging wind gusts and a few brief tornadoes
- Locations: Southeast VA and Northeast NC
- Storm Coverage: Storms will form into a line with localized impacts within the the line

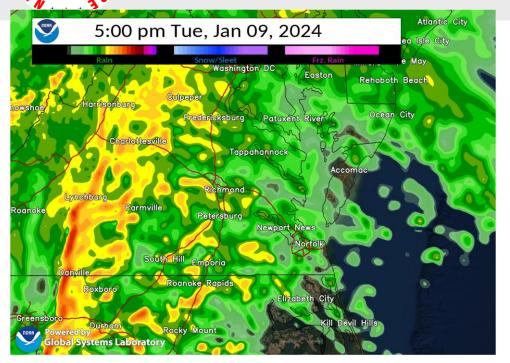


Tornado Threat



- Timing: This evening into the early overnight hours
- Potential Impacts: A few brief tornadoes are possible
- Locations: Southeast VA and Northeast NC (a potential for significant tornadoes is near the local area, immediately south of the Albemarle Sound)
- Storm Coverage: Storms will form into a line with localized impacts within the the line

Timing Of Heavy Rain / Storms







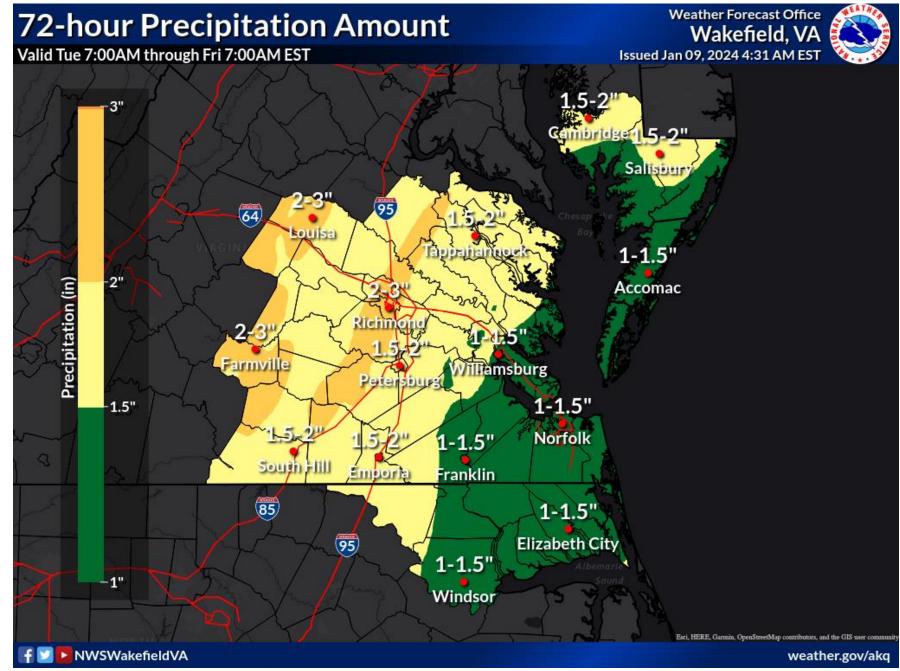
Model simulated reflectivity of what the radar may look like from 5 pm through 11 pm this evening.







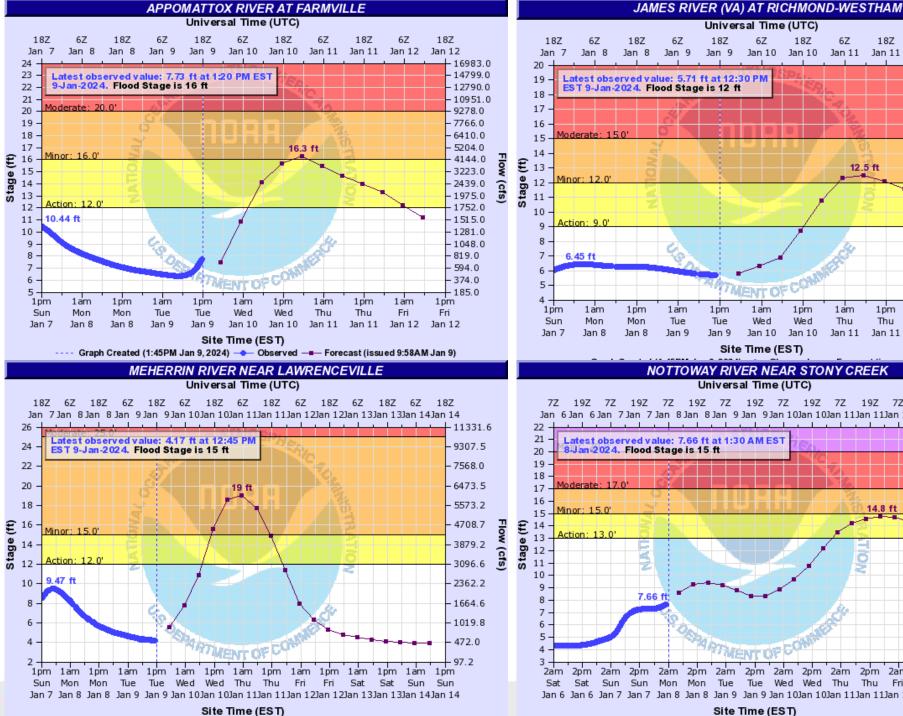
Total Expected Rainfall Forecast



- Moderate to heavy rain is expected to continue in waves this evening through 10 pm.
- The greatest amounts are expected across the mountains and Piedmont placing the heaviest rainfall in the headwaters of the James and other main rivers rivers



River Flooding Overview



Summary of River Flooding

132.7

117.3

103.1

89.9

77.7

66.7

57.5

49.5

42.0

35.0

- 28.5

22.6

17.2

12.4

- 8.3

15426.0

12610.0

5008.0

4144.0

3603.0

2788.0

2406.0 2040.0

-1692.0 1363.0

1057.0

- 781.0 - 530.0

Observations courtesy of US Geological Survey

- Minor flooding across portions of the James/Appomattox and Chowan River Basins is expected.
- Rivers will crest primarily form late Wednesday into Thursday.

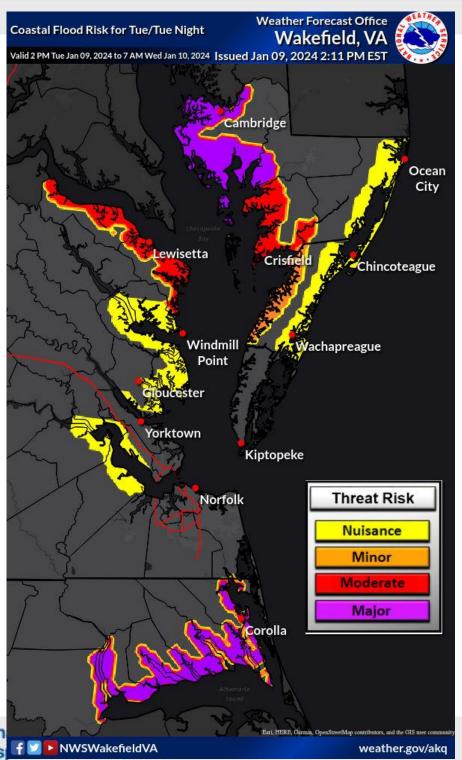
National Weather Service Wakefield, VA

---- Graph Created (1:45PM Jan 9, 2024) → Observed → Forecast (issued 9:05AM Jan 9)

---- Graph Created (2: 45AM Jan 8, 2024) - Observed - Forecast (issued 7:55PM Jan 7)



Tidal Flooding Overview



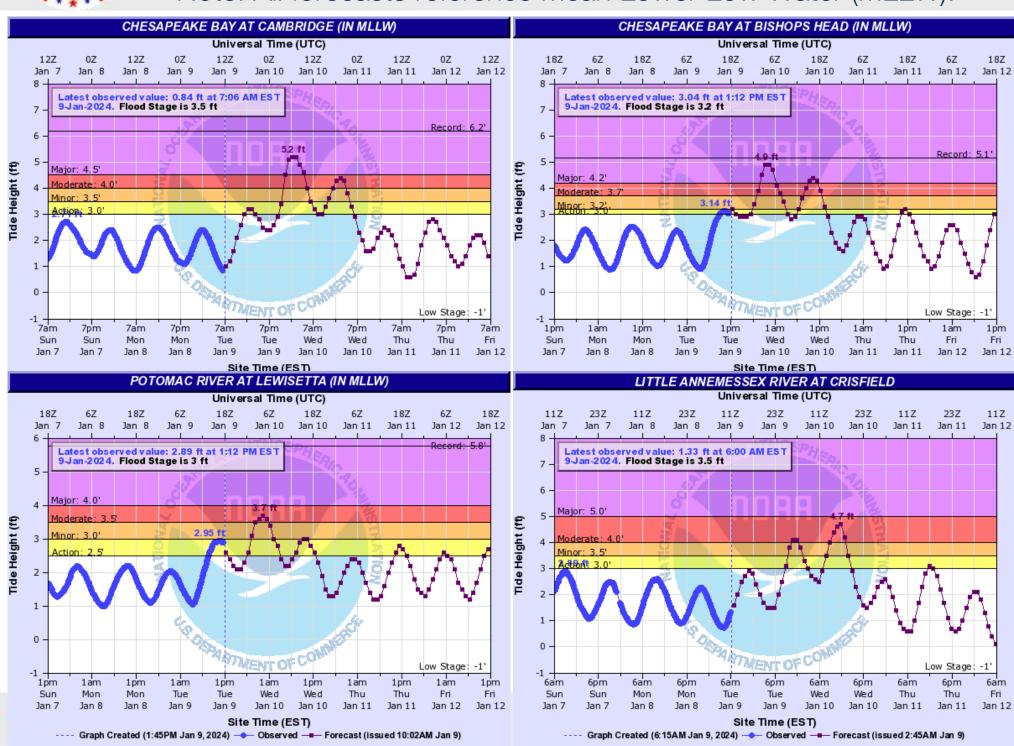
- Strong southeast winds will push water up the Chesapeake Bay, tidal rivers and the northern shore of the Albemarle Sound.
- Major tidal flooding is expected for the bay-side of the lower MD Eastern Shore. Widespread moderate tidal flooding is expected from Windmill Point to Lewisetta and along the eastern shore around Bayford.
- 2 to 3 ft of inundation (more more) is possible. Water will likely close roads and threaten some homes and businesses in some areas in areas of Major to Moderate flooding.

Coastal Flood Webpage
https://www.weather.gov/erh/coastalflood?wfo=akg



Tidal Overview - Upper Bay

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



Summary of Tidal Trends

- Moderate to major tidal flooding is likely over portions of the middle and upper Chesapeake Bay and tributaries.
- Timing of peak tides will be this evening into early Wednesday.
- 2 to 3 ft of inundation (or more) is possible. Water will likely close roads and threaten some homes and businesses in some areas in areas of Major to Moderate flooding.

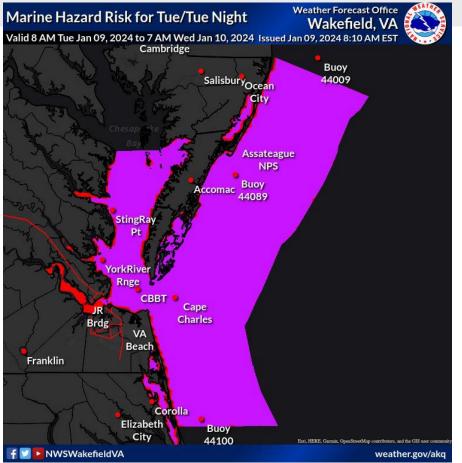
Coastal Flood Webpage

National Weather Service Wakefield, VA

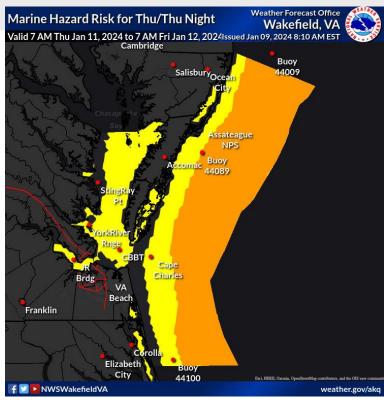


Marine Threat Potential - Next 5 Days

January 9, 2024 3:00 PM







LT 🐸 🕍	NVV3VVakeneluVA weather.gov/akq
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).

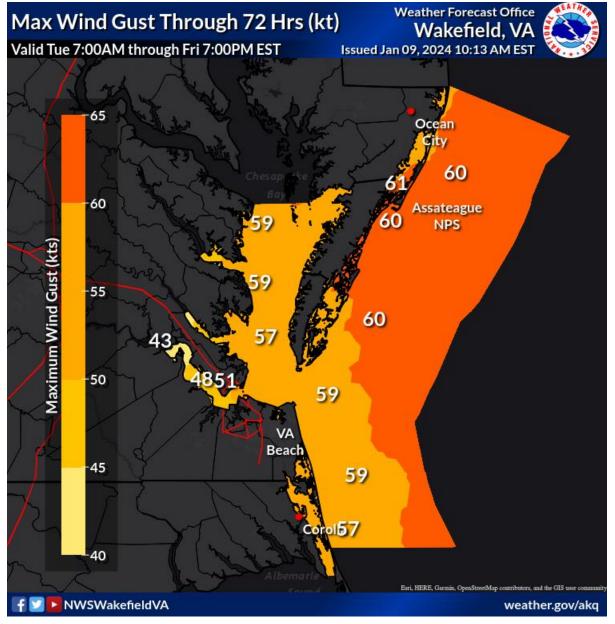


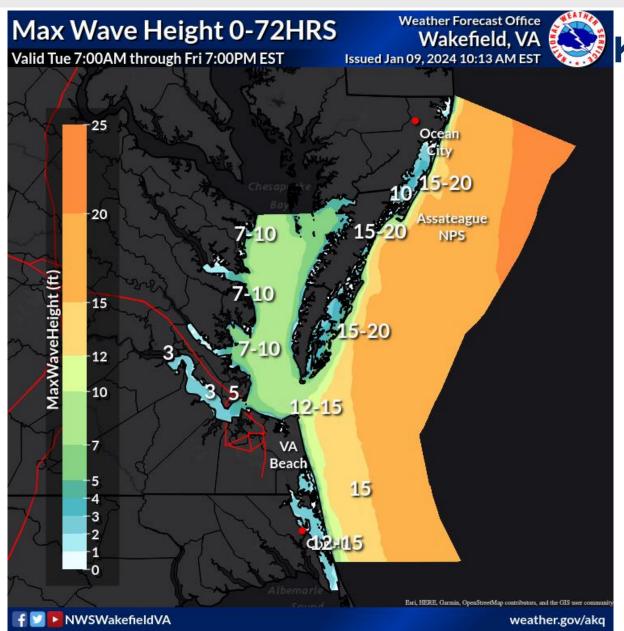


National Weather Service Wakefield, VA



Marine Threat Potential





Key Points:

- Storm Warnings are in effect for the Bay and all coastal waters.
- SE winds increase to 30 kt gust 40 kt, then SE 40 kt gust 50 kt this evening through midnight.
- Waves on the Bay rapidly build to 7 to 10 ft Tue evening, 12 to 20 ft on the ocean.
- Outlook: Gale conditions persist until noon Wed with a WSW wind

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





Marine Wind Forecast Summary

Sustained Wind

Maximum Wind Speed Forecast

maximam vina opeca i ciccact										
	1/	9		1/	1/11					
	Tu	е		We	Thu					
	12pm	6pm	12am	6am	12am 6am					
CBBT	39	42	297	33	30-	20*	14	12		
Cape Henry	39	42	297	33	29	20*	15	12		
Chesapeake Light	40	43	32	35	30	22	17	14		
Chincoteague Shoal	37	431	33	31	30-	21	16	13		
Duck, NC	37	40	28	31	27	18	15	12		
Fenwick Shoal	33	41	36 ★	29	28	18	13	13		
HRBT	34	35	24	28	27	16	10	10		
JRB	30	31	24	28	26	14	8.7	10		
New Point Comfort	38₹	40	267	28	27	17	12	11		
Parramore Banks	37	42	31 ≯	31	29	21🗪	16	13		
Rappahannock Light	39	40	27	28	27	18	14	13		
Tangier	38	42	27	29	27	20	15	13		
Thimble Shoal	38₹	39	27	33	29	19	13	12		

^{*}Table values in kt

Wind Gusts Maximum Wind Gust Forecast

	1/	9		1/	1/11			
	Tu	е		We	Thu			
	12pm	6pm	12am	6am	6pm	12am 6am		
CBBT	50	53◀	37₹	42	37	25	18	15
Cape Henry	49	53	36₹	42	36❖	25	19	15
Chesapeake Light	50	54	40₹	44	37❖	28	21	18
Chincoteague Shoal	46	541	42 *	39	38❖	27	20→	17
Duck, NC	48	51	36₹	40	34❖	23	19	16
Fenwick Shoal	42	53	47 ★	37🗪	36	26	18	197
HRBT	46	47	33	38	36❖	21	13	14
JRB	41	42	32	38	36❖	20	11	13
New Point Comfort	50	53	34₹	37	36❖	23	16	14
Parramore Banks	47	531	39₽	39	36❖	26	20	17
Rappahannock Light	48	50	33	35	34	23	18	16
Tangier	48	53	34≯	36	34	25	19→	16
Thimble Shoal	47	49 *	34₹	41	36	23	16	15
a= 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								

^{*}Table values in kt



^{**}Created: 2 pm EST Tue 1/9/2024

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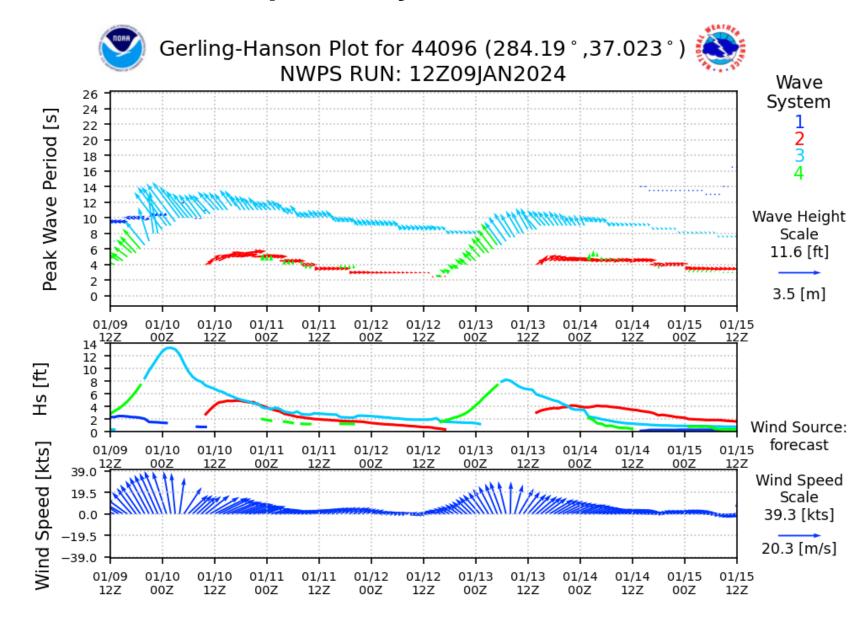
Marine Wave Forecast Summary

Wave Height Forecast

	1/	9		1/	1/11			
	Tu	е		We	Thu			
	12pm	6pm	12am	6am	12pm	6pm	12am	6am
CBBT	8.0	9.0	7.0	6.0	6.0	4.0	3.0	3.0
Cape Henry	10.0	12.0	10.0	7.0	6.0	5.0	4.0	3.0
Chesapeake Light	12.0	16.0	14.0	10.0	9.0	7.0	5.0	5.0
Chincoteague Shoal	10.0	15.0	14.0	12.0	9.0	8.0	5.0	4.0
Duck, NC	10.0	12.0	10.0	7.0	6.0	5.0	4.0	3.0
Fenwick Shoal	10.0	15.0	15.0	12.0	10.0	8.0	6.0	5.0
HRBT	5.0	5.0	4.0	4.0	3.0	2.0	1.0	1.0
JRB	3.0	3.0	2.0	2.0	2.0	2.0	1.0	1.0
New Point Comfort	7.0	8.0	5.0	4.0	4.0	2.0	2.0	1.0
Parramore Banks	11.0	14.0	13.0	10.0	8.0	7.0	5.0	4.0
Rappahannock Light	7.0	8.0	7.0	5.0	5.0	3.0	2.0	1.0
Tangier	6.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
Thimble Shoal	7.0	8.0	7.0	5.0	5.0	3.0	2.0	2.0

^{*}Table values in feet

Cape Henry Model Wave



^{**}Created: 2 pm EST Tue 1/9/2024

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



Key Messages

- Strong low pressure and a cold front will track from the Appalachian Mountains this evening to off the Mid-Atlantic coast tonight.
- Moderate to heavy rain and strong winds will persist across the area this this evening and into tonight.
- Rain will persist this evening and exit the region late tonight. The heaviest rain will occur between 3 pm and midnight.
- Winds continue to increase late this afternoon peaking from 5 pm until midnight.
- There is a risk for strong to severe storms across northeast North Carolina and Southeast Virginia this evening. Strong, damaging wind gusts are the main threat, but there is also a potential for tornadoes.
- There will be the potential for localized power outages from wind and flooding from rainfall in addition to tidal flooding.





Contact and Next Briefing Information

For NWS Wakefield, Virginia



→ NWS Wakefield Briefing



- → Final Briefing
- → Method: Email and Online



Disclaimer

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



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