

NWS Wakefield

Briefing Web

Page

Users Guide

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Wakefield, VA

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Preface

This document attempts to provide a resource to help customers navigate through, and understand, [NWS Wakefield's Briefing Web Page](#). The Briefing Web page was first developed about 10 years ago as an effort to merge data from a number of different NWS and NOAA sources into a "one-stop shop" of weather related information. The current version of the page also provides most mobile users the convenience of having our Briefing Web Page available when they are using a smartphone or tablet PC, either in the office, or in the field.

While I have done most of the development, a number of people inside and outside of NWS Wakefield have contributed ideas, suggestions for improvement, and programming solutions. The Briefing Web Page continues to be a work in progress. I will try to keep this page as up to date as possible. Your help, in the form of comments, suggestions, etc. is always welcome and appreciated.

I only ask that you take time to become familiar with our Briefing Web Page. This guide can help. Please feel free to contact me at any time relative to our Briefing Web Page.

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1 - Main Briefing Page

NWS Wakefield Briefing Web page

[Weather.gov](#) > [Wakefield, VA](#) > NWS Wakefield Briefing Web page

Wakefield, VA

Weather Forecast Office

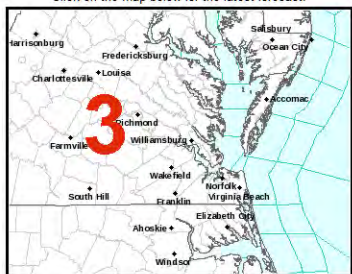
WFO Wakefield, VA SKYWARN Spotter Page
Watch/Warning/Advisory Color Definitions

WFO Wakefield, VA Home Page
Weather Term/Abbreviations Glossary

NOAA Sunrise/Sunset Web Site

Local Time : 7:15:20 p.m. UTC : 23:15:20 Z

Click on the map below for the latest forecast.



[Read watches, warnings & advisories](#)

[Zoom Out](#)

[Small Craft Advisory](#)

VA/MD/NC Weather Roundup as of 6:00 PM EDT Mon Sep 14 2015

Location	Sky & Wx	Tmp (°F)	DP (°F)	RH (%)	Wind (mph)	Pres (in)	Remarks
Ocean City, MD	SUNNY	74	48	39	W9	30.16R	
Salisbury, MD	SUNNY	74	48	39	W10	30.17R	
Cambridge, MD	SUNNY	77	46	33	W6	30.16R	
Accomack, VA	SUNNY	77	46	33	W9	30.19R	
Stafford, VA	SUNNY	N/A	N/A	N/A	SW3	30.21S	
Fredericksbrg, VA	SUNNY	75	48	38	W8	30.17S	
Charlottesville, VA	SUNNY	75	47	36	SW7	30.19S	
Hanover, VA	SUNNY	73	47	39	NW8	30.21S	
Tappahannock, VA	SUNNY	76	40	26	W6	30.20R	
Saluda, VA	FAIR	74	48	40	CALM	30.19R	
Richmond, VA	SUNNY	75	46	35	SW10	30.20R	
Chesterfield, VA	FAIR	75	45	33	SW7	30.21S	
Petersburg, VA	SUNNY	75	52	43	W5	30.21S	
Fort Pickett, VA	FAIR	74	45	35	W3	30.21R	
Farmville, VA	SUNNY	75	42	30	W3	30.20R	
Clarksville, VA	FAIR	73	46	38	SW3	30.21S	
South Hill, VA	SUNNY	72	51	47	S5	30.27S	
Emporia, VA	N/A	72	50	46	S3	30.23R	
US160-Wakefield, VA	SUNNY	77	45	32	W5	30.21R	
Williamsburg, VA	SUNNY	81	48	32	W8	30.21R	
Franklin, VA	SUNNY	74	47	38	W5	30.21R	
Norfolk, VA	SUNNY	76	43	30	VRB3	30.19S	
Virginia Beach, VA	SUNNY	80	45	28	CALM	30.19R	
Newport News, VA	SUNNY	76	47	35	NW9	30.20R	
Elizabeth City, NC	SUNNY	75	47	36	SW6	30.20S	
Currituck, NC	SUNNY	76	39	26	CALM	30.21R	
Edenton, NC	SUNNY	74	50	41	SW5	30.21S	
Roanoke Rapids, NC	FAIR	73	48	40	W7	30.21S	

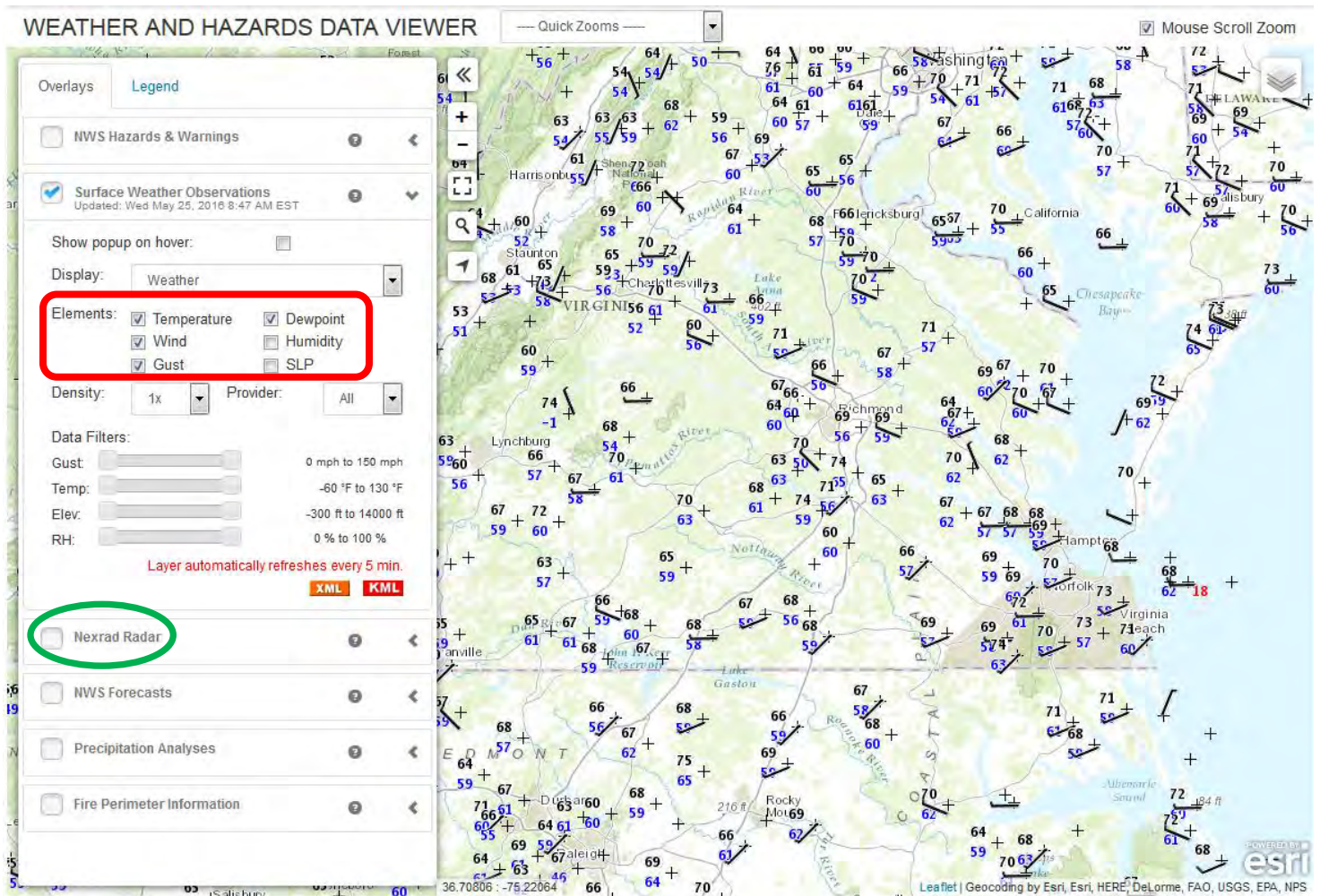
The NWS Wakefield Briefing web page has a significantly different structure than most NWS web pages. The tabs across the top of the page (1) link to topic specific web pages. Below the tabs are links to radar and other ways to access routine forecasts (2). These will be discussed in section 1b. The main NWS Watch, Warning and Advisory (WWA) Map (3) is the same as our office main web page. Click anywhere on the map to obtain a 7 day forecast on land, and a 5 day forecast on the Bay/ocean. Below the WWA map is a listing of observations across our area of responsibility (4). Click on the location to obtain a 2 day listing of observations for that site (see section 1a). (5). **“Click to Enlarge”**: Click on any of the 3 seasonally oriented thumbnail graphics to obtain a full size version of that graphic. During the winter season, the 5 day Graphical Tropical Weather Outlook shown to the left is replaced with our 3 day snowfall forecast graphic. In the spring, the Day 1 and 2 Severe Thunderstorm Outlooks accompany our 3 day rainfall forecast map.

Finally, to the right of the WWA map and observation listing, are links to

seasonally appropriate hazard outlook, and some of our text products/forecasts (6). Under **Regional Observations**, the **Interactive Regional Map** takes you to a map that is Mid Atlantic centric, containing the most recent surface observations from a variety of sources - airport observations (ASOS/AWOS), marine buoys, fire weather (RAWS) observation sites, and mesonet observations. This map can be panned and zoomed, and will update automatically.

This page is scheduled to refresh automatically every 5 minutes.

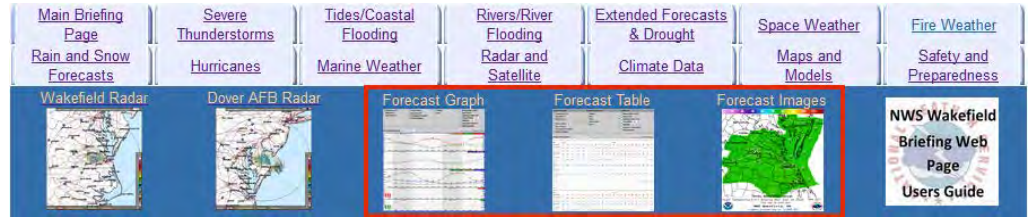
1b – Using the Interactive Observation Map



Clicking on the *Interactive Regional Map* (from the **main Briefing Page**), *Land and Water (map)* (from the **Marine Weather page**) or *Mesonet Surface Observation Map* (from the **Maps and Models Page**), will get you to the map interface above. The default map is centered on the Mid Atlantic region. However, the user can move around, or zoom in/out, by using the arrows and +/-, or via your mouse. You can toggle on/off the weather variables circled in red, and add the latest radar image by clicking “**Nexrad Radar**” (circled in green). Additional display variables, including forecasts and analyses, can be added to the display.

1c – Forecast Graph, Forecast Table and Forecast Images

Just below the various briefing page tabs are links to 3 additional ways to obtain specific forecast information in either a point form, or in map/image form.



Read watches, warnings & advisories

Zoom Out

Hourly Weather Graph

Select City/Location

- Accomac VA
- Ahoskie NC
- Charlottesville VA
- Elizabeth City NC
- Farmville VA
- Franklin VA
- Fredericksburg VA

Submit

Latitude/Longitude Entry decimal degrees (e.g. 42.134) or deg min sec (e.g. 42 23 34)

Latitude:

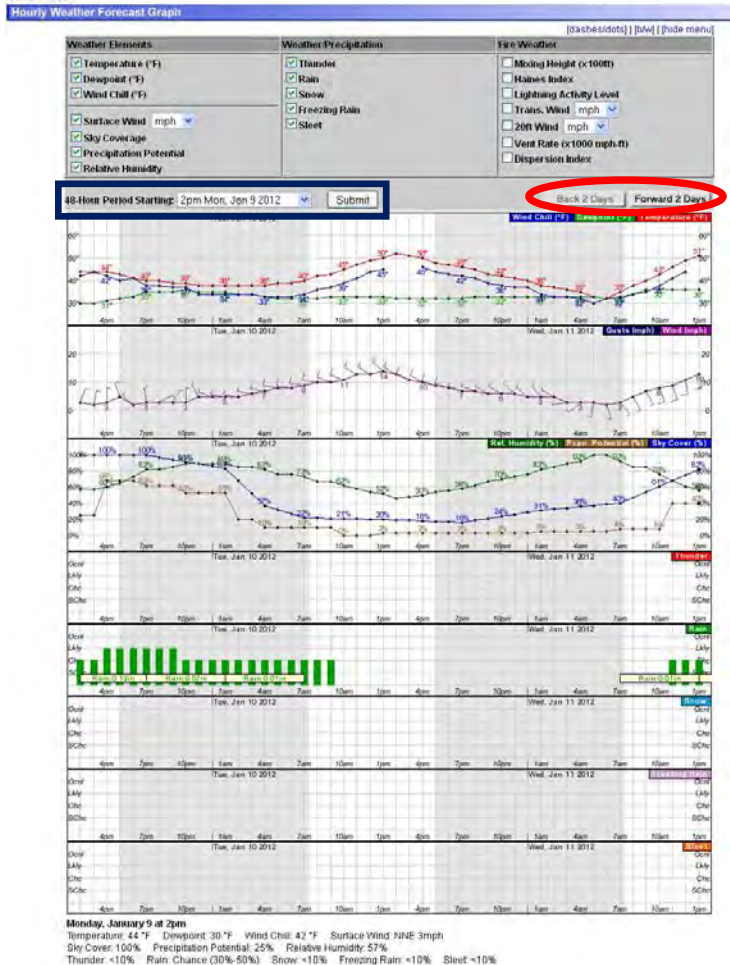
Longitude:

Submit

Forecast Graph and Forecast Table

Click on either the **Forecast Graph** or **Forecast Table** links and you get a map interface that looks very similar to the map on the main briefing page. Examples below show the forecast in graph form (below left) and tabular form (below right). This is a 2 day forecast, but, by using the interface, forecasts out to 7 days can be retrieved.

Point Forecast: 7 Miles W Snow Hill MD 38.1°N 75.5°W Last Update: 1:14 pm EST JA



Weather Elements		Weather Precipitation		Fire Weather	
<input checked="" type="checkbox"/> Temperature (°F)	<input checked="" type="checkbox"/> Dewpoint (°F)	<input checked="" type="checkbox"/> Wind Chill (°F)	<input checked="" type="checkbox"/> Thunder	<input checked="" type="checkbox"/> Rain	<input checked="" type="checkbox"/> Snow
<input checked="" type="checkbox"/> Surface Wind (mph)	<input checked="" type="checkbox"/> Sky Coverage	<input checked="" type="checkbox"/> Precipitation Potential	<input checked="" type="checkbox"/> Freezing Rain	<input checked="" type="checkbox"/> Sleet	<input type="checkbox"/> Mixing Height (x1000ft)
<input checked="" type="checkbox"/> Relative Humidity					<input type="checkbox"/> Haines Index
					<input type="checkbox"/> Lightning Activity Level
					<input type="checkbox"/> Trans. Wind (mph)
					<input type="checkbox"/> 20ft Wind (mph)
					<input type="checkbox"/> Vent Rate (x1000 mph-ft)
					<input type="checkbox"/> Dispersion Index

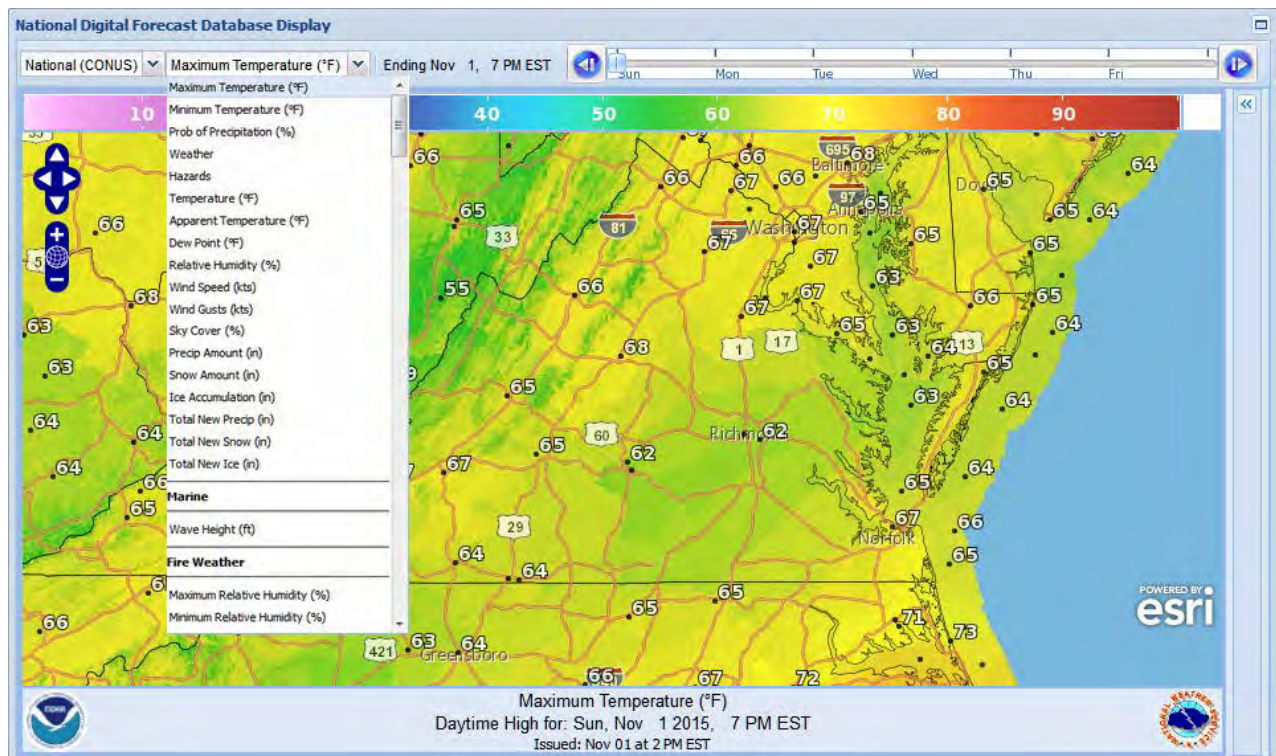
Date	01/09	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	
Hour (EST)	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	
Temperature (°F)	44	44	44	43	41	40	40	39	38	38	38	38	38	38	38	39	39	40	42	43	45	47	49	50
Dewpoint (°F)	30	30	31	32	33	35	35	35	35	35	35	34	34	34	34	33	32	32	32	33	33	33	33	
Wind Chill (°F)	42	44	42	40	41	38	38	37	37	34	34	34	34	33	33	33	34	36	37	39	41	44	45	
Wind (mph)	3	2	3	5	2	3	3	3	3	5	5	5	5	6	7	8	9	10	10	11	13	13	14	
Wind Dir	NNE	N	N	NNW	NW	N	ENE	NNE	N	NW	WNW	W	W	W	W	W	W	W	WNW	WNW	WNW	WNW	WNW	
Sky Cover (%)	100	100	100	100	100	100	97	94	91	89	86	83	68	52	37	32	27	22	22	21	21	21	20	
Pcpn. Potential (%)	25	25	68	68	68	62	62	62	53	53	53	20	20	10	10	10	10	10	10	0	0	0	3	
Rel. Humidity (%)	57	57	60	65	73	82	82	85	89	89	89	89	85	86	82	76	76	73	67	67	62	68	64	
Thunder	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Rain	Chc	Chc	Lkly	Lkly	Lkly	Lkly	Lkly	Lkly	Chc	Chc	Chc	Chc	Chc	Chc	Chc	Chc	Chc	Chc	Chc	---	---	---	---	
Snow	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Freezing Rain	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Sleet	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

Date	01/10	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12
Hour (EST)	14	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	
Temperature (°F)	52	51	50	49	47	46	45	43	42	41	40	38	37	36	35	33	32	35	38	40	43	46	49	51
Dewpoint (°F)	32	32	32	32	32	32	33	33	33	33	33	33	33	33	33	33	32	33	34	36	36	36	36	
Wind Chill (°F)	46	44	43	42	41	39	38	37	37	34	33	33	32	32	32	32	34	35	38	41	44	44	44	
Wind (mph)	13	11	10	9	8	7	7	6	6	5	5	5	5	5	5	5	5	5	5	7	8	9	11	
Wind Dir	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	NW	NW	WNW	W	SW	S	SSE	SE	SSE	SSE	SSE	SSE	SSE	S	
Sky Cover (%)	19	19	18	17	17	16	19	21	24	26	29	31	33	34	36	37	39	40	47	54	61	68	75	
Pcpn. Potential (%)	3	3	3	3	3	3	3	3	3	3	3	3	5	5	5	5	5	8	8	8	8	40	40	
Rel. Humidity (%)	46	48	50	54	56	58	62	67	70	73	76	82	85	89	92	100	92	85	85	76	68	61	66	
Thunder	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Rain	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Chc	Chc	Chc
Snow	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Freezing Rain	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Sleet	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

Monday, January 9 at 2pm
 Temperature 44°F Dewpoint 30°F Wind Chill 42°F Surface Wind NNE 3mpg
 Sky Cover 100% Precipitation Potential 25% Relative Humidity 57%
 Thunder <10% Rain Chance (30%-50%) Snow <10% Freezing Rain <10% Sleet <10%

Both the hourly graph and hourly table have the same user interface. All of the weather elements at the top can be toggled on/off to those of most concern to you. To move the forecast period forward (backward) in 2 day increments, click the **“Forward 2 days”** (Back 2 Days) buttons below the parameter selection area. You can also start the 2 days forecast from a desired day/time by using the **“48 Hour Period Starting:”** drop-down menu, selecting the desired date/time, and clicking **“Submit”**.

Forecast Images



Click on the **Forecast Images** link, and you will see the interface above. The various weather elements are listed in the drop down menu, with maximum temperature being the default parameter. The slider bar to the right of the weather element selection menu allows you to advance the graphic on an hourly, 6 hourly or daily basis, depending upon the weather element chosen.

These maps have roam, zoom and pan capabilities, allowing the user to go anywhere in the U.S. to obtain forecasts in map view perspective.

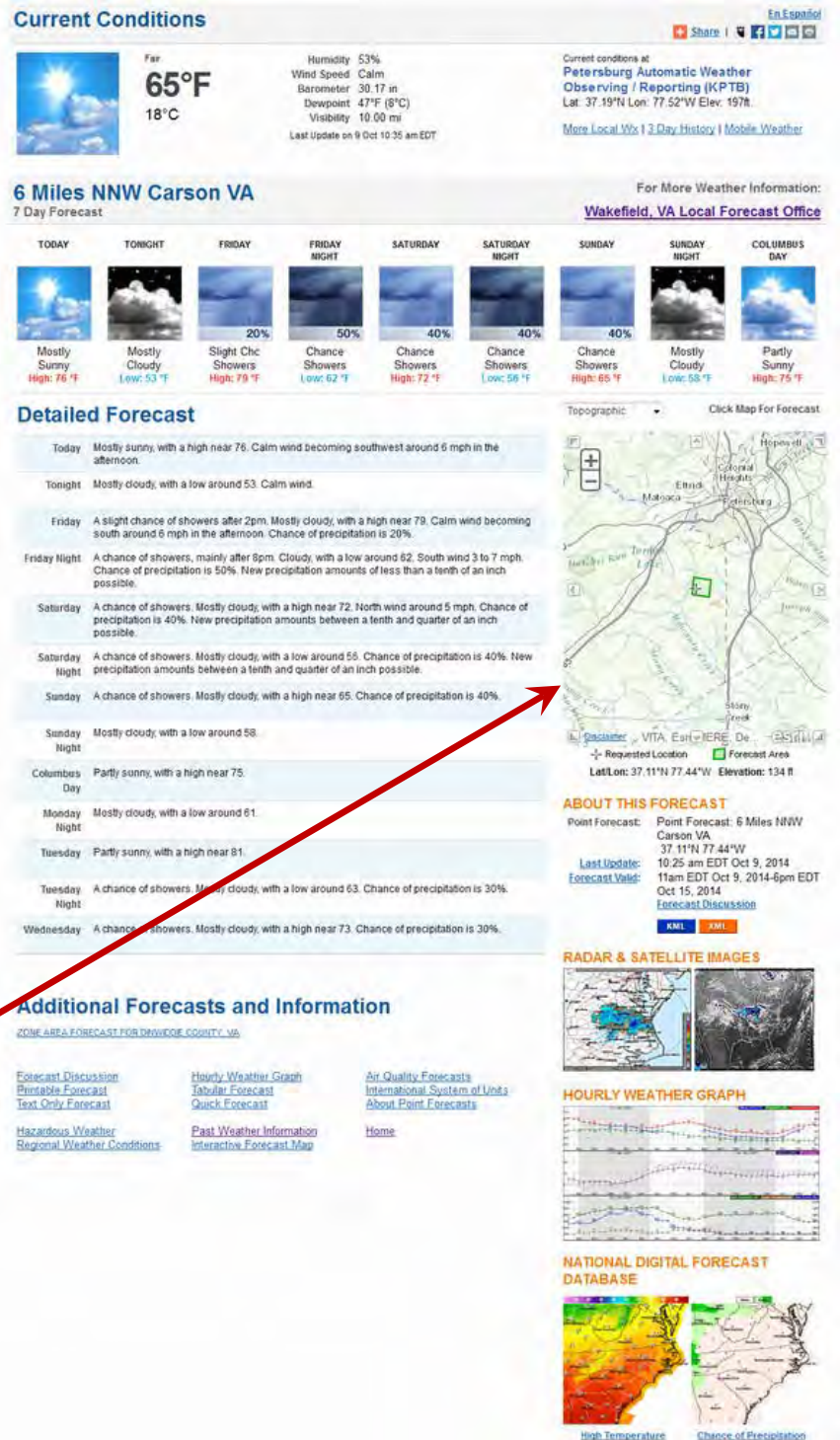
1d – The Point and Click Forecast

The **point and click forecast** can be obtained for any land based point simply by clicking on the desired location within the main briefing web page map (labeled 3 on the Main Briefing Page description graphic). The forecast page you get looks like the image to the right. The forecast information is pretty self-explanatory, and you can get the forecast images by going to the bottom left, and there are links to the forecast graph (Hourly Weather Graph) and forecast table (Tabular Forecast) at the bottom right.

On the right hand side of the page are links to NWS Wakefield radar, satellite imagery, and current observations. However, the 3 day history is different and less thorough than the links discussed previously.

One feature that you might find useful is the map under the Detailed Point Forecast header to the right of the 7 day forecast. This map utilizes an interface that that allows you to pan and zoom anywhere in the U.S. using your mouse, or the legend at the top left of the map. Thus, you can get a 7 day forecast for any location in the U.S. simply by navigating to the location you want, and clicking on the map. **This includes bays, sounds and nearshore marine areas!!!**

For mariners, getting a point forecast direct from the main briefing page map is a 2 step process. First, click on the marine location desired, which will give you the coastal waters text forecast for the appropriate zone. To get a point specific forecast, go to the map, and click on the specific marine location of interest.



2 – The Severe Thunderstorms Page

NOTE: This page utilizes mouseover capabilities, and is compatible with smartphones and tablets.

Severe Thunderstorm Briefing Page

Weather.gov > Wakefield, VA > Severe Thunderstorm Briefing Page

Wakefield, VA
Weather Forecast Office

The Storm Prediction Center (SPC) in Norman, OK has responsibility for issuing outlooks, and watches for severe thunderstorms and tornadoes across the lower 48. An overview of SPC and its products is available at: <http://www.spc.noaa.gov/misc/about.htm>. Our severe weather briefing page is designed to provide most of SPC's outlook products, as well as the latest mesoscale discussions and valid watches. SPC's outlooks are issued at various times during the day, but only the day 1 and day 2 outlooks are issued multiple times per day. **Day 1 (current day) outlook products** are issued at approximately **1am-2 am, 8am-9am, 1130am-1230pm, 3pm-4pm and 8pm-9pm** every day. **Day 2 (tomorrow) outlooks** are issued daily at **2 am, and 1230pm-130pm**. The **Day 3 and days 4-8 outlooks** are issued once per day

before 6 am.

The days 1-3 outlooks contain both deterministic (categorical) forecasts, and probabilistic forecasts. The probability corresponding to the various severe thunderstorm categories is provided in the graphics below.

Day 1 Outlook Probability	TORN	WIND	HAIL
2%	MRGL	Not Used	Not Used
5%	SLGT	MRGL	MRGL
10%	ENH	Not Used	Not Used
10% with Significant Severe	ENH	Not Used	Not Used
15%	ENH	SLGT	SLGT
15% with Significant Severe	MDT	SLGT	SLGT
30%	MDT	ENH	ENH
30% with Significant Severe	HIGH	ENH	ENH
45%	HIGH	ENH	ENH
45% with Significant Severe	HIGH	MDT	MDT
60%	HIGH	MDT	MDT
60% with Significant Severe	HIGH	HIGH	MDT

Day 3 Outlook Probability	Combined TOR, WIND, HAIL
5%	MRGL
15%	SLGT
15% with Significant Severe	SLGT
30%	ENH
30% with Significant Severe	ENH
45%	ENH
45% with Significant Severe	MDT

Day 2 Outlook Probability	Combined TOR, WIND, HAIL
5%	MRGL
15%	SLGT
15% with Significant Severe	SLGT
30%	ENH
30% with Significant Severe	ENH
45%	ENH
45% with Significant Severe	MDT
60%	MDT
60% with Significant Severe	HIGH

Below the day 1 outlook

product links are links to **4 hour probabilistic thunderstorm forecasts**, which are issued multiple times per day. Please note that the first 00Z-04Z Tstm Outlook is issued in the 8am to 9am time frame, and the first 04Z-12Z Tstm Outlook is issued between 1230am and 130am.

Below the links to SPC's outlook and watch products are links to national storm report maps, as well as the most recent weather balloon (radiosonde) observations for Wallops Island, VA, Dulles, VA, Greensboro, NC, Blacksburg, VA and Morehead City, NC. SPC has created a [radiosonde/Skew-T help page](#) for anyone interested in learning how to interpret these observations and the parameters derived from analysis of the data.

For those of you interested in digging a little deeper into the science/meteorology behind severe thunderstorms/tornadoes, there are a couple of links worth investigating. The [SPC Mesoanalysis Page](#) link offers the ability for the user to look at severe weather parameters at a number of regional sectors across the lower 48. We have also created a [local Severe Mesoanalysis Page](#) that provides a mouseover based display of the SPC severe weather parameters for a mid Atlantic centered regional sector. Additional information on this page can be found in Appendix B of this guide (or on the next page if you are viewing the Severe Thunderstorm page users guide).

Severe Thunderstorm Briefing Page

[Weather.gov](#) > [Wakefield_VA](#) > Severe Thunderstorm Briefing Page

Wakefield, VA
Weather Forecast Office

Main Briefing Page	Severe Thunderstorms	Tides/Coastal Flooding	Rivers/River Flooding	Extended Forecasts & Drought	Space Weather	Fire Weather
Rain and Snow Forecasts	Hurricanes	Marine Weather	Radar and Satellite	Climate Data	Maps and Models	Safety and Preparedness
Hazardous Weather Outlook (HWO)	WFO Wakefield Local Storm Reports	National GIS Based Storm Reports	Severe Mesoanalysis Page	Past Storm Events Web Page		

Storm Prediction Center (SPC) Products Day 1 Outlook Day 1 Tor Probability Day 1 Wind Probability Day 1 Hail Probability 16Z-20Z Tstm Outlook 20Z-00Z Tstm Outlook 00Z-04Z Tstm Outlook 04Z-12Z Tstm Outlook Day 2 Outlook Day 2 SVR Probabilities Day 3 Outlook Day 3 SVR Probabilities Day 4 to 8 SVR Outlook Current Meso Discussions Valid SVR/TOR Watches SPC Mesoanalysis Page SPC Storm Reports Today's Storm Reports Storm Reports Last 3 Hours Storm Reports Yesterday Mid Atlantic Weather Balloon Plots Wallops Island Sounding Dulles Sounding Greensboro Sounding Blacksburg Sounding Morehead City Sounding Severe Mesoanalysis Page	<p>SPC DAY 1 CATEGORICAL OUTLOOK ISSUED: 1254Z 09/13/2015 VALID: 13/1300Z-14/1200Z FORECASTER: CORFIDWCOOK N/A&NWS Storm Prediction Center, Norman, Oklahoma</p>
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Finally, a link to **WFO Wakefield's Past Storm Events Page**, which contains reviews of significant winter weather, severe thunderstorm and tropical storm/hurricane events going back more than 10 years, has been added to the links above the graphic display.

3 – The Rain and Snow Forecasts Page

NOTE: This page utilizes mouseover capabilities, and is compatible with smartphones and tablets.

Rain and Snow Forecasts
Wakefield, VA
Weather Forecast Office

Menu: Severe Thunderstorms, Tides/Coastal Flooding, Rivers/River Flooding, Extended Forecasts & Drought, Space Weather, Fire Weather

Links: NWS Multi-Sensor Daily Precipitation Analysis Page, NOAA/NWS Precipitation Frequency Analysis Web Site, WPC Heavy Snow Discussion, WPC Excessive Rainfall Discussion, WPC Day 1 & 2 Rainfall Discussion, Short-Range Ensemble Based Winter Impact Graphics, Mid Atlantic Snow Analysis, Probabilistic Snowfall Forecasts Page

Mouse Over Links Below to Change Graphic:

Natl Precip Forecasts	Local Rainfall Forecasts
Day 1 Forecast	12 Hour Total
Day 2 Forecast	24 Hour Total
Day 3 Forecast	36 Hour Total
Day 1+2 Forecast	48 Hour Total
Day 1+2+3 Forecast	72 Hour Total
Day 4+5 Forecast	Local Snow & Ice Forecasts
5 Day Total Precip	0-6 Hour Snow
Day 6+7 Forecast	6-12 Hour Snow
7 Day Total Precip	12-18 Hour Snow
Day 1 Excessive Rainfall Fcst	18-24 Hour Snow
Day 2 Excessive Rainfall Fcst	24-30 Hour Snow
Natl Winter Probabilities	30-36 Hour Snow
4"+ Snow (Day 1)	36-42 Hour Snow
6"+ Snow (Day 1)	42-48 Hour Snow
25"+ Ice (Day 1)	48-54 Hour Snow
4"+ Snow (Day 2)	54-60 Hour Snow
6"+ Snow (Day 2)	60-66 Hour Snow
25"+ Ice (Day 2)	66-72 Hour Snow
4"+ Snow (Day 3)	Storm Total Snow
6"+ Snow (Day 3)	Storm Total Ice
25"+ Ice (Day 3)	High End Snow
	Low End Snow
WPC Day 4-7 Snow Probs	
Day 4 Prob	Day 5 Prob
Day 6 Prob	Day 7 Prob
Winter Mesoanalysis Page	

36 Hour Total QPF
Valid: 03/21/2018 07:00 AM - 03/22/2018 07:00 PM EDT

National Weather Service
Wakefield Virginia
03/21/2018 07:17 AM EDT

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weather.gov/Wakefield

Our Rain and Snow Forecasts page can be utilized in much the same way as the Severe Thunderstorms page. At left is the winter version of this page. **Between April and mid-November, only the left column of the links table (i.e. rainfall forecasts) will be seen.**

There are 2 types of precip forecasts on this page. The **first type are forecasts generated here at NWS Wakefield.** **Second** are the **Weather Prediction Center (WPC) national forecasts of precipitation, snow or ice.** The snow/ice probability thresholds used are defined as follows: **SLGT** - 10% to 40% chance of occurrence within the outlined area. **MODERATE (MDT)** - 40% to 70% chance of occurrence within the outlined area. **HIGH** - 70% chance or greater of occurrence within the outlined area. Associated WPC discussions are linked above the graphics display. The timeframes for the various graphics are fairly self-explanatory, and are labeled on both our local and WPC

precipitation forecasts. However, there is an important difference between our locally produced rain and snow forecasts.

The **12 through 72 hour rainfall forecasts are running totals** through the 72 hour period. The **0-6 hour through 66-72 hour snowfall forecasts are individual 6 hour accumulations.** From a snowfall perspective, this gives the user an idea of not only when the wintry precipitation will begin, but in what time the heaviest snow is expected. Snowfall and ice accumulation totals for the entire storm can be found in the Storm Total Ice, and Storm Total Snow links. In addition, **High End** (10% chance amounts will be higher) and **Low End** Snowfall (90% chance amounts will be higher) maps have been added from our [Snow Probabilities Web Site](#).

The [Winter Mesoanalysis Page](#) link (bottom of the precip graphics table) will take you to a page with SPC winter weather parameters overlaid on the same regional section as the Severe Mesoanalysis Page discussed in the Severe Thunderstorms tab discussion (see Appendix A of this document, or the last 2 pages of the Rain and Snow Forecasts Page Users Guide).

Two additional links above the graphics display provide some very useful information. These are discussed on the next page.

Rain and Snow Forecasts

Weather.gov > Wakefield, VA > Rain and Snow Forecasts

Wakefield, VA
Weather Forecast Office

Main Briefing Page	Severe Thunderstorms	Tides/Coastal Flooding	Rivers/River Flooding	Extended Forecasts & Drought	Space Weather	Fire Weather
Rain and Snow Forecasts	Hurricanes	Marine Weather	Badar and Satellite	Climate Data	Maps and Models	Safety and Preparedness
NWS Multi-Sensor Daily Precipitation Analysis Page		NOAA/NWS Precipitation Frequency Analysis Web Site				
WPC Heavy Snow Discussion		WPC Excessive Rainfall Discussion		WPC Day 1 & 2 Rainfall Discussion		
Short-Range Ensemble Based Winter Impact Graphics				Mid Atlantic Snow Analysis		

Mouse Over Links Below to Change Graphic

Nat'l Precip Forecasts	Local Rainfall Forecasts
Day 1 Forecast	12 Hour Total
Day 2 Forecast	24 Hour Total
Day 3 Forecast	36 Hour Total
Day 1+2 Forecast	48 Hour Total
Day 1+2+3 Forecast	72 Hour Total
Day 4+5 Forecast	Local Snow & Ice Forecasts
5 Day Total Precip	0-6 Hour Snow
Day 6+7 Forecast	6-12 Hour Snow
7 Day Total Precip	12-18 Hour Snow
Day 1 Excessive Rainfall Fcst	18-24 Hour Snow
Day 2 Excessive Rainfall Fcst	24-30 Hour Snow
Nat'l Winter Probabilities	30-36 Hour Snow
4"+ Snow (Day 1)	36-42 Hour Snow
8"+ Snow (Day 1)	42-48 Hour Snow
25"+ Ice (Day 1)	48-54 Hour Snow
4"+ Snow (Day 2)	54-60 Hour Snow
8"+ Snow (Day 2)	60-66 Hour Snow
25"+ Ice (Day 2)	66-72 Hour Snow
4"+ Snow (Day 3)	Storm Total Snow
8"+ Snow (Day 3)	Storm Total Ice
25"+ Ice (Day 3)	

[Winter Mesoanalysis Page](#)

36 Hour Total QPF
Valid: November 30, 2015

National Weather Service
Wakefield Virginia
11/30/2015 01:25 PM EST

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weather.gov/Wakefield

The links to the **NWS Multi-Sensor Daily Precipitation Analysis Page** (highlighted by the red oval), and the **NOAA/NWS Precipitation Frequency Analysis Web Site** (highlighted by the yellow oval), provide very useful information about past precipitation, and the frequency of precipitation events of certain magnitudes, respectively.

Daily Precipitation Analysis

The default map display shows precipitation across the U.S. in the last 24 hours, with the national data being available by 1 pm each day. This graphic is derived from a combination of rain gauge measurements and radar based rainfall. The display can be changed to any state by selecting the state from the menu under **Location** located below the map. In addition, different products (departure from normal, percent of normal) can be obtained by selecting a different time frame (last 7 days to water year to date) under **Timeframe**.

QPE: Quantitative Precipitation Estimates Download About NWS Precip Analysis Other Useful Information Survey & Feedback Regional / RFC Precip Data

Displaying Current 1-Day Observed Precipitation
Valid on: November 01, 2015 12:00 UTC

What is UTC time? Map Help Find address or location

Download the full resolution version of the current map for Alaska, CONUS, and Puerto Rico (4000x2250 pixels) [Generate image](#)

Timeframe View Today's Analysis View Yesterday's Analysis Archive Data: <input type="radio"/> Yearly <input type="radio"/> Monthly <input type="radio"/> Daily Time Range: November 1, 2015 - Today November 1, 2015 - Last 7 Days November 1, 2015 - Last 14 Days November 1, 2015 - Last 30 Days	Product Observed	Units <input checked="" type="radio"/> Imperial <input type="radio"/> Metric
Mouse Location Lat: 23.385 Lon: -61.529	Map Overlays Precipitation: <input checked="" type="checkbox"/> County: <input type="checkbox"/> State: <input type="checkbox"/> River Forecast Center: <input type="checkbox"/> Weather Forecast Office: <input type="checkbox"/>	Location Full Conus Data Availability Data for the entire country are usually available by 12:30 pm Eastern Time (9:30 am Pacific Time).

Precipitation Frequency Analysis

A precipitation frequency analysis can provide useful information to planners at the state or local level. The

analysis shows the return period/interval (in years) for a given amount of precipitation for durations ranging from 5 minutes to 60 days. Click on the Precipitation Frequency Analysis link, and the page to the left appears in a new window.

Click on any state highlighted in blue, and the new map looks like this:

To obtain a precipitation frequency analysis for a given location, simply drag the red cross to the desired location, and the map will automatically re-center to that location, and a *precipitation frequency analysis will appear below the map* in a table similar to the one below:

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5 min	0.396 (0.257-0.442)	0.468 (0.422-0.521)	0.540 (0.487-0.602)	0.611 (0.548-0.680)	0.682 (0.611-0.764)	0.749 (0.687-0.852)	0.829 (0.715-0.997)	0.862 (0.781-0.988)	0.929 (0.818-1.03)	0.988 (0.858-1.10)
10 min	0.632 (0.570-0.705)	0.748 (0.675-0.833)	0.865 (0.780-0.964)	0.977 (0.877-1.09)	1.09 (0.978-1.22)	1.19 (1.054-1.32)	1.28 (1.141-1.43)	1.37 (1.21-1.52)	1.47 (1.29-1.64)	1.56 (1.35-1.73)
15 min	0.790 (0.712-0.882)	0.941 (0.849-1.05)	1.09 (0.987-1.22)	1.23 (1.11-1.38)	1.39 (1.24-1.58)	1.51 (1.34-1.80)	1.62 (1.44-1.80)	1.73 (1.52-1.92)	1.85 (1.62-2.06)	1.95 (1.70-2.17)
30 min	1.08 (0.976-1.21)	1.30 (1.17-1.45)	1.55 (1.40-1.73)	1.79 (1.61-1.99)	2.06 (1.84-2.29)	2.27 (2.03-2.57)	2.48 (2.20-2.76)	2.69 (2.37-2.98)	2.94 (2.68-3.28)	3.16 (2.75-3.52)
60 min	1.35 (1.22-1.51)	1.63 (1.47-1.81)	1.99 (1.80-2.22)	2.33 (2.08-2.60)	2.74 (2.45-3.04)	3.06 (2.75-3.42)	3.42 (3.03-3.80)	3.77 (3.32-4.18)	4.22 (3.70-4.70)	4.62 (4.01-5.14)
2-hr	1.60 (1.44-1.79)	1.93 (1.74-2.15)	2.39 (2.15-2.67)	2.84 (2.53-3.18)	3.40 (3.02-3.77)	3.88 (3.43-4.31)	4.37 (3.85-4.95)	4.89 (4.28-5.43)	5.61 (4.96-6.32)	6.23 (5.38-6.9)
3-hr	1.72 (1.51-1.84)	2.07 (1.85-2.33)	2.59 (2.30-2.89)	3.06 (2.73-3.43)	3.69 (3.27-4.12)	4.24 (3.74-4.73)	4.82 (4.21-5.37)	5.42 (4.71-6.04)	6.28 (5.38-6.86)	7.03 (5.99-7.83)
6-hr	2.07 (1.85-2.33)	2.48 (2.21-2.80)	3.09 (2.74-3.48)	3.68 (3.26-4.15)	4.46 (3.93-5.02)	5.17 (4.53-5.79)	5.91 (5.18-6.61)	6.70 (5.76-7.40)	7.83 (6.68-7.75)	8.85 (7.44-9.86)
12-hr	2.45 (2.10-2.79)	2.93 (2.61-3.24)	3.67 (3.25-4.30)	4.41 (3.89-5.00)	5.40 (4.72-6.11)	6.30 (5.47-7.32)	7.27 (6.25-8.10)	8.33 (7.09-9.20)	9.86 (8.28-11.1)	11.3 (9.30-12.6)
24-hr	2.84 (2.60-3.13)	3.45 (3.17-3.80)	4.44 (4.07-4.90)	5.28 (4.62-6.02)	6.52 (5.60-7.16)	7.57 (6.61-8.32)	8.72 (7.78-9.58)	9.99 (8.85-11.0)	11.6 (10.3-13.0)	13.4 (11.8-14.8)
2-day	3.29 (3.02-3.62)	3.99 (3.69-4.40)	5.11 (4.68-6.02)	6.05 (5.20-6.86)	7.44 (6.47-8.17)	8.62 (7.59-9.47)	9.90 (8.94-10.3)	11.3 (10.0-12.5)	13.4 (11.7-14.8)	15.1 (13.1-16.4)
3-day	3.49 (3.20-3.84)	4.23 (3.88-4.65)	5.39 (4.95-6.03)	6.37 (5.40-6.93)	7.78 (7.07-8.53)	8.98 (8.11-9.85)	10.3 (9.26-11.3)	11.7 (10.4-12.8)	13.8 (12.1-15.2)	15.8 (13.5-17.2)
4-day	3.69 (3.39-4.05)	4.46 (4.11-4.91)	5.60 (5.23-6.23)	6.68 (5.72-7.22)	8.13 (7.40-9.00)	9.34 (8.46-10.2)	10.7 (9.57-11.7)	12.1 (10.8-13.2)	14.2 (12.5-15.6)	16.0 (13.9-17.6)
7-day	4.29 (3.94-4.63)	5.16 (4.76-5.64)	6.47 (5.98-7.07)	7.55 (6.94-8.23)	9.09 (8.31-9.91)	10.4 (9.43-11.3)	11.7 (10.6-12.8)	13.2 (11.8-14.4)	15.3 (13.8-16.8)	17.0 (14.9-18.7)
10-day	4.90 (4.55-5.23)	5.88 (5.49-6.39)	7.20 (6.74-8.00)	8.41 (7.76-9.11)	10.0 (9.20-10.8)	11.3 (10.4-12.3)	12.7 (11.5-13.9)	14.2 (12.9-15.4)	16.2 (14.5-17.1)	17.9 (16.3-19.5)
20-day	6.63 (6.18-7.13)	7.91 (7.38-8.39)	9.98 (9.32-10.5)	11.7 (10.1-11.7)	13.8 (11.8-13.7)	15.8 (14.5-17.8)	17.3 (15.8-18.7)	19.5 (18.1-18.7)	21.7 (19.7-21.1)	23.3 (21.2-25.1)
30-day	8.22 (7.72-8.70)	9.76 (9.10-10.4)	11.6 (10.9-12.4)	13.1 (12.2-14.0)	15.0 (14.0-16.0)	16.6 (15.4-17.7)	18.1 (16.9-19.3)	20.1 (18.7-21.0)	21.7 (19.9-22.3)	23.3 (21.2-25.1)
45-day	10.3 (9.67-10.8)	12.1 (11.4-12.8)	14.2 (13.4-15.2)	16.0 (15.0-17.0)	18.2 (17.1-19.4)	20.0 (18.7-21.2)	21.7 (20.2-23.1)	23.5 (21.8-25.0)	25.9 (23.8-27.6)	27.7 (25.3-29.7)
60-day	12.2 (11.6-13.0)	14.4 (13.6-15.3)	16.9 (15.9-17.7)	18.6 (17.6-19.7)	21.0 (19.8-22.2)	22.8 (21.5-24.2)	24.6 (23.1-26.1)	26.4 (24.8-28.0)	28.4 (26.3-30.5)	30.4 (28.1-32.4)

1) Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parentheses are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently used PMP values. Please refer to NOAA Atlas 14 document for more information.

4 – The Hurricanes Page

WFO Wakefield Tropical Weather Page

Weather.gov > Wakefield, VA > WFO Wakefield Tropical Weather Page

Wakefield, VA
Weather Forecast Office

Main Briefing Page	Severe Thunderstorms	Tides/Coastal Flooding	Rivers/River Flooding	Extended Forecasts & Drought	Space Weather	Fire Weather
Rain and Snow Forecasts	Hurricanes	Marine Weather	Radar and Satellite	Climate Data	Maps and Models	Safety and Preparedness

[NWS Hurricane Preparedness Web Site](#) [COMET Community Hurricane Preparedness Course](#)

[Click to enlarge](#)

Two-Day Graphical Tropical Weather Outlook
National Hurricane Center Miami, Florida

All Disturbances

Current Disturbances and 2-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricanes

Post-Tropical Cyclone Remnants

[View 5 Day Tropical Weather Outlook](#)

[Click to enlarge](#)

SST Anomalies

Atlantic Ocean Heat Content

[National Hurricane Center \(NHC\)](#)

[Tropical Weather Discussion \(Technical\)](#)

NWS Wakefield Products

Hurricane Local Statement (HLS)

Hurricane Post-Storm Report (PSH)

[Hurricane Names AND Pronunciation](#)

[NOAA Hurricane Season Outlook](#)

[NHC Storm Surge Education Tool](#)

[Virginia Hurricane Preparedness Guide](#)

RECON Data

[NHC RECON Page](#)

Vortex Data

NWS Wakefield Tropical Cyclone Threat and Impact Graphics
Available Only When a Storm Threatens the Mid Atlantic Region Within 2-3 Days

Click to enlarge	Click to enlarge	Click to enlarge	Click to enlarge
Wind Threat	Storm Surge Threat	Rainfall Flooding Threat	Tornado Threat

NOAA Tropical Satellite Imagery

Visible Imagery

Western Atlantic Click to enlarge	Central Atlantic Click to enlarge	Tropical Atlantic Click to enlarge
Single Image / Loop	Single Image / Loop	Single Image / Loop

Infrared Imagery

Western Atlantic Click to enlarge	Central Atlantic Click to enlarge	Tropical Atlantic Click to enlarge
Single Image / Loop	Single Image / Loop	Single Image / Loop

The information available on the Hurricanes tab is fairly self explanatory. The **Graphical Tropical Weather Outlook** is issued daily by the National Hurricane Center **at approximately 2 AM, 8 AM, 2 PM, and 8 PM EDT** during the June 1st to November 30th Atlantic Hurricane Season.

The **RECON data** are only available when active storm or storms are within range of the **Hurricane Hunter aircraft** in either the Atlantic or eastern Pacific basins.

The **NWS Wakefield Products** – Hurricane Local Statement (HLS) and Post-Storm Report (PSH) - are available only when a tropical storm/hurricane is approaching and/or has affected the region.

The **Tropical Cyclone Impact Graphics** are available once a tropical storm or hurricane **WATCH** is issued for some portion of the NWS Wakefield forecast area. These graphics are subsequently produced every 6 to 12 hours until all watches and/or warnings have been discontinued.

All of the satellite imagery on this page are real-time.

The **“Click to Enlarge” feature** allows you to click on an image or link, except those denoted by a **red X**, and get a full size image without navigating away from this page.

5 – The Marine Weather Page

Marine Briefing Page

[Weather.gov](#) > [Wakefield, VA](#) > Marine Briefing Page

Wakefield, VA
Weather Forecast Office

Main Briefing Page	Severe Thunderstorms	Tides/Coastal Flooding	Rivers/River Flooding	Extended Forecasts & Drought	Space Weather	Fire Weather
Rain and Snow Forecasts	Hurricanes	Marine Weather	Radar and Satellite	Climate Data	Maps and Models	Safety and Preparedness
Wakefield Radar	Dover AFB Radar	Forecast Graph	Forecast Table	Forecast Images	NWS Wakefield Briefing Web Page Users Guide	

NOAA Tide Predictions for Virginia, Maryland, and North Carolina
[WFO Wakefield, VA Home Page](#)
[Weather Term/Abbreviations Glossary](#)

Local Time : 7:42:24 p.m. UTC : 23:42:24 Z

Click on the map below for the latest forecast.

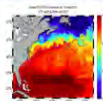


[Read watches, warnings & advisories](#)

[Small Craft Advisory](#)

[Zoom Out](#)

Click to enlarge



[NCEP SST Analysis](#)

[Gridded Offshore Winds](#)
[Duck NC to Oyster VA](#)

[Oyster VA to Cape Henlopen DE](#)

[Regional Observations](#)
[Land and Water \(map\)](#)

[Marine Observations](#)
[Bay and Ocean \(text\)](#)

[National Data Buoy Center \(NDBC\)](#)

[Chesapeake Bay Interpretive Buoys](#)

[Chesapeake Bay PORTS® Observations](#)
[Northern Bay \(Text\)](#)

[Northern Bay \(Map\)](#)

[Southern Bay \(Text\)](#)

[Southern Bay \(Map\)](#)

[Other Text Products](#)
[Area Forecast Discussion](#)

[Marine Weather Warnings](#)

[Marine Weather Statement](#)

[Coastal Flood Watches and Warnings](#)

[Rip Current Forecast](#)
Issued May 15 to October 1

[NOAA Tsunami Info](#)
West Coast and Alaska Tsunami Warning Center

Marine Observations as of 7:00 PM EDT Mon Sep 14 2015

Location	UTC TIME	Air Temp (°F)	Water Temp (°F)	Wind (DIR/SP/Gust)	Pres (mb)	Wave&Swell (HT/PER)
Thomas Pt. MD	2200	76	76	310/ 9/ 10	1021.7	
Gooses Reef. MD	2300	75	77	250/ 12/ 14	1022.6	
Cove Pt. MD	2200	73		270/ 10/ 14	1022.4	
Piney Pt. MD	2205			290/ 10/ 11	N/A	
Cambridge. MD	2200	76	76	250/ 5/ 10	1020.7	
Bishops Head. MD	2200	74	71	270/ 9/ 12	1021.0	
Potomac. MD	2300	75	77	280/ 10/ 12	1021.3	1
Solomons Island. MD	N/A	N/A	N/A	N/A	N/A	N/A
Lewisatta. VA	2200	74	75	310/ 6/ 7	1021.6	
Rappahannock Light	2200			280/ 9/ 10	1022.6	
StingRay Pt.	2300	75	78	270/ 8/ 10	1022.8	1
Yorktown. VA	2200	75	79	250/ 8/ 10	1022.2	
York River Rng	2200	76		280/ 6/ 7	1021.9	
Jamestown. VA	2300	74	79	230/ 6/ 8	N/A	
Willouby Str. VA	2200	76		210/ 5/ 6	1023.5	
Dominion Term Str	2200	76		230/ 1/ 2	1022.6	
Money Pt.	2200	76	80	280/ 5/ 6	1022.3	
Sewells Pt.	2200		78		1022.6	
Norfolk. VA	2300	74	80	260/ 4/ 6	1021.9	
Kiptopeke. VA	2200		76	320/ 8/ 9	N/A	
Ches Bay Bridge	2200	73	79	340/ 3/ 5	1022.2	
Cape Henry VA	2200	73		340/ 5/ 6	N/A	
Buoy 44025	2250	72	71	290/ 16/ 19	1018.6	4
Lewes. DE	2200	74	72	300/ 15/ 17	1020.8	
Buoy 44009	2250	73	73	260/ 14/ 16	1021.5	2
Brandwine Light	2200	73	74	300/ 15/ 17	1021.0	
Ocean City Inlet	2200	73	74	310/ 9/ 12	1020.6	
Wachapreague. VA	2200	73	75	270/ 6/ 10	1022.3	
Cape Henry Buoy	N/A	N/A	N/A	N/A	N/A	N/A
Cape Charles Buoy	N/A	N/A	N/A	N/A	N/A	N/A
1st Landing Buoy	2300		78		1022.5	1
Chesapeake Lgt	2300	72		320/ 7/ 8	1023.6	
Buoy 44014	2250	72	77	290/ 10/ 14	1022.5	3
Buoy 44100	N/A	N/A	N/A	N/A	N/A	N/A
Buoy 44056	N/A	N/A	N/A	N/A	N/A	N/A
Duck Pier	2200	74	78	120/ 6/ 8	1022.5	
Oregon Inlet. NC	2200	72	77	110/ 3/ 5	1023.2	
Buoy 41025	N/A	N/A	N/A	N/A	N/A	N/A

NOAA Tide Predictions takes you to the NOAA Tides and Currents tide prediction page for the state you choose (VA, MD or NC). Click on the location of interest to obtain a 2 day text and graphic display of astronomical tide times and heights (in MLLW) for that location.

The products and web pages linked in the right column of this page provide information from a number of sources. Under **Regional Observations**, the **Land and Water (Map)** takes you to the same map described at the end of page 4, and repeated later in this section. The remaining links in the right column are self-explanatory. The remainder of the Marine Weather page is laid out nearly identical to the main Briefing Web Page. A detailed explanation of the links can be found in pages 3-7. One notable exception is the **Marine Observations** listing. This listing starts with observations on or near the Chesapeake Bay. Starting at Buoy 44025 is a listing of marine observations on or near the Atlantic Coastal Waters. Clicking on the location will take you to the National Data Buoy Center (NDBC) observation page for that location. There are 2 additional links on the Marine page that are not on the main Briefing Page.

The link to **NOAA Charts – Booklet Format**, takes you to the NOAA Booklet Nautical Chart web page. NOAA Nautical charts in “booklet” format can be downloaded as a PDF from this site for any Atlantic location.

In addition, the link to **Text/Graphical**

6 – The Tides and Coastal Flooding Page

The tides and coastal flooding page was created in an effort to consolidate information on tides, coastal flooding, and coastal flooding forecasts. Astronomical tide forecasts and observations (including weather observations at tide gages) are available from NOAA's National Ocean Service (NOS). Water level/coastal flooding forecasts are generated from both the NWS and NOS. These forecasts for sites in the NWS Wakefield area of responsibility can be obtained from the table on the right side of the Tides and Coastal Flooding page. Column header definitions are provided below.

Tide – The astronomical tide prediction from the [NOS Tides and Currents web site](#). NOAA astronomical tide predictions for all locations in [Virginia](#), [Maryland](#) and [North Carolina](#) can be obtained via the links above the map and table.

Forecasts – The forecasts column links to location specific web pages containing the following water level graphs: **Top Left** – Total Water Level (TWL) forecast produced by NWS Wakefield (new in December 2013); **Top Right** - NWS Extra-Tropical Storm Surge ([ETSS](#)) forecast; **Bottom Left** – [VIMS Tidewatch](#) forecasts; **Bottom Right** – the Chesapeake Bay Operational Forecast System ([CBOFS](#)) forecast from NOS. **Note:** *Some locations (e.g. Bishops Head, MD and Duck, NC) only have 2 or 3 of the 4 types of forecasts/forecast guidance available.*

Obs – Water level observations for highlighted sites from the [NOS Tides and Currents web site](#).

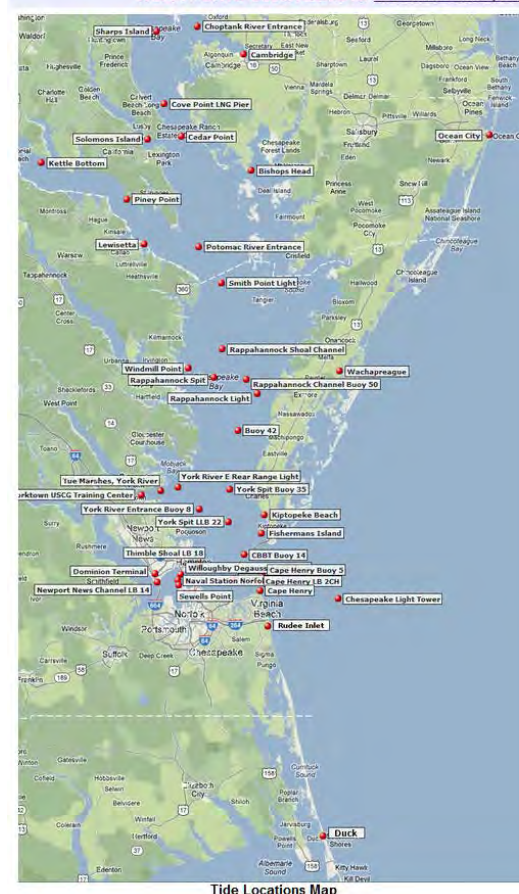
Met – Meteorological observations (wind, pressure, air temperature and/or water temperature) for highlighted sites from the [NOS Tides and Currents web site](#).

Tides and Coastal Flooding Page

Weather.gov > Wakefield, VA > Tides and Coastal Flooding Page

Wakefield, VA
Weather Forecast Office

[Main Briefing Page](#) | [Severe Thunderstorms](#) | [Tides/Coastal Flooding](#) | [Rivers/River Flooding](#) | [Extended Forecasts & Drought](#) | [Space Weather](#) | [Fire Weather](#)
[Rain and Snow Forecasts](#) | [Hurricanes](#) | [Marine Weather](#) | [Radar and Satellite](#) | [Climate Data](#) | [Maps and Models](#) | [Safety and Preparedness](#)
[Probabilistic Storm Surge Graphics \("psurge" - Tropical only\)](#) | [EXPERIMENTAL Probabilistic Storm Surge Inundation \(Tropical only\)](#)
[NOAA Tide Predictions for all of Virginia, Maryland, and North Carolina](#) | [National Hurricane Center Storm Surge Awareness/Education Tool](#)
[NOAA PORTS Observations for Southern Chesapeake Bay and Northern Chesapeake Bay](#)



Tide Locations Map

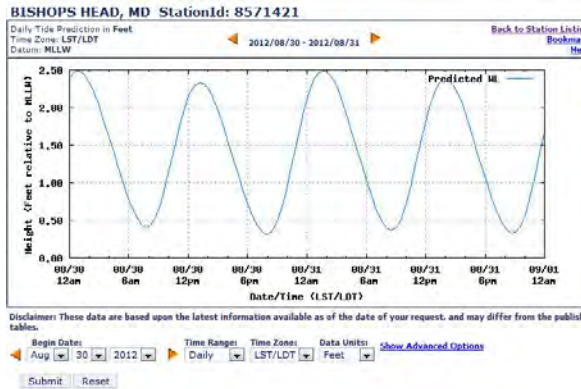
3 Hourly Mid Atlantic Extratropical Storm Surge (ETSS) AND Extratropical Surge and Tide Operational Forecast System (ESTOFS) Forecast Maps with 96 Hour Loop

[Tide = Link to NOAA Astronomical Tides](#)
[Forecasts = Link to Water Level Forecast Page](#)
[TWL = NWS Wakefield Water Level Forecasts](#)
[CBOF = CBOFS Water Level Forecasts](#)
[TW = VIMS Tidewatch Water Level Forecasts](#)
[Obs = Link to Observed Tide Plot](#)
[Met = Link to Weather Observations](#)

Location	Tide	Forecasts	Obs	Met
Ocean City Inlet MD	X	X	X	X
Chincoteague VA		X	X	
Wachapreague VA	X	X	X	X
Oyster VA	X	X		
Cambridge MD	X	X	X	X
Solomons Island MD	X	X	X	X
Bishops Head MD	X	X	X	X
Saxis VA	X	X		
Lewisetta VA	X	X	X	X
Windmill Point VA	X	X	X	X
Stingray Point VA				X
Bayford VA		X		
Mobjack Bay VA		X		
Yorktown USCG Ctr. VA	X	X	X	X
Kiptopeke VA	X	X	X	X
Hampton VA (Back Rvr)	X	X	X	
Fort Monroe VA	X	X		
Jamestown VA	X	X		X
Sewells Point VA	X	X	X	X
Money Point VA	X	X	X	X
Ches. BB Tunnel VA	X	X	X	X
Duck Pier NC	X	X	X	X

Below are examples of the column headers described above.

Bishops Head, MD Tide Example:

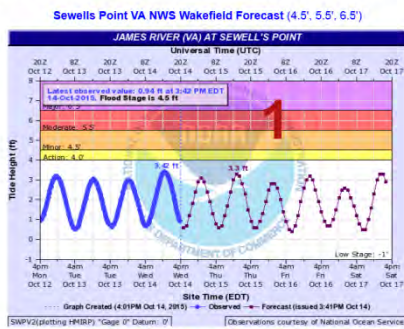


Published Tide Tables Formats
 Annual PDF Annual TXT Annual XML
 Get Adobe Reader Printer Friendly
 High/Low Tide Predictions in Feet from 2012/08/30 - 2012/08/31
 Download: TXT XML

Date	Day	Time	Hgt
08/30	Thu	12:52 AM	2.5 H
08/30	Thu	07:47 AM	0.4 L
08/30	Thu	01:13 PM	2.34 H
08/30	Thu	07:56 PM	0.31 L
08/31	Fri	01:38 AM	2.49 H
08/31	Fri	08:31 AM	0.36 L
08/31	Fri	02:00 PM	2.38 H
08/31	Fri	08:46 PM	0.32 L

Sewells Point Water Level Forecast Comparison Wakefield, VA Weather Forecast Office

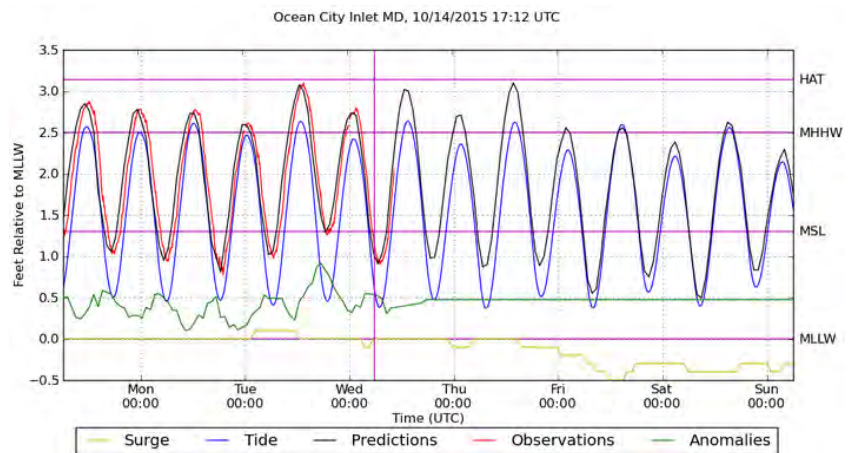
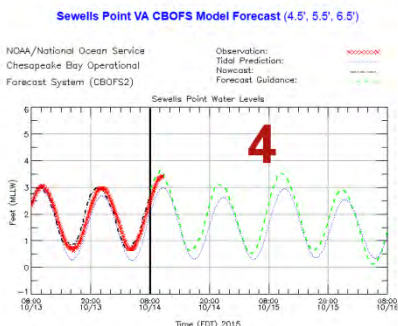
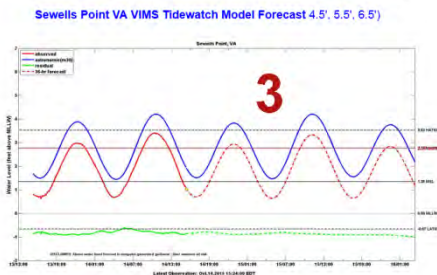
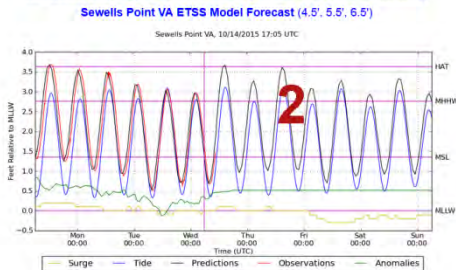
(Numbers in Parentheses denote minor, moderate and severe coastal flood thresholds)



At Left: Example of Coastal Flood Forecast page for Sewells Point, VA.

From Top:

- 1). NWS Wakefield Total Water Level (TWL) forecast
- 2). ETSS forecast from MDL (*not available at every site*)
- 3). VIMS Tidewatch forecast (*not available at every site*)
- 4). CBOFS forecast (*not available at every site*)



Ocean City Inlet, MD ETSS Water Level Forecast Example:

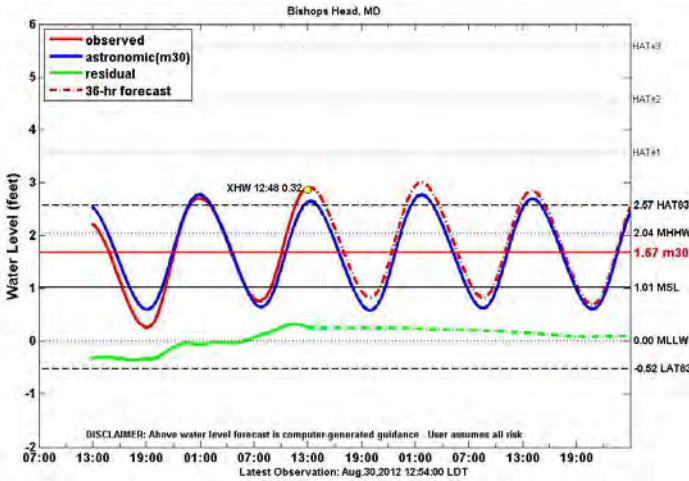
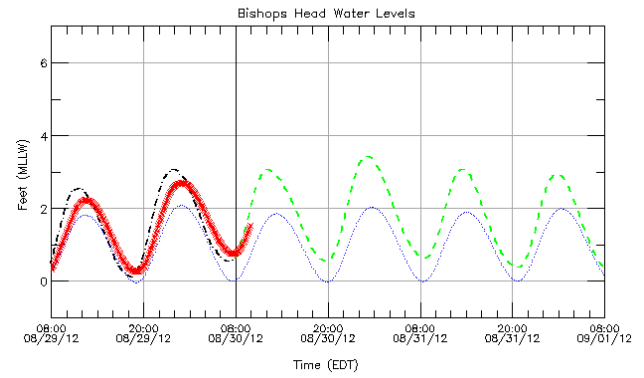
Note the legend at the top relative to the various line colors on the graph.

NOAA/National Ocean Service
Chesapeake Bay Operational
Forecast System (CBOFS2)

Observation: x
Prediction: -
Nowcast: -
Forecast Guidance: -

Bishops Head, MD CBOFS Water Level Forecast Example:

Note the legend at the top relative to the various line colors on the graph

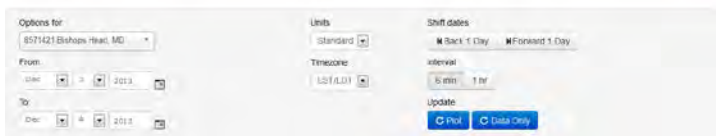
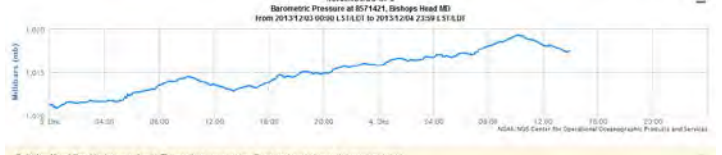
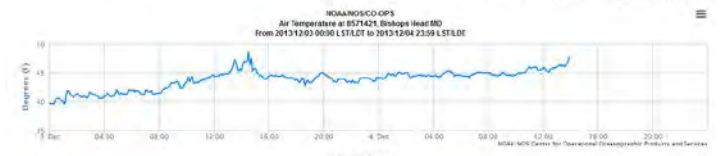
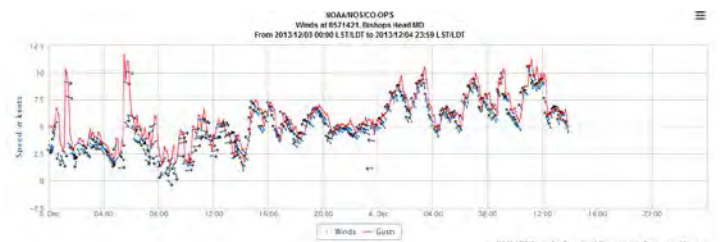


Bishops Head, MD Tidewatch Water Level Forecast Example:

Note the legend in the top left relative to the various line colors on the graph.

Ocean City Observed Water Level Example:

Note the legend below graph relative to the various line colors on the graph.



At Right: Bishops Head Meteorological observations Example:

Note the legend below graphs relative to the various line colors on the graphs.

NOAA PORTS Observations for Southern Chesapeake Bay and Northern Chesapeake Bay

Southern Chesapeake Bay PORTS, NOAA/NOS 2012-03-12 12:01 EDT

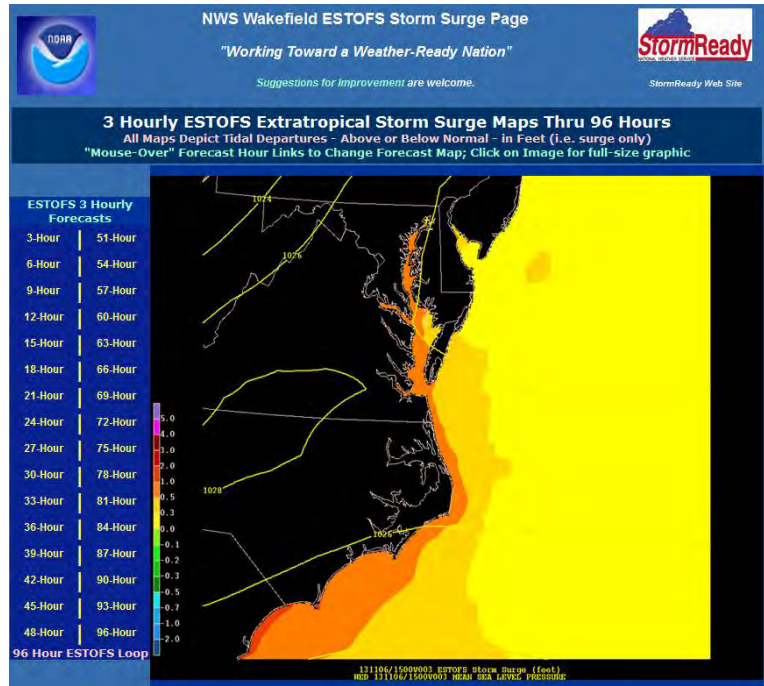
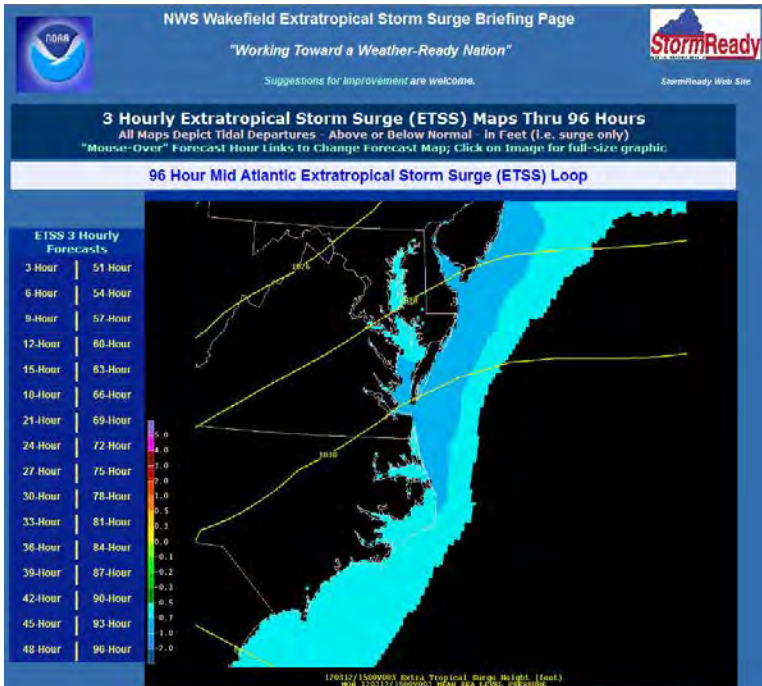
-----Water Levels (above MLLW)-----					
Yorktown USCG Center	1.5 ft, Rising	Kiptopeke Beach	2.0 ft, Rising		
Bay Bridge Tunnel	2.1 ft, Steady	Sewells Point	1.9 ft, Rising		
Money Point	2.0 ft, Rising				
-----Winds-----					
	Spd	Dir	Gusts	Spd	Dir
York Riv E-R Rnge Lt	13 kn	SW	14	Yorktown USCG Center	10 kn SW 16
Kiptopeke Beach	8 kn	SSW	8	Willoughby Degauss.	*** kn *** ***
Bay Bridge Tunnel	9 kn	SW	11	Dom. Term Pier 11	11 kn SW 13
Cape Henry	10 kn	SSW	14	South Craney Island	7 kn SSW 11
Money Point	10 kn	SSW	14		
-----Air and Water Temperature-----					
	Air	Water		Air	Water
York Riv E-R Rnge Lt	58 °F		Yorktown USCG Center	60 °F	50 °F
Kiptopeke Beach		50 °F	Willoughby Degauss.	*** °F	
Bay Bridge Tunnel	56 °F		Dom. Term Pier 11	57 °F	
Sewells Point		51 °F	Cape Henry	62 °F	
Cape Henry Wave		49 °F	Money Point	63 °F	54 °F
-----Barometric Pressure-----					
York Riv E-R Rnge Lt	1028 mb	Falling	Yorktown USCG Center	1028 mb	Falling
Willoughby Degauss.	*** mb		Bay Bridge Tunnel	1029 mb	Falling
Dom. Term Pier 11	1029 mb	Falling	Sewells Point	1030 mb	Falling
Cape Henry	1028 mb	Falling	South Craney Island	1029 mb	Falling
Money Point	1029 mb	Falling			
-----Salinity/Specific Gravity-----					
Station	Salin.	S.G.	Station	Salin.	S.G.
Yorktown USCG Center	15.8 psu	1.013	Bay Bridge Tunnel	21.4 psu	1.017
Sewells Point	14.1 psu	1.012	Money Point	12.6 psu	1.010
-----Currents (F)lood, (S)lack, (E)bb, towards °T-----					
	Spd	Dir		Spd	Dir
York Spit LBB 22	0.8 kn (F)	344.0°T	Thimble Shoal LB 18	*** kn (),	***°T
Naval Sta Norf. LB 7	0.7 kn (F)	222.0°T	Domination Terminal	*** kn (),	***°T
Cape Henry LB 2CH	*** kn (),	***°T	N-port News Ch LB 14	*** kn (),	***°T
-----Waves-----					
Station	SigHt	PkDir	PkPer	Station	SigHt
Cape Henry Wave	2.5 ft	111°T	11 s		

NOAA PORTS Observations Link

Just above the map and table are links to text based observations from the [NOAA Chesapeake Bay PORTS North](#) and [South](#) web sites (see image at left).

3 Hourly Mid Atlantic Extratropical Storm Surge (ETSS) AND Extratropical Surge and Tide Operational Forecast System (ESTOFS) Forecast Maps with 96 Hour Loop

Finally, a separate page has been created which provides maps of the *Extra-Tropical Storm Surge (ETSS)* and *Extratropical Surge and Tide Operational Forecast System (ESTOFS)* forecasts out to 96 hours using a mid-Atlantic are map projection (see map below). A link to a loop of these forecast maps is also provided on these pages.



7 – The Rivers/River Flooding Page

NOAA has issued its annual Spring Flood Outlook. [Details...](#)

ALERT! A **Flood Warning** is in effect for portions of the area. [View all valid statements/warnings](#) or choose a specific point or river to get the details for that location.

Weather Forecast Office Wakefield, VA

River Observations River Forecasts Precipitation Download

335 total gauges 3 gauges in flood

Print this map Permalink BOOKMARK

Hydrograph Available
Probability and Hydrograph Available

Major Flooding
Moderate Flooding
Minor Flooding
Near Flood Stage
No Flooding
Observation More Than 24 Hours Old
Out of Service

Last map update: 03/26/2012 at 07:17:11 am EDT 03/26/2012 11:17:11 UTC

Disclaimer

River Menus

Rivanna River	Meherrin River (and Tributaries)	South Anna River
James River (and Tributaries)	Cashie River	Mattaponi River
Appomattox River	Pasquotank River	Chickahominy River
Nottoway River	Ahoskie Creek	
Blackwater River	York River (and Tributaries)	

Resources

Hydrologic Resources

- Text Products
- Past Precipitation
- Forecast Precipitation
- River Forecast Centers
- Automated Flood Warning Systems
- Chowan River Basin Multimedia - Includes Photos and Panoramics
- Past Precipitation for Chowan River Basin
- Forecast Precipitation for Chowan River Basin
- Inundation Mapping Locations

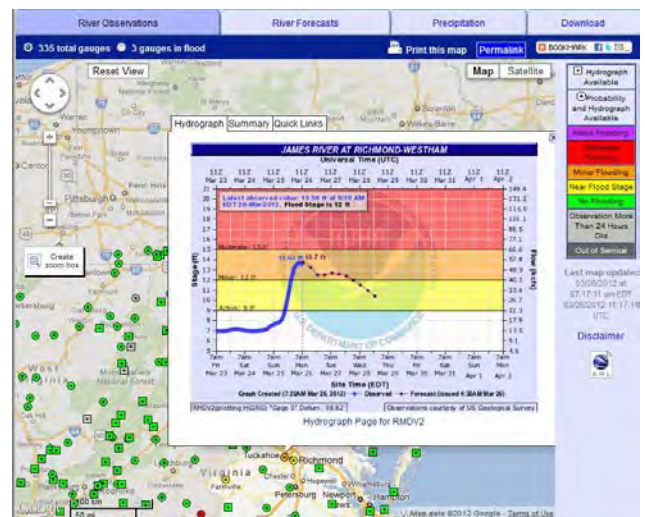
Additional Resources

- Area Hydrographs
- NWS Precipitation and River Forecasting
- Southeast River Forecast Center - Support for Chowan River Basin and Middle Atlantic River Forecast Center - Support for Lower James and Appomattox Basin
- Snow Information
- Experimental Ensemble River Forecasts

The Rivers and River Flooding tab takes you to the NWS Wakefield Advanced Hydrologic Prediction Service (AHPS) web page. The AHPS page has been upgraded to take advantage of a Google® map interface. Since NWS Wakefield is the State Liaison Office for Virginia, our AHPS view has been expanded to cover virtually every river and tide gauge in the Commonwealth. There are several types of gauges on this map. Some gauges provide observations and forecasts, while others are observation only. Still others are called “contingency” gauges. At contingency gauge points, observations are available continuously, but forecasts are only available when the river is forecast to reach or exceed the “Near Flood Stage” level at that location (see legend to the right of the map). The color of all gauge points on this map is dictated by the river level

relative to its flood status. The legend for this status is provided to the right of the map. For example, and river gauge experiencing **Moderate Flooding** would be colored in **red**. A gauge location **below** the “Near Flood Stage” level (i.e. **“No Flooding”**) is colored **green**.

If you click on any gauge point, a large thumbnail of the gauge hydrograph will be displayed. In this case, the Richmond-Westham Gauge was selected. This gauge is both an observation and forecast point. Note the color of the hydrograph relative to the flood thresholds. In this case, the “Action” level refers to the “Near Flood Stage” level. Additional information can be obtained by clicking the **“Summary”** and **“Quick Links”** tab, or by clicking on the hydrograph (see next page).



Hydrograph Summary Quick Links Sport Mountain Wilkes-Barre

Summary for Gauge RMDV2

Location: James River at Richmond-Westham
Flood Stage: 12 ft.

Latest Observation: 13.56 ft.
Observation Time: 03/26/2012 06:30:00 am EDT


Highest Forecast: 13.7 ft.
Highest Forecast Time: 03/26/2012 08:00:00 am EDT

Last Forecast: 10.4 ft.
Last Forecast Time: 03/28/2012 08:00:00 pm EDT


Summary Example

Hydrograph Summary Quick Links Sport Mountain Wilkes-Barre


Quick Links for Gauge RMDV2



Hydrograph



Download



Exceedance Probability

Quick Links Example

Clicking on the station hydrograph from the pop-up window takes you to a page providing a larger version of the hydrograph (see image to left), as well as detailed station information, including historical high/low water levels, and flood impacts, for that location (see below).

Weather Forecast Office Wakefield, VA Middle Atlantic River Forecast Center

Flood Warning

View all valid statements/warnings

Hydrograph River at a Glance Download Weekly Chance of Exceeding Levels Chance of Exceeding Levels During Entire Period

JAMES RIVER AT RICHMOND-WESTHAM

Universal Time (UTC)

Latest observed value: 13.56 ft at 6:30 AM EDT 26-Mar-2012. Flood Stage is 12 ft

Moderate: 15.0'
 Minor: 12.0'
 Action: 9.0'

Site Time (EDT)

Graph Created (7:20AM Mar 26, 2012) Observed Forecast (issued 4:38AM Mar 26)

RMDV2(plotting HGTRG) "Gage 0" Datum: 98.82' Observations courtesy of US Geological Survey

Printable Image About this graph Tabular Data XML RSS Datum: N/A Metadata

NOTE: Downstream bridge construction and a temporary dam may create more frequent flood and near flood conditions upstream of the Richmond-Westham gauge.

NOTE: Downstream bridge construction and a temporary dam may create water levels 1-1.5 ft lower than expected at or near flood stage for locations downstream of the Richmond-Westham gauge.

NOTE: Forecasts for the James River at Richmond-Westham are issued routinely year-round.

Upstream Gauge Downstream Gauge

Flood Categories (in feet)

- Major Flood Stage: 22
- Severe Flood Stage: 18
- Flood Stage: 12
- Action Stage: 9

Historical Crests

- 28.62 ft on 06/23/1972
- 24.91 ft on 08/21/1969
- 24.77 ft on 11/07/1985
- 23.42 ft on 03/19/1936
- 22.65 ft on 04/27/1937

Show More Historical Crests

Low Water Records

- 2.00 ft on 09/22/1966
- 2.94 ft on 10/10/1970
- 2.94 ft on 10/21/1968
- 3.00 ft on 09/17/1943
- 3.00 ft on 09/25/1936

Show More Low Water Records

Latitude/longitude Disclaimer: The gauge location shown in the above map is the approximate location based on the latitude/longitude coordinates provided to the NWS by the gauge owner.

Above the hydrograph plot are 3 other tabs containing useful information – **River at a Glance**, **Weekly Chance of Exceeding Levels**, and **Chance of Exceeding Levels During Entire Period**. The content on these tabs will be discussed on the next 2 pages.

Flood Impacts & Photos

28.62 FLOOD OF RECORD DURING HURRICANE AGNES.

27 NEAR RECORD FLOODING BEGINS.

23 RICHMOND CITY WATER FILTRATION PLANT ENDANGERED.

22 MAJOR FLOODING BEGINS. DOWNSTREAM INDUSTRIES, SHOPS AND STREETS ALONG THE RIVERFRONT ARE FLOODED AT AND ABOVE THIS LEVEL.

18.2 CSX RAILROAD TRACKS FLOODED.

15 BEGIN MODERATE FLOODING. RESIDENCES NEAR GAGE THREATENED WITH SOME DRIVEWAYS UNDER ONE TO ONE AND A HALF FEET OF WATER.

13 APPROXIMATELY 29 ACRES OF LOWLAND FLOODED IN VICINITY OF GAGE.

12 FLOOD STAGE. MINOR FLOODING ALONG BOTH BANKS...NO DAMAGE AT THIS LEVEL.

About This Location

Latitude: 37.563056° N, Longitude: 77.547222° W, Horizontal Datum: NAD83/WGS84

River Stage Reference Frame	Gauge Height	Flood Stage	Uses
NWS stage	0 ft	12 ft	Interpreting hydrographs and NWS watch, warnings, and forecasts, and inundation maps
Vertical Datum	Elevation (gauge height - 0)	Elevation (gauge height + flood stage)	Elevation information source
NAVD88	N/A	N/A	Survey grade GPS equipment, FEMA flood plain maps, newer USGS topographic maps
NGVD 29	98.82 ft	110.82 ft	Older USGS topographic maps, NGVD29 benchmarks
MSL	N/A	N/A	Older USGS topographic maps, MSL benchmarks
Other	N/A	N/A	

River at a Glance

Weather Forecast Office Wakefield, VA

Hydrograph | **River at a Glance** | Download | Weekly Chance of Exceeding Levels | Chance of Exceeding Levels During Entire Period

James River

Select the points: and Select the information you want:
NOTE: Availability of information varies.

All

at Lick Run

at Buchanan

at Holcomb Rock

at Bent Creek

at Scottsville

at Brems Bluff

at Cartersville

at Richmond-Westham

at Richmond Locks

and Tributaries

near Providence Forge

All

Stage/Forecast Graph (Description)

Stage/Forecast Text

Flood Impacts

Probabilistic Stage (Description)

Probabilistic Flow (Description)

Probabilistic Volume (Description)

Stage Exceedance (Description)

Flow Exceedance (Description)

Volume Exceedance

Location Map

Record Crest History

Low Flow

Low Water Impacts

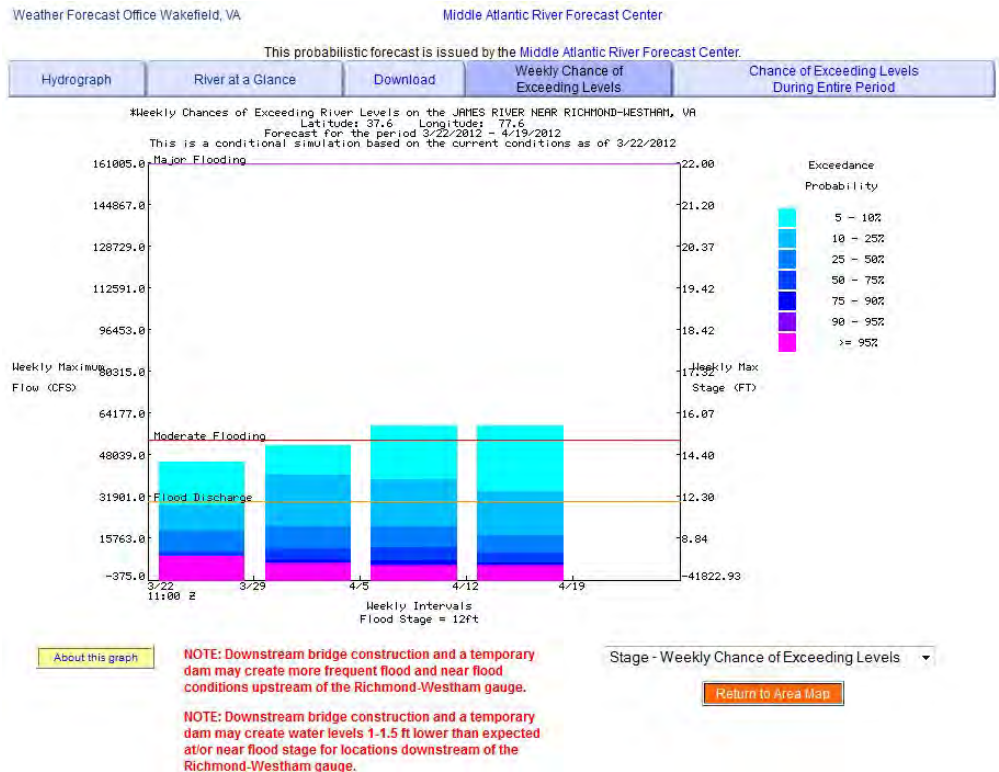
Low Water Records

XML

[Return to Area Map](#)

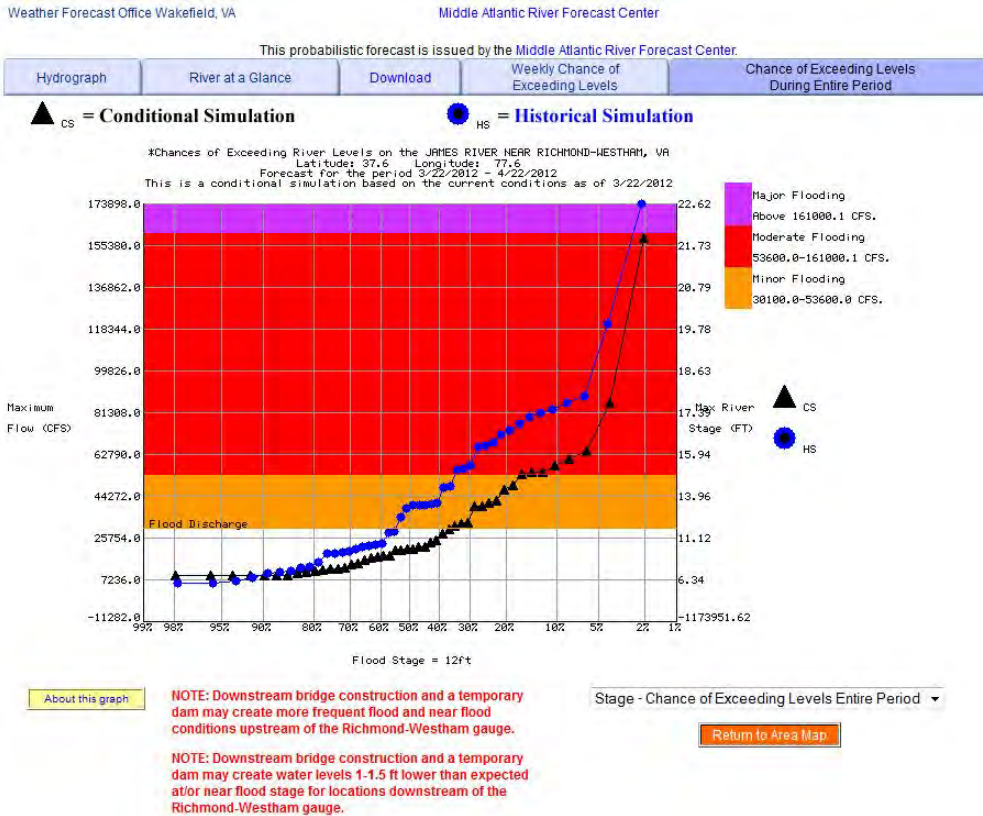
The **River at a Glance** interface allows the user to select what points on the river he/she would like information, and then select what information he/she would like to view. Be aware that, when you click **“Make my River Page!”**, the resulting page can be very long, depending upon the number of points and amount of data selected.

Weekly Chance of Exceeding Levels



The **Weekly Chance of Exceeding Levels** display is a probabilistic view of the weekly chance of reaching or exceeding certain levels within the next 4 weeks at that forecast point.

Chance of Exceeding Levels During the Entire Period



The **Chance of Exceeding Levels During the Entire Period** graph shows chances of the river stage, flow, or volume going above various levels during the forecast period labeled above the graph. Similar plots are usually available for one or more of these variables at this forecast location. The **Conditional Simulation (CS) line** indicates chances of the river going above given levels based on current conditions. The **Historical Simulation (HS) line** indicates the chances of the river going above given levels based on the total range of past levels.

8 – The Radar and Satellite Page

Radar and Satellite Page

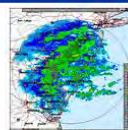
Weather.gov > Wakefield, VA > Radar and Satellite Page

Wakefield, VA
Weather Forecast Office

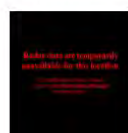
Main Briefing Page	Severe Thunderstorms	Tides/Coastal Flooding	Rivers/River Flooding	Extended Forecasts & Drought	Space Weather	Fire Weather
Rain and Snow Forecasts	Hurricanes	Marine Weather	Radar and Satellite	Climate Data	Maps and Models	Safety and Preparedness

NWS Radar Data National Radar Display

National Weather Service Radar
Click on Map to Zoom In



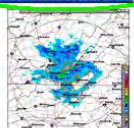
Dover AFB Radar
Choose product:



NWS Wakefield Radar
Choose product:



NWS Sterling Radar
Choose product:



NWS Blacksburg Radar
Choose product:



NWS Raleigh Radar
Choose product:



NWS Morehead City Radar
Choose product:

NOAA GOES-16 Satellite Imagery (Video - Understanding NOAA Satellites)

Infrared (IR) Imagery

Visible (VIS) Imagery

GeoColor Imagery



Water Vapor (WV) Imagery

Tropical Satellite Images



The Radar and Satellite Page provides access to local radar data from NWS Wakefield, and all surrounding radars. Click on each of the individual local radar images to obtain the latest base reflectivity image for that site. In addition, you can choose specific radar products for all of the 6 local radars by clicking on the “Choose product” drop-down menu.

In addition to the 6 local radars, the national **NWS Radar Mosaic** image at the top left of the page is also an image map. Clicking on this map will take you to the latest base reflectivity image for the radar closest to the point on the map you clicked.

The **EXPERIMENTAL National Radar Display** link at the top of the page will take you to an interactive radar display discussed on the next page.

All satellite images are from GOES-16 There are 3 primary

types of satellite imagery available on this page – **Infrared (IR)**, **Visible (VIS)** and **Water Vapor (WV)**.

WV and IR imagery are available 24/7, while VIS imagery is only available during daylight hours. During the night, a gray scale IR image is substituted for VIS imagery. To obtain the latest imagery, or a loop of that imagery, click on the links below the image thumbnail. The satellite loops are HTML5 loops generated on the NOAA GOES-16 satellite imagery web site.

The “**Click to Enlarge**” feature allows you to click on an image or link, and get a full size image, without navigating away from this page. The radar image links **circled in green** also have the same functionality.

9 – The Extended Forecasts and Drought Page

Extended Forecasts and Drought

[Weather.gov](#) > [Wakefield, VA](#) > Extended Forecasts and Drought

Wakefield, VA
Weather Forecast Office

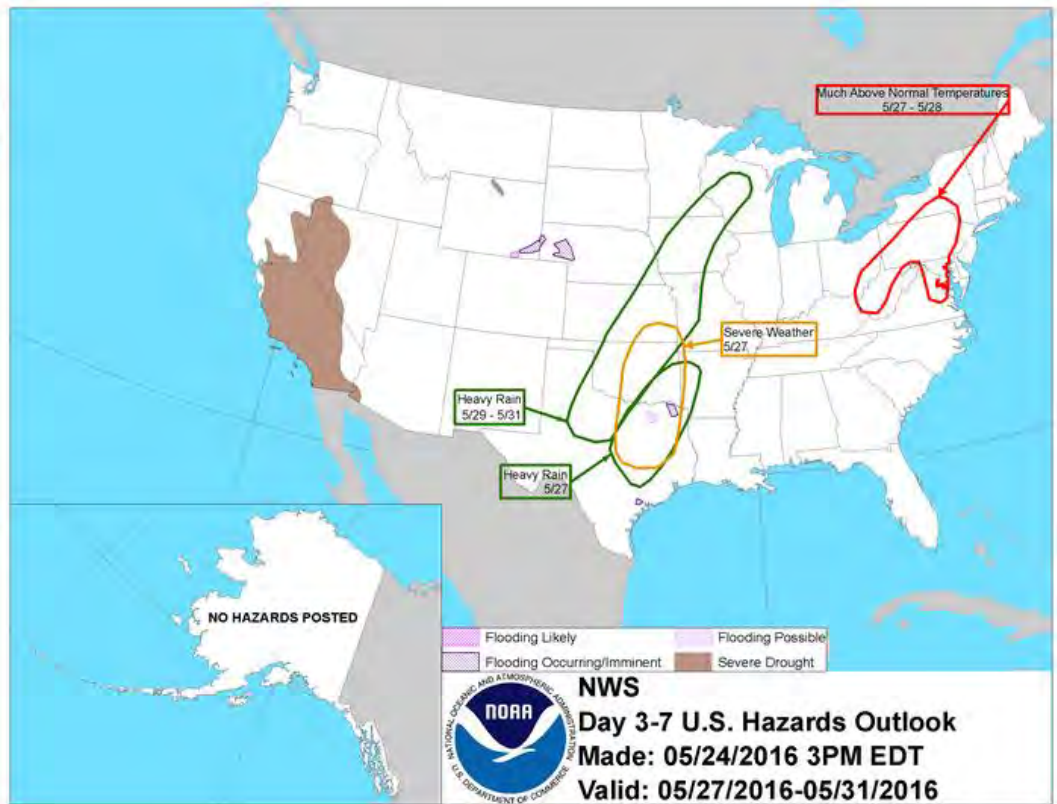
[Main Briefing Page](#) | [Severe Thunderstorms](#) | [Tides/Coastal Flooding](#) | [Rivers/River Flooding](#) | [Extended Forecasts & Drought](#) | [Space Weather](#) | [Fire Weather](#)
[Rain and Snow Forecasts](#) | [Hurricanes](#) | [Marine Weather](#) | [Radar and Satellite](#) | [Climate Data](#) | [Maps and Models](#) | [Safety and Preparedness](#)

[Climate Prediction Center \(CPC\) Multi-Season Outlooks](#) | [NWS Multi-Sensor Daily Precipitation Analysis Page](#) | [Water Conservation Tips From VA Dept. of Environmental Quality](#)

[NCEP Days 0-7 Forecast Loop](#) | [NCEP Extended Forecast Discussions](#)

Long Range/Seasonal Forecasts, El Nino Status, and Drought Information
Click on Graphic to enlarge or be Re-directed to a Web Site Providing More Detailed Information

- Day 3-7 U.S. Hazards
- Day 8-14 U.S. Hazards
- El Nino Anomaly Loop
- Ocean Temp Anomalies
- Extended Forecasts**
 - 6-10 Day Temp Forecast
 - 6-10 Day Pcpn Forecast
 - 8-14 Day Temp Forecast
 - 8-14 Day Pcpn Forecast
 - 30 Day Temp Outlook
 - 30 Day Precip Outlook
 - 90 Day Temp Outlook
 - 90 Day Precip Outlook
- Drought Information**
 - U. S. Drought Monitor
 - VA Drought Monitor
 - MD Drought Monitor
 - NC Drought Monitor
 - Crop Moisture Index
 - Short-Term Drought Indicator
 - Long-Term Drought Indicator
 - U.S. Drought Outlook



NOTE: This page utilizes mouseover capabilities, and is compatible with smartphones and tablets.

The information provided in the Extended Forecasts and Drought tab is fairly self-explanatory. However, the update time for the various graphics varies. *Seasonal outlooks (winter, hurricane, etc.)* are added as appropriate. The graphics under *Drought Information* are updated weekly on Thursdays, while the *30 and 90 day outlooks* are issued the third Friday of every month. The *remaining graphics* are updated daily by 4 pm. The *Multi-Sensor Daily Precipitation Analysis Page* is described on page 11 of this Guide.

10 – The Climate Data Page

There are a number of different products and datasets available on the NWS Wakefield Climate web page. This guide will discuss the **Observed Weather, Local Data/Records** and **NOWData** tabs you see to the left.

Observed Weather

In the Observed Weather section of the Climate data page, **Daily Climate and Preliminary Monthly Climate (CF6)** information is available for the last 5 years. The Preliminary Monthly Climate (CF6) data is a

comprehensive overview of daily weather data in both a tabular and text form (see graphics below). An **explanation of how to use the CF6 table** can be found at the link above the data.

Select Other Date

[Explanation of the Preliminary Monthly Climate Data \(F6\) Product](#)

These data are preliminary and have not undergone final quality control by the National Climatic Data Center (NCDC). Therefore, these data are subject to revision. Final and certified climate data can be accessed at the NCDC - <http://www.ncdc.noaa.gov>.

WFO Monthly/Daily Climate Data

```

000
CXUS51 KAKQ 071010
CF6SBY
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: SALISBURY MD
MONTH: FEBRUARY
YEAR: 2012
LATITUDE: 38 20 N
LONGITUDE: 75 30 W

=====
TEMPERATURE IN F:   :PCPN:  SNOW:  WIND   :SUNSHINE: SKY   :PK WND
=====
1  2  3  4  5  6A  6B  7  8  9  10  11  12  13  14  15  16  17  18
      12Z  AVG  MX  2MIN
=====
DY  MAX  MIN  AVG  DEP  HDD  CDD  WTR  SNW  DPTH  SPD  DIR  MIN  PSBL  S-S  WX  SPD  DR
=====
1  68  50  59  23  6  0  0  0  0  9.3  20  240  M  M  2  26  240
2  54  40  47  11  18  0  0.33  0.0  0  5.8  17  320  M  M  7  18  26  330
3  50  29  40  4  25  0  0.00  0.0  0  6.3  18  320  M  M  0  23  320
4  51  27  39  3  26  0  0.10  0.0  0  4.0  13  190  M  M  6  1  17  180
5  45  27  36  0  29  0  0.01  0.0  0  5.3  15  360  M  M  7  18  20  360
6  50  24  37  1  28  0  0.00  0.0  0  4.0  16  240  M  M  0  1  22  250
=====
SM  318  197  132  0  0.44  0.0  34.7  M  22
=====
AV  53.0  32.8  5.8  FASTST  M  M  4  MAX(MPH)
MISC  --->>  # 20 240  # 26 240
=====
NOTES:
# LAST OF SEVERAL OCCURRENCES
COLUMN 17 PEAK WIND IN M.P.H.
    
```

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

STATION: SALISBURY MD
 MONTH: FEBRUARY
 YEAR: 2012
 LATITUDE: 38 20 N
 LONGITUDE: 75 30 W

```

[TEMPERATURE DATA]  [PRECIPITATION DATA]  SYMBOLS USED IN COLUMN 16

AVERAGE MONTHLY: 42.9  TOTAL FOR MONTH: 0.44  1 = FOG OR MIST
DPTR FM NORMAL: 6.9    DPTR FM NORMAL: -0.27  2 = FOG REDUCING VISIBILITY
HIGHEST: 68 ON 1      GRTST 24HR 0.33 ON 1- 2  TO 1/4 MILE OR LESS
LOWEST: 24 ON 6      SNOW, ICE PELLETS, HAIL  3 = THUNDER
TOTAL MONTH: 0.0 INCH  GRTST 24HR 0.0          4 = ICE PELLETS
GRTST 24HR 0          5 = HALL
GRTST DEPTH: 0        6 = FREEZING RAIN OR DRIZZLE
                    7 = DUSTSTORM OR SANDSTORM:
                    VSBY 1/2 MILE OR LESS
                    8 = SMOKE OR HAZE
                    9 = BLOWING SNOW
                    X = TORNADO

[NO. OF DAYS WITH]  [WEATHER - DAYS WITH]

MAX 32 OR BELOW: 0    0.01 INCH OR MORE: 3
MAX 90 OR ABOVE: 0    0.10 INCH OR MORE: 2
MIN 32 OR BELOW: 4    0.50 INCH OR MORE: 0
MIN 0 OR BELOW: 0     1.00 INCH OR MORE: 0

[HDD (BASE 65) ]
TOTAL THIS MO. 132    CLEAR (SCALE 0-3) 3
DPTR FM NORMAL -42   PTCLDY (SCALE 4-7) 3
TOTAL FM JUL 1 2032  CLOUDY (SCALE 8-10) 0
DPTR FM NORMAL -683

[CDD (BASE 65) ]
TOTAL THIS MO. 0
DPTR FM NORMAL 0     [PRESSURE DATA]
TOTAL FM JAN 1 0     HIGHEST SLP M ON M
DPTR FM NORMAL 0     LOWEST SLP 29.95 ON 2

[REMARKS]
    
```


Local Data/Records

At right, is a screen capture of the Local Data/Records tab. There is considerable local data available on this page, and we make every effort to keep the records and normals documents up-to-date.

NOWData

The NOWData tab allows the user to access some additional climate related data not available through the **Observed Weather** or **Local Data/Records** tabs. The NOWData interface is depicted in the screen capture below. Most of the locations for which data are available are Cooperative observers, who provide daily max/min temperature and precipitation data to the NWS.

This page provides local weather extremes and records, holiday weather, COOP data, and area climate summaries.

Observed Weather	Climate Locations	Climate Prediction	Climate Resources	Local Data/Records	Astronomical	NOWData
------------------	-------------------	--------------------	-------------------	--------------------	--------------	---------

Unique Local Climate Data

Climate Data

- RICHMOND DAILY RECORDS & NORMALS
- NORFOLK DAILY RECORDS & NORMALS
- SALISBURY DAILY RECORDS & NORMALS
- ELIZABETH CITY 30 YEAR NORMALS
- ELIZABETH CITY DAILY RECORDS
- WALLEPS ISLAND DAILY RECORDS
- NWS WAKEFIELD CLIMATE DATA
- PFEL CLIMATE & MARINE FISHERIES

Climate Graphs

- RICHMOND HISTORICAL GRAPHS
- RICHMOND PRECIPITATION BY MONTH BREAKDOWN
- RICHMOND SNOWFALL BY MONTH BREAKDOWN
- DAILY CLIMATE PLOT ALL OFFICIAL LOCATIONS

Other

- WAKEFIELD WEATHER EVENT SUMMARY PAGE
- RICHMOND TOP 10 LIST AVG TEMPERATURE
- RICHMOND TOP 10 LIST PRECIPITATION
- Top 10 RICHMOND SNOW EVENTS
- NORFOLK TOP 10 LIST AVG TEMPERATURE
- NORFOLK TOP 10 LIST PRECIPITATION
- Top 10 NORFOLK SNOW EVENTS
- FAQs & HOLIDAY CLIMATOLOGY NORFOLK
- FAQs & HOLIDAY CLIMATOLOGY RICHMOND
- ALL-TIME RECORD SNOWFALLS
- MONTHLY FACTOIDS SINCE 2002 RICHMOND & NORFOLK
- NEED CLIMATE OR WEATHER DATA FOR LEGAL USE
- CoCoRaHS...CoCoRaHS is an acronym for the Community Collaborative Rain, Hail and Snow Network

Observed Weather	Climate Locations	Climate Prediction	Climate Resources	Local Data/Records	Astronomical	NOWData
------------------	-------------------	--------------------	-------------------	--------------------	--------------	---------


NOWData - NOAA Online Weather Data

1. Product » <input type="radio"/> Daily data for a month <input type="radio"/> Daily almanac <input checked="" type="radio"/> Monthly avgs/totals <input type="radio"/> Monthly occurrences <input type="radio"/> Monthly extremes <input type="radio"/> Daily extremes <input type="radio"/> Daily/monthly normals <input type="radio"/> Record extremes <input type="radio"/> First/last dates	2. Location » Norfolk Area Richmond Area Wallops Island Area Elizabeth City C, NC Ashland, VA Brems Bluff, VA Camp Pickett, VA Crozier, VA Emporia 1 Whw, VA Farmville 2 N, VA	3. Variable » <input checked="" type="radio"/> Max Temperature <input type="radio"/> Min Temperature <input type="radio"/> Avg Temperature <input type="radio"/> Precipitation <input type="radio"/> Snowfall <input type="radio"/> Snow Depth <input type="radio"/> Heating Degree Days <input type="radio"/> Cooling Degree Days <input type="radio"/> Growing Degree Days	4. Year » <input checked="" type="radio"/> Current year <input type="radio"/> Last year <input type="radio"/> 1981-2010	5. View » <input type="button" value="Go"/>
---	---	--	---	---

Product Description:

MONTHLY AVERAGES/TOTALS - calculates averages or totals, as appropriate, for the selected variable for each month of the year. This product is available for the current year, the previous year, or an average of the years 1971 through 2000. Additional stations and years of data are available from the Regional Climate Centers and the National Climatic Data Center.

- NCDC Map Services -
 - Common questions -
 - Submit a question/comment -

Powered by  ACIS
 NOAA Regional Climate Centers

The Applied Climate Information System (ACIS) is a joint project of the Regional Climate Centers, the National Climatic Data Center and the National Weather Service. Official data and data for additional locations and years are available from the Regional Climate Centers and the National Climatic Data Center.

11 – The Space Weather Page

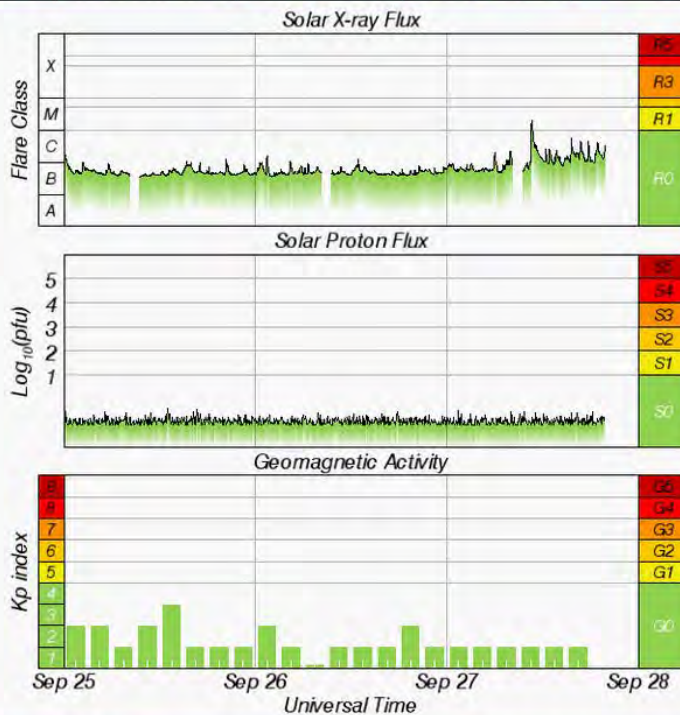
Space Weather Briefing Web Page

Weather.gov > Wakefield, VA > Space Weather Briefing Web Page

Wakefield, VA
Weather Forecast Office

Main Briefing Page	Severe Thunderstorms	Tides/Coastal Flooding	Rivers/River Flooding	Extended Forecasts & Drought	Space Weather	Fire Weather
Rain and Snow Forecasts	Hurricanes	Marine Weather	Radars and Satellite	Climate Data	Maps and Models	Safety and Preparedness
NOAA Space Weather Prediction Center (SWPC)		SWPC 3 Day Forecast		SWPC Forecast Discussion		
Space Weather for:	Aviation Community	Radio Communications	Power Companies	Emergency Management	Space Weather Enthusiasts	

- Satellite Images
 - Solar X-Ray
 - Coronal Mass Ejection
 - Aurora Borealis Forecast
- Solar Activity Plots
 - Space Weather Overview
 - GOES X-Ray Flux
 - GOES Proton Flux
 - Magnetic Field and Solar Wind
 - Planetary K Index
 - Satellite Environment
 - Total Electron Content
 - Solar Wind Prediction
 - D Region Absorption
 - Long Term Solar Cycle Plots
 - Sunspot Numbers
 - 10.7cm Radio Flux
 - A Index Progression



Space Weather Impact Charts (Click chart below corresponding to NOAA Scale above)

<p>NOAA Space Weather Scales</p> <p>Geomagnetic Storms</p> <p>Geomagnetic Storm Impacts</p>	<p>NOAA Space Weather Scales</p> <p>Solar Radiation Storms</p> <p>Solar Radiation Storm Impacts</p>	<p>NOAA Space Weather Scales</p> <p>Radio Blackouts</p> <p>Radio Blackouts Impact Scale</p>
---	---	---

The Space Weather Page was created to provide a quick overview of solar activity, and the potential impacts of solar storms.

[NOAA's Space Weather Prediction Center \(SWPC\)](#)

is responsible for monitoring space weather conditions, and issuing warnings and advisories for significant solar activity. Of greatest importance on this page is the table associated with Space Weather Overview. The impacts related to corresponding to the activity level (G1-5, S1-5 or R1-5) can be found by clicking the appropriate table under **Space Weather Impact Charts**. The SWPC also issues periodic discussions during solar events. Those discussions are available at the link above the SWPC images and graphs. Links to

SWPC web pages for various space weather user groups are provided above the SWPC graphics.

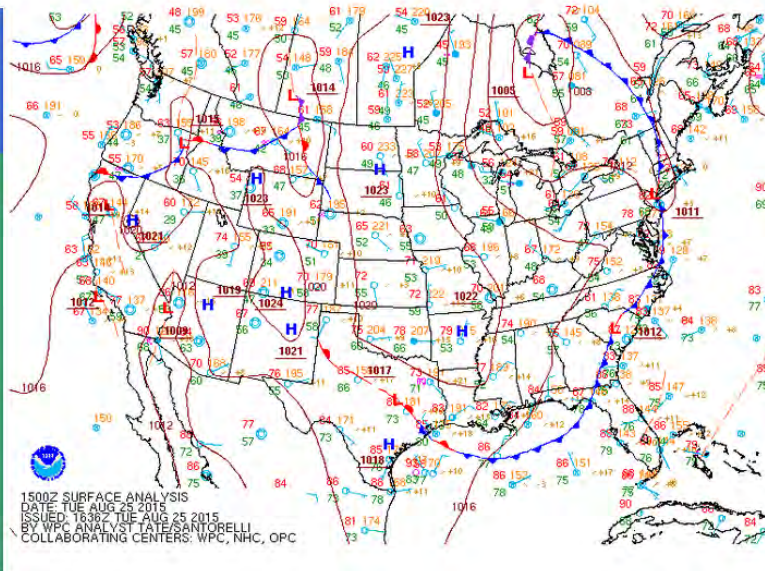
12 – The Maps and Models Page

NOTE: This page utilizes mouseover capabilities, and is compatible with smartphones and tablets.

Main EM/Briefing Page	Severe Thunderstorms	Tides/Coastal Flooding	Rivers/River Flooding	Extended Forecasts & Drought	Space Weather	Fire Weather
Rain and Snow Forecasts	Hurricanes	Marine Weather	Radar and Satellite	Climate Data	Maps and Models	Safety and Preparedness
Current Weather/ Observations	Regional Surface Observations			Latest NCEP Surface Analysis		
	Mesonet Surface Observation Map					
Forecast Models	GFS	NAM	SREF	GFS Ens Spaghetti	GFS Ens Mean	NAEFS
	WFO Local WRF	4km NAM	RAP	Hi-Res ARW	Hi-Res Rapid Refresh (HRRR)	Hi-Res NMM
Days 1-7 Surface Maps and Discussions						
NCEP Days 0-7 Forecast Loop		NCEP Short-Range Model Discussion			NCEP Day 3-7 Discussion	

The Maps and Models tab provides additional resources for analyzing current conditions, forecast models, and forecast surface maps through day 7. The links are fairly self explanatory, so a detailed explanation is not necessary. The [Mesonet Surface Observation Map](#) link takes you to the same map discussed in Section 1b of the main guide (and on the last page, if you are viewing the [Maps and Models page](#) specific users guide).

Understanding These Maps
Surface Map Legend
Polar Legend
NCEP Surface Maps (Mouseover)
U.S. Surface Analysis
National Radar Image
12-Hr Forecast
24-Hr Forecast
36-Hr Forecast
48-Hr Forecast
Short Term Loop
Day 3 Forecast
Day 4 Forecast
Day 5 Forecast
Day 6 Forecast
Day 7 Forecast
Low Tracks Error Circle
Low Tracks Ensemble



The Forecast Model portion of the page now contains links taking you directly to that model output, mostly via the [NCEP Model Guidance Page](#).

The links for [GFS Ens Spaghetti](#) and [GFS Ens Mean](#) represent the “spaghetti” plots and ensemble mean plots from the GFE ensemble forecasts. The [NAEFS](#) links to the [North American Ensemble Forecast System](#) output.

NCEP Home > NCEP Central Operations > Systems Integration Branch > Model Analyses and Guidance

Model Analyses and Guidance

[Check Here For Message Of The Day](#)

[Read Latest Information and News](#)

Select Model Guidance, Observations and Analyses, or Tropical Guidance

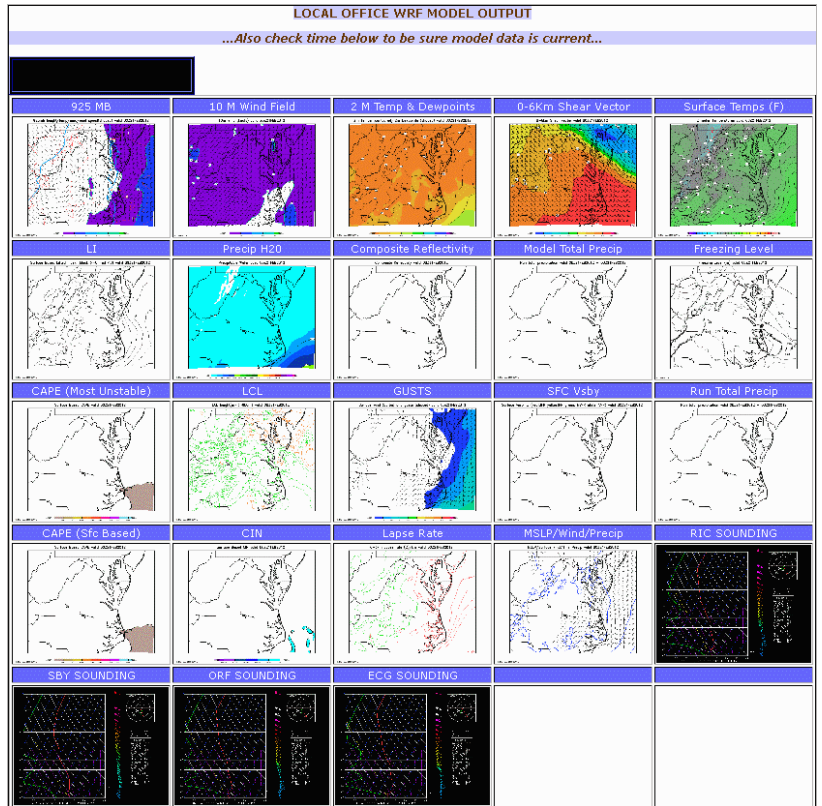
MODEL GUIDANCE	OBSERVATIONS AND ANALYSES	TROPICAL GUIDANCE
--------------------------------	---	-----------------------------------

[USER'S GUIDE](#)
[Frequently Asked Questions](#)
[Upcoming Changes](#)
[Training](#)

More information is available in the [Product Description Document](#)

At left is a screen capture of the [NCEP Model and Analysis website interface](#). This [NCEP Model and Analysis Page](#) also has a [detailed User's Guide](#).

The **WFO Wakefield Local WRF Model** is run twice daily, providing forecast output of a number of variables through 24 hours from the model start time. The image at right is a screen capture of our local WRF model page.




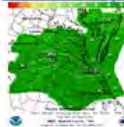
Finally, the **Hi-Res Rapid Refresh (HRRR) Model** is run hourly, and provides output out to 15 hours from the model forecast start time. A partial screen capture of the HRRR model page is provided below.

HRRR Model Fields - Experimental
Model: HRRR primary Area: Full Date: 21 Feb 2012 - 14Z

Model: Domain: Date:

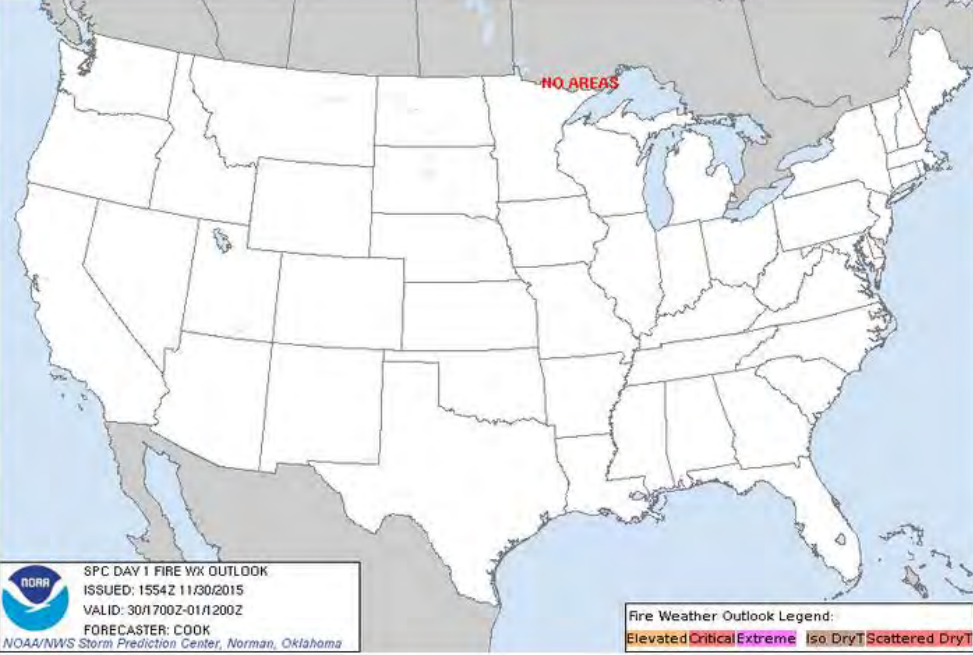

	All times	Loop	Valid Time																	
			Tue 14						Tue 15						Wed 16			Wed 17		
			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15		
all fields			.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
1 km agl reflectivity	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
composite reflectivity	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
ensemble comp reflectivity	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
max 1 km agl reflectivity	✓	✓		.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
surface CAPE	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
surface CIN	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
mixed CAPE	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
most unstable CAPE	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
most unstable layer CAPE	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
best LI	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
LCL	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
0-1 km shear	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
0-6 km shear	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
0-1 km helicity, storm motion	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
0-3 km helicity, storm motion	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
2-5 km updraft helicity	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
1-6 km updraft helicity	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
2-5 km max updraft helicity	✓	✓		.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
1-6 km max updraft helicity	✓	✓		.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
ensemble updraft helicity	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
convective activity 1	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
convective activity 2	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		
convective activity 3	✓	✓	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15		

13 – The Fire Weather Page

Main Briefing Page	Severe Thunderstorms	Tides/Coastal Flooding	Rivers/River Flooding	Extended Forecasts & Drought	Space Weather	Fire Weather
Rain and Snow Forecasts	Hurricanes	Marine Weather	Radar and Satellite	Climate Data	Maps and Models	Safety and Preparedness
Wakefield Radar	Dover AFB Radar	Forecast Graph	Forecast Table	Forecast Images	Fire Weather Forecast	
					Point Fire Weather Forecast (RAWS Sites)	
National Wildfire Assessment Page	Request a Spot Forecast			Area Forecast Discussion (AFD)	NWS National Fire Weather Page	Fire Weather Warnings
						Fire Danger Statements
						Wakefield Fire Weather Page

Fire Weather Outlooks and Parameters

Click on Graphic to enlarge or be Re-directed to a Web Site Providing More Detailed Information

Fire Weather Graphics - Mouseover to Change Graphic	
SPC National Outlooks	
Day 1 Outlook	
Day 2 Outlook	
Days 3-8 Outlook	
Fuel Moisture (FM) Graphics	
10 Hour FM (Observed)	
10 Hour FM (Forecast)	
100 Hour FM (Observed)	
100 Hour FM (Forecast)	
1000 Hour FM (Observed)	
1000 Hour FM (Forecast)	
Drought Status Graphics	
Keetch-Byrum Index	
Palmer Drought Index	
Observed Soundings	
Wallops Island	
Dulles	
Greensboro	
Blacksburg	
Morehead City	
	<p>SPC DAY 1 FIRE WK OUTLOOK ISSUED: 1554Z 11/30/2015 VALID: 30/1700Z-01/1200Z FORECASTER: COOK NOAA/NWS Storm Prediction Center, Norman, Oklahoma</p>
	<p>Fire Weather Outlook Legend: Elevated Critical Extreme Iso Dry T Scattered Dry T</p>

NOTE: This page utilizes mouseover capabilities, and is compatible with smartphones and tablets.

The Fire Weather Briefing Page is designed to allow customers with fire and fire suppression related interests to access fire weather information and forecasts from national and local sources. The links to the **Forecast Graph**, **Forecast Table**, and **Forecast Images** are described on pages 6 and 7 of the main users guide, and after this page (if you are looking at the fire weather page users guide). Also, to the left of these links are links to our **text fire weather forecast**, **RAWS point Fire Weather Forecast**, and **Fire Weather Warning and Danger Statements**.

Forestry and forestry management professionals can request a spot (or location specific) fire weather forecast via the link above the fire weather graphics. The requests are received at forecaster workstations and forecasts are usually generated within 15-20 minutes of the spot forecast request.

14 – The Safety and Preparedness Page

Safety and Preparedness Page

[Weather.gov](#) > [Wakefield, VA](#) > Safety and Preparedness Page

Wakefield, VA
Weather Forecast Office

Main EM/Briefing Page Rain and Snow Forecasts	Severe Thunderstorms Hurricanes	Tides/Coastal Flooding Marine Weather	Rivers/River Flooding Radar and Satellite	Extended Forecasts & Drought Climate Data	Space Weather Maps and Models	Fire Weather Safety and Preparedness
Thunderstorm, Tornado and Lightning Safety Tstms, Tornadoes and Lightning  Lightning Safety  Family Lightning Safety 			Winter Weather Safety Winter Storms  Winter Safety Web Site 		NOAA Weather Radio NOAA Weather Radio  Regional Weather Radio Map 	
Hurricane Safety and Preparedness Hurricanes and Tropical Storms  Tropical Cyclone Flooding  Hurricane Preparedness  VA Hurricane Evacuation Guide  VA Hurricane History 					Flooding Safety Floods and Flood Safety  Turn Around Don't Drown 	
Heat Safety Heat Wave 	Miscellaneous Safety and Preparedness Owlie SKYWARN (For Kids)  StormReady Brochure  Tsunami Safety Web site  Tsunami - The Great Waves  Tsunami Warning Center  Storm Spotters Guide 					
Additional Resources NWS Office & Internal Sites  NOAA Cloud Chart  Past Events Web Page  Locally Produced Climate Info  NWS Wakefield Warning Criteria  USGS Earthquake Info 						

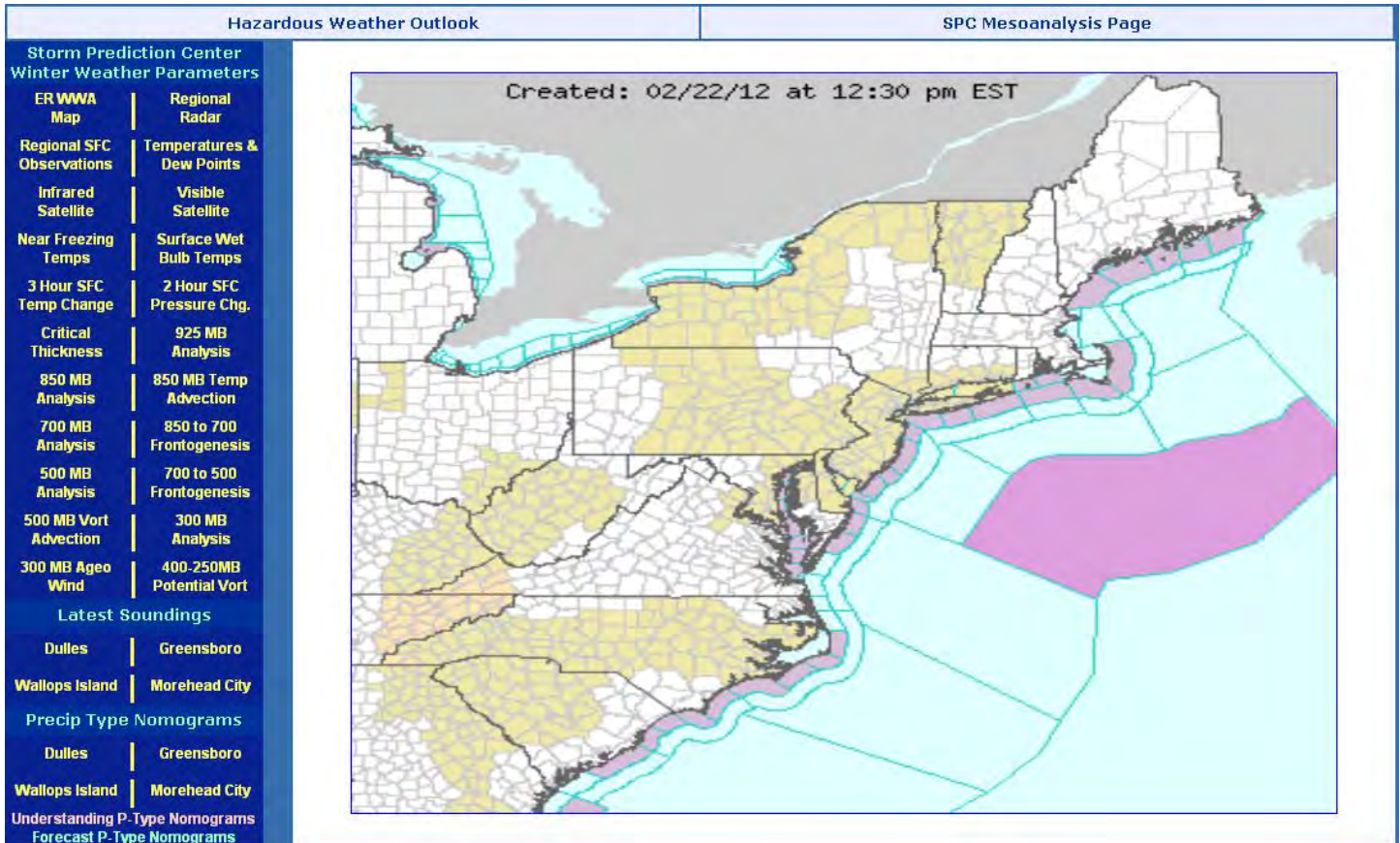
The Safety and Preparedness Page contains natural hazard brochures, fact sheets, and other safety and preparedness materials. Many of the brochures are prepared jointly by NOAA, FEMA and the American Red Cross. Some materials, such as [VA Hurricane History](#), [NWS Offices and Internet Sites](#), and the [Regional Weather Radio Map](#), are locally prepared and periodically updated. Under Additional Resources are links to NWS Wakefield's [Past Events Web Page](#), which contains descriptions of many of the significant weather events affecting Virginia since 1995; and a link to [Locally Produced Climate Info](#). The information on the [Locally Produced Climate Info](#) page is all produced at NWS Wakefield, and an effort is made to keep the data and information on this page as up-to-date as possible. Links to USGS earthquake info, and the Alaska Tsunami Warning Center (which serves the U.S. East Coast), are provided.

In addition, at the top left of this page are links to the [ReadyVirginia](#), [ReadyNC](#), [Ready.gov](#) and [Maryland Emergency Management](#) preparedness web sites.

Appendix A – The Winter Mesoanalysis Page

NOTE: *This page utilizes mouseover capabilities, and is compatible with smartphones and tablets.*

The Severe Thunderstorm Mesoanalysis page is designed to provide a real-time picture of thunderstorm and/or severe thunderstorm potential. The graphics on this page are mostly from the SPC Mesoanalysis Page (linked above the graphics), utilizing the Mid Atlantic sector. Although many of the parameters are well known to meteorologists, others require some explanation (see descriptions below graphic).



Frontogenesis – The generation or intensification of a front. It occurs when warm air converges onto colder air, and the horizontal temperature gradient amplifies by at least an order of magnitude.

Advection – Transport of an atmospheric property by the wind. Most often used to describe increases or decreases in temperature or moisture.

Potential Vort (Potential Vorticity) – This plays an important role in the generation of vorticity (cyclonic turning in the atmosphere) in cyclogenesis, especially along the polar front. It is also very useful in tracing intrusions of stratospheric air deep into the troposphere in the vicinity of jet streaks.

Appendix A1 – The Precip Type Nomogram Page

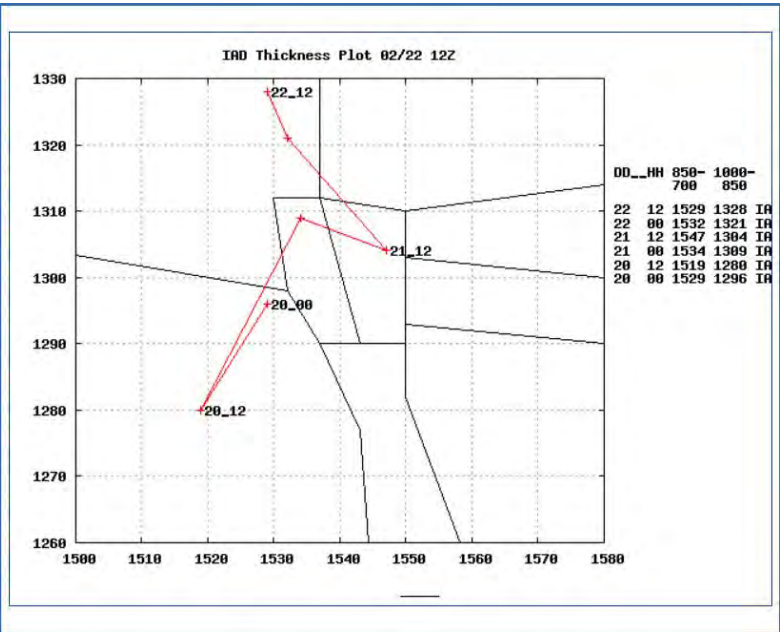
NOTE: This page utilizes mouseover capabilities, and is compatible with smartphones and tablets.

Precipitation type nomograms can be a quick way to determine precipitation type, or the evolution of precipitation types, during a winter weather event. This page shows nomograms for weather balloon observations from Dulles Airport, VA, Greensboro, NC, Morehead City, NC and Wallops Island, VA. In addition, forecast precipitation type

Understanding P-Type Nomograms
Observed Precip Type Nomograms

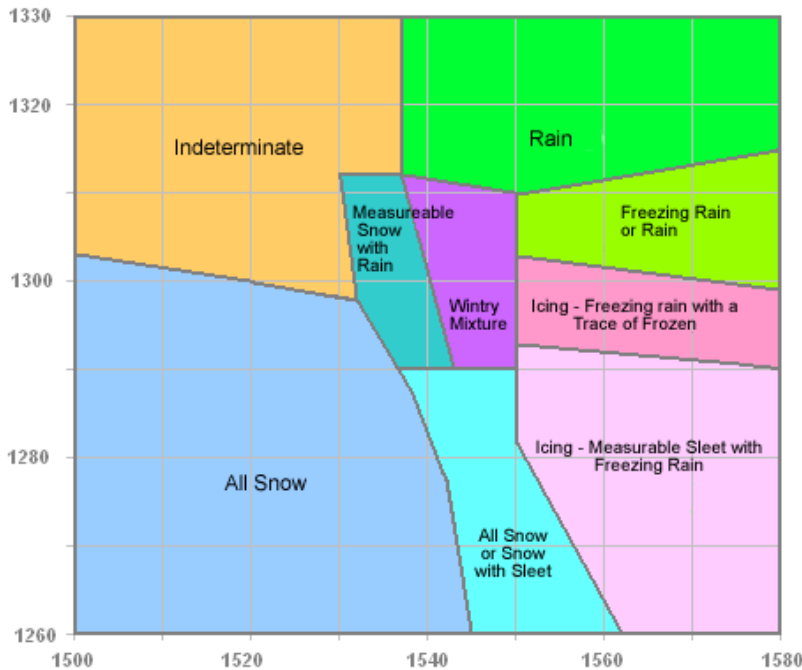
Forecast Precip Type Nomograms
Courtesy WFO Raleigh

IAD	GSO	WAL	MHX
Charlottesville VA			
RUC	WRF	NAM	SREF
Dulles Airport VA			
RUC	WRF	NAM	SREF
Salisbury MD			
RUC	WRF	NAM	SREF
Farmville VA			
RUC	WRF	NAM	SREF
Richmond VA			
RUC	WRF	NAM	SREF
Danville VA			
RUC	WRF	NAM	SREF
Raleigh NC			
RUC	WRF	NAM	SREF
Roanoke Rapids NC			
RUC	WRF	NAM	SREF
Norfolk VA			
RUC	WRF	NAM	SREF
Elizabeth City NC			
RUC	WRF	NAM	SREF
GEM			



nomograms for about a dozen locations in and around the NWS Wakefield area of responsibility are available for the following models – RUC (Rapid Update Cycle); WRF (Weather Research and Forecast); NAM; SREF (Short-Range Ensemble); GFS; and GEM (Canadian). These nomograms are all available courtesy of WFO Raleigh, NC.


P-Type Categories

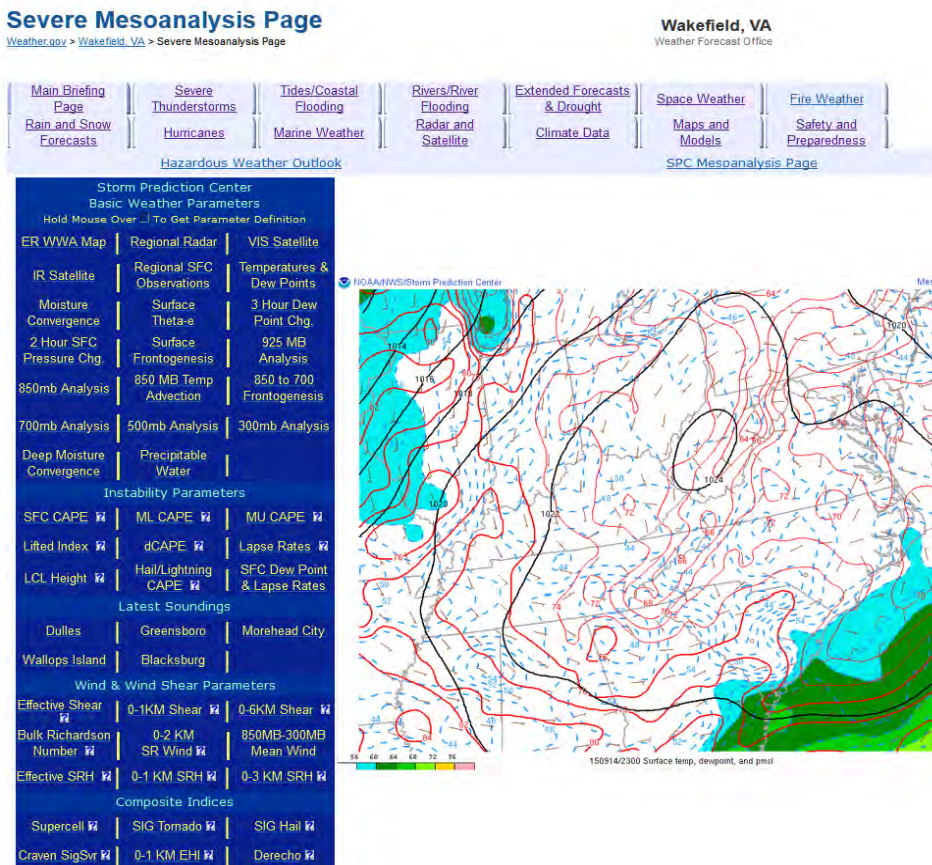


The image at left is a legend for understanding precip type nomograms.

Appendix B – The Severe Thunderstorm Mesoanalysis Page

NOTE: This page utilizes mouseover capabilities, and is compatible with smartphones and tablets.

The [Severe Thunderstorm Mesoanalysis](#) page is designed to provide a real-time picture of thunderstorm and/or severe thunderstorm potential. The graphics on this page are mostly from the SPC Mesoanalysis Page (linked above the graphics), utilizing the Mid Atlantic sector. Although many of the parameters are well known to meteorologists, others require some explanation. For those viewing this page from a PC/laptop, hold your mouse over the  symbol for an explanation of that parameter. These explanations are also provided below.



Severe Mesoanalysis Page
Weather.gov > Wakefield, VA > Severe Mesoanalysis Page

Wakefield, VA
Weather Forecast Office

Main Briefing Page | Severe Thunderstorms | Tides/Coastal Flooding | Rivers/River Flooding | Extended Forecasts & Drought | Space Weather | Fire Weather | Rain and Snow Forecasts | Hurricanes | Marine Weather | Radar and Satellite | Climate Data | Maps and Models | Safety and Preparedness

Hazardous Weather Outlook | SPC Mesoanalysis Page

Storm Prediction Center
Basic Weather Parameters
Hold Mouse Over to Get Parameter Definition

ER WWA Map	Regional Radar	VIS Satellite
IR Satellite	Regional SFC Observations	Temperatures & Dew Points
Moisture Convergence	Surface Theta-e	3 Hour Dew Point Chg.
2 Hour SFC Pressure Chg.	Surface Frontogenesis	925 MB Analysis
850mb Analysis	850 MB Temp Advection	850 to 700 Frontogenesis
700mb Analysis	500mb Analysis	300mb Analysis
Deep Moisture Convergence	Precipitable Water	

Instability Parameters

SFC CAPE	ML CAPE	MU CAPE
Lifted Index	dCAPE	Lapse Rates
LCL Height	Hail/Lightning CAPE	SFC Dew Point & Lapse Rates

Latest Soundings

Dulles	Greensboro	Morehead City
Wallops Island	Blacksburg	

Wind & Wind Shear Parameters

Effective Shear	0-1KM Shear	0-6KM Shear
Bulk Richardson Number	0-2 KM SR Wind	850MB-300MB Mean Wind
Effective SRH	0-1 KM SRH	0-3 KM SRH

Composite Indices

Supercell	SIG Tornado	SIG Hail
Craven SigSpr	0-1 KM EHI	Derecho

Frontogenesis - the generation or intensification of a front. It occurs when warm air converges onto colder air, and the horizontal temperature gradient amplifies by at least an order of magnitude.

Theta-e – Equivalent Potential Temperature - The temperature a parcel of air would have if a) it was lifted until it became saturated, b) all water vapor was condensed out, and c) it was returned adiabatically (i.e., without transfer of heat or mass) to a pressure of 1000 millibars. Theta-e, which typically is

expressed in degrees Kelvin, is directly related to the amount of heat present in an air parcel. Thus, it is useful in diagnosing atmospheric instability.

Precipitable Water – Measure of the depth of liquid water at the surface that would result after precipitating all of the water vapor in a vertical column over a given location, usually extending from the surface to 300 mb.

SFC CAPE – Surface CAPE is the Convective Available Potential Energy based lifting a surface parcel, and the convective inhibition for the same parcel. Areas of high CAPE (1000+ j/kg) and minimal convective inhibition (i.e. an unstable airmass) are associated with an increased threat for surface-based thunderstorms.

ML CAPE – MLCAPE (Mixed Layer Convective Available Potential Energy) is a measure of instability in the troposphere. This value represents the mean potential energy conditions available to parcels of air located in the lowest 100mb when lifted to the level of free convection (LFC). No parcel entrainment is considered. The CAPE and CIN calculations use the virtual temperature correction.

MU CAPE – MUCAPE (Most Unstable Convective Available Potential Energy) is a measure of instability in the troposphere. This value represents the total amount of potential energy available to the most unstable parcel of air found within the lowest 300mb of the atmosphere while being lifted to its level of free convection (LFC). No parcel entrainment is considered. The CAPE and CIN calculations use the virtual temperature correction.

Lifted Index – SBLI (Surface Based Lifted Index) is a comparison between the temperature of a surface based parcel lifted to 500mb (approx. 20,000 ft) and the environmental temperature at 500MB. Negative values of SBLI denote an unstable atmosphere; the more negative, the more unstable. These fields are meant to identify areas of surface-based CAPE and minimal convective inhibition, which suggests some threat for surface-based thunderstorms.

dCAPE – The DCAPE (Downdraft CAPE) can be used to estimate the potential strength of rain-cooled downdrafts within thunderstorm convection, and is similar to CAPE. Larger DCAPE values are associated with potentially stronger downdrafts.

Lapse Rates – Lapse rates are shown in terms of temperature change (in degrees Celsius) per kilometer in height. Values less than 5.5-6.0 degrees C/km (moist adiabatic) represent stable conditions, while values near 9.5 degrees C/km (dry adiabatic) are considered absolutely unstable. In between these two values, lapse rates are considered conditionally unstable. Conditional instability means that if enough moisture is present, lifted air parcels could have a negative LI (lifted index) and/or positive CAPE.

LCL Height – The LCL (Lifting Condensation Level) is the level at which a parcel becomes saturated. It is a reasonable estimate of cloud base height when parcels experience forced ascent. The height difference between this parameter and the LFC is important when determining convective initiation. The smaller the difference between the LCL and the LFC, the more likely thunderstorms develop. The LFC-LCL difference is similar to CIN (convective inhibition).

Lightning/Hail CAPE – This image depicts CAPE in the layer from -10 C to -30 C, and the freezing level height (in meters). Large CAPE (values greater than 400-500) in the layer from -10 C to -30 C favors rapid hail growth and significant lightning activity. Freezing level heights less than 3500 meters suggest a greater probability of hail reaching the surface prior to melting.

Effective Shear – The bulk vector difference from the effective inflow base upward to 50% of the equilibrium level height for the most unstable parcel in the lowest 300 mb. This parameter is similar to the 0-6 km bulk shear, though it accounts for storm depth (effective inflow base to EL) and is designed to identify both surface-based and elevated supercell environments. Supercells become more probable as the effective bulk shear vector increases in magnitude from 25-40 kt and greater.

0-1KM Shear – Surface-1-km Vertical Shear is the difference between the surface wind and the wind at 1km above ground level. These data are plotted as vectors with shear magnitudes contoured. 0-1km shear magnitudes greater than 15-20 knots tend to favor supercell tornadoes.

0-6KM Shear – The Boundary Layer through 6km above ground level shear vector denotes the change in wind throughout this height. Thunderstorms tend to become more organized and persistent as vertical shear increases. Supercells are commonly associated with vertical shear values of at least 35-40 knots through this depth.

Bulk Richardson Number – The BRN is meant to estimate the balance between vertical shear and buoyancy, with low BRN values suggestive of vertical shear that is too strong relative to the buoyancy, and large BRN values are suggestive of multicell clusters. Intermediate BRN values favor sustained supercells. BRN values in the range of 10-45 (dimensionless) have been associated with supercells via numerical simulations.

0-2KM SR Wind – Low-Level SR (Storm Relative) winds (0-2km) are meant to represent low-level storm inflow. The majority of sustained supercells have 0-2km storm inflow values of 15-20 knots or greater.

Effective SRH – Effective SRH (Storm Relative Helicity) is based on threshold values of lifted parcel CAPE (100 J/kg) and CIN (-250 J/kg). These parcel constraints are meant to confine the SRH layer calculation to the part of a sounding where lifted parcels are buoyant, but not strongly capped. Effective SRH discriminates the best between significant tornadic and nontornadic supercells.

0-1 KM SRH – SRH (Storm Relative Helicity) is a measure of the potential for cyclonic updraft rotation in right-moving supercells, and is calculated for the lowest 1-km and 3-km layers above ground level. There is no clear threshold value for SRH when forecasting supercells, since the formation of supercells appears to be related more strongly to the deeper layer vertical shear. However, larger values of 0-3km SRH (greater than $250 \text{ m}^2/\text{s}^2$) and 0-1km SRH (greater than $100 \text{ m}^2/\text{s}^2$) do suggest an increased threat of tornadoes with supercells. For SRH, larger values are generally better, but there are no clear boundaries between non-tornadic and significant tornadic supercells.

0-3 KM SRH – SRH (Storm Relative Helicity) is a measure of the potential for cyclonic updraft rotation in right-moving supercells, and is calculated for the lowest 1-km and 3-km layers above ground level. There is no clear threshold value for SRH when forecasting supercells, since the formation of supercells appears to be related more strongly to the deeper layer vertical shear. However, larger values of 0-3km SRH (greater than $250 \text{ m}^2/\text{s}^2$) and 0-1km SRH (greater than $100 \text{ m}^2/\text{s}^2$) do suggest an increased threat of tornadoes with supercells. For SRH, larger values are generally better, but there are no clear boundaries between non-tornadic and significant tornadic supercells

Supercell Composite Parameter (SCP) – A multiple ingredient, composite index that includes effective storm-relative helicity (ESRH, based on Bunkers right supercell motion), most unstable parcel CAPE (muCAPE), and effective bulk wind difference (EBWD). Each ingredient is normalized to supercell threshold values, and larger values of SCP denote greater overlap in the three supercell ingredients. Only positive values of SCP are displayed, which correspond to environments favoring right-moving (cyclonic) supercells.

SIG Tornado Composite Parameter (STP) – A multiple ingredient, composite index that includes 0-6 km bulk wind difference (6BWD), 0-1 km storm-relative helicity (SRH1), surface parcel CAPE (sbCAPE), surface parcel CIN (sbCIN), and surface parcel LCL height (sbLCL). This version of STP uses fixed layer calculations of vertical shear, and the surface lifted parcels, as an alternative to the effective layer version of STP. A majority of significant tornadoes (F2 or greater damage) have been associated with STP values greater than 1, while most non-tornadic supercells have been associated with values less than 1.

SIG Hail Composite Parameter – The Significant Hail Parameter (SHIP) was developed using a large database of surface-modified, observed severe hail proximity soundings. It is based on 5 parameters, and is meant to delineate between SIG (2 in. diameter or greater) and NON-SIG (<2in. diameter) hail environments. Developed in the same vein as the STP and SCP parameters, values of SHIP greater than 1.00 indicate a favorable environment for SIG hail. Values greater than 4 are considered very high. In practice, maximum contour values of 1.5-2.0 or higher will typically be present when SIG hail is going to be reported.

Craven SIG Svr Composite Parameter – The simple product of 100mb MLCAPE and 0-6km magnitude of the vector difference accounts for the compensation between instability and shear magnitude. Using a database of about 60,000 soundings, the majority of significant severe events (2+ inch hail, 65+ knot winds, F2+ tornadoes) occur when the product exceeds 20,000 m³/s³. Units are scaled to the nearest 1000 on the web plot.

0-1KM EHI – The basic premise behind the EHI (Energy-Helicity Index) is that storm rotation should be maximized when CAPE is large and SRH is large. 0-1km EHI values greater than 1-2 have been associated with significant tornadoes in supercells.

Derecho Composite – The DCP was developed to identify environments considered favorable for cold pool driven wind events through 4 mechanisms: 1) Cold pool production [DCAPE], 2) Ability to sustain strong storms along the leading edge of a gust front [MUCAPE], 3) Organization potential for any ensuing convection [0-6 km shear], and 4) 0-6 km mean wind. This index is formulated as follows:

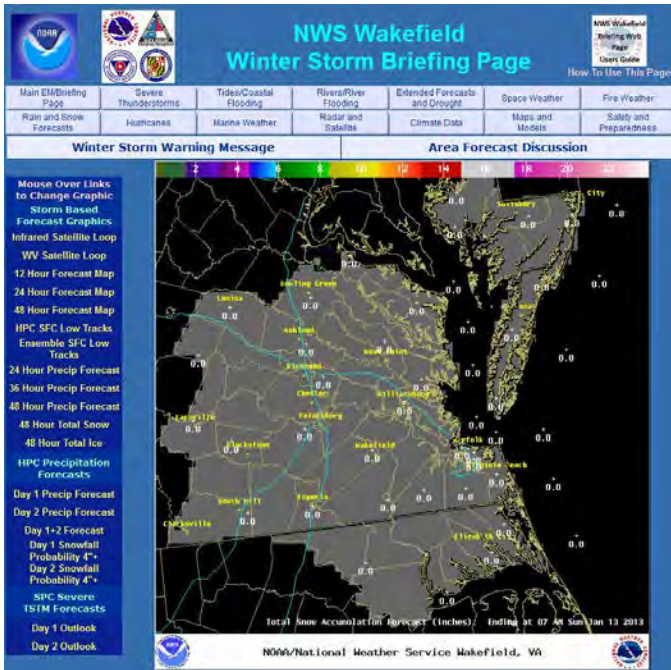
$DCP = (DCAPE/980) * (MUCAPE/2000) * (0-6 \text{ km shear}/20 \text{ kt}) * (0-6 \text{ km mean wind}/16 \text{ kt}).$

Appendix C – Comprehensive Airport Observation List

Airport Locations in and around WFO Wakefield

Location	Site ID	Location	Site ID
DOVER DE	KDOV	CLARKSVILLE	KW63
GEORGETOWN DE	KGED	SOUTH HILL	KAVC
EASTON MD	KESN	LUNENBURG	KW31
OCEAN CITY MD	KOXB	FORT PICKETT	KBKT
SALISBURY MD	KSBY	CREWE	KW81
PATUXENT RIVER NAS MD	KNHK	LAWRENCEVILLE	KLVL
ACCOMACK	KMFV	NEW KENT/QUINTON	KW96
WALLOPS ISLAND	KWAL	WILLIAMSBURG	KJGG
TANGIER ISLAND	KTGI	HAMPTON (LANGLEY AFB)	KLFI
STAFFORD	KRMN	NEWPORT NEWS	KPHF
FREDERICKSBURG	KEZF	WAKEFIELD	KAKQ
GORDONSVILLE	KGVE	FRANKLIN	KFKN
CHARLOTTESVILLE	KCHO	SUFFOLK	KSFQ
LOUISA	KLKU	HAMPTON ROADS AIRPORT	KPVG
LAKE ANNA	K7W4	NAS NORFOLK	KNGU
HANOVER	KOFP	NORFOLK	KORF
TAPPAHANNOCK	KXSA	CHESAPEAKE	KCPK
SALUDA	KW75	CHESAPEAKE (Fentress Field)	KNFE
RICHMOND	KRIC	VIRGINIA BEACH (NAS OCEANA)	KNTU
WEST POINT	KFYJ	ELIZABETH CITY	KECG
CHESTERFIELD	KFCI	CURRITUCK	KONX
PETERSBURG	KPTB	MANTEO	KEDE
FARMVILLE	KFVX	AHOSKIE	KASJ
LYNCHBURG	KLYH	EDENTON	KEDE
DANVILLE	KDAN	ROANOKE RAPIDS	KIXA
SOUTH BOSTON	KW78		
CHASE CITY	KCXE		

Appendix D – Winter Storm, Thunderstorm and Tropical Storm/Hurricane Situational Awareness (SA) Pages

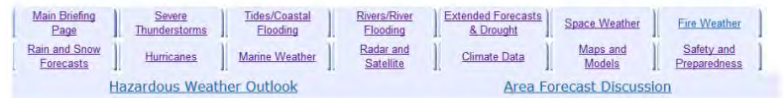


Obtaining overall (or big picture) situational awareness (SA) about an impending hurricane/tropical storm, severe thunderstorm, or winter weather event can be a difficult task, even using the [Briefing Web Page](#). To simplify the process of obtaining that big picture situational awareness, storm specific (for tropical events), [thunderstorm](#), and [winter weather](#) situational awareness web pages were developed.

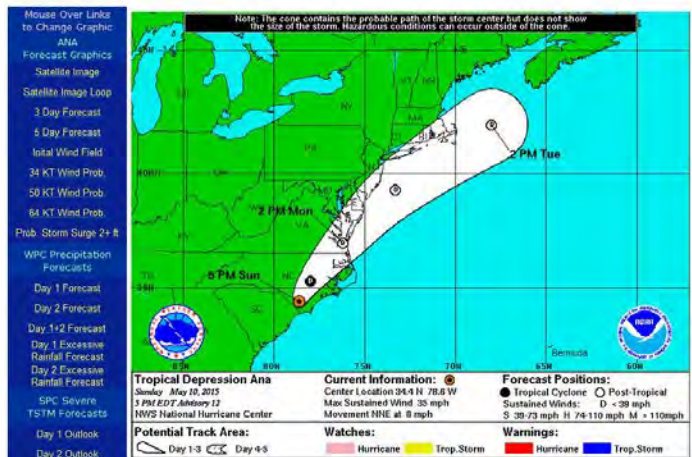
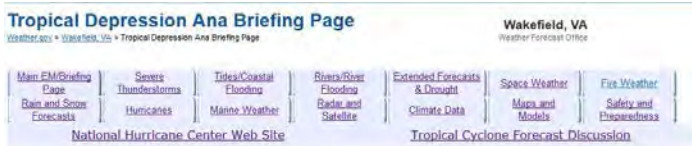
Thunderstorm Briefing Web Page

Weather.gov > Wakefield, VA > Thunderstorm Briefing Web Page

Wakefield, VA
Weather Forecast Office



The [winter weather](#) and [thunderstorm](#) pages are static pages meant to compliment the more comprehensive and detailed information available on the [Briefing Web Page](#). The data shown on this page come from the [Rain and Snow Forecasts](#) page, the [Severe Thunderstorms](#) page, the [Satellite and Radar](#) page, and the [Maps and Models](#) page.



The storm specific hurricane/tropical storm pages are available only for those storms potentially making landfall on the U.S. East/Gulf coasts, or those getting widespread news coverage. Much of the information under "...Forecast Graphics" is obtained from the [National Hurricane Center](#). The precipitation and severe thunderstorm graphics come from the [Weather Prediction Center \(WPC\)](#), and the [Storm Prediction Center \(SPC\)](#).

The URL for these pages is:

<http://weather.gov/akq/Stormname> (first letter of storm name is capitalized. E.G., the URL for Erika (2015) would end with *Erika*).

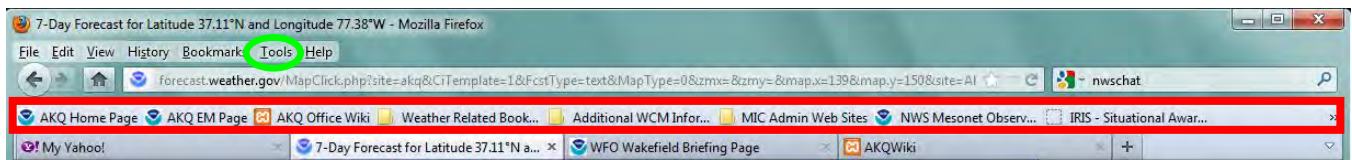
Appendix E – A Daily Briefing to Enhance Situational Awareness

Trying to decide what is or is not important weather-wise on a given day may seem difficult. However, NWS Wakefield’s Briefing Page is designed to simplify the task, and allow you the flexibility to create your personal daily briefing. Creating your own daily briefing will enhance situational awareness in benign and hazardous weather situations. **And, it generally takes less than 5 minutes.** Below are a couple of ways to use our Briefing Page to generate your daily briefing.

Tabbed Browsing

Web browsers, including those on most tablet PCs, have the ability to open multiple web pages as “home pages” whenever the browser starts. I call this tabbed browsing. You can easily leverage this capability to create an overall informational briefing, part of which includes weather. Below are examples of a browser with multiple tabs (pages) open in both Firefox and Internet Explorer.

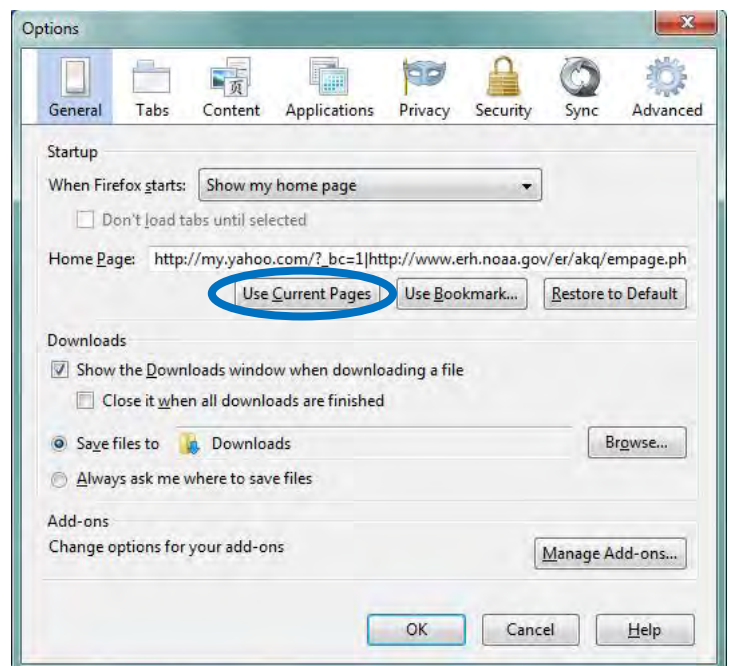
Firefox



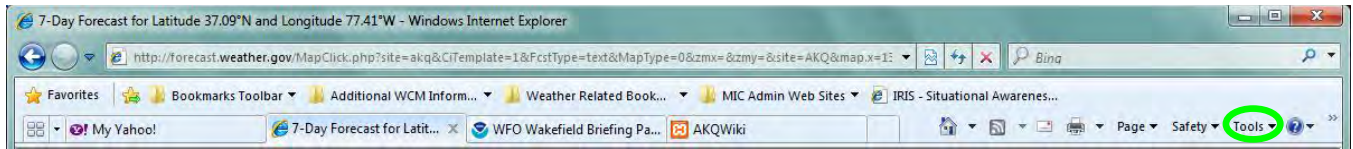
Simply click on the + to add a tab to this suite of pages. Note that I also like to have the bookmarks toolbar displayed (**highlighted in red**), which makes it easy to bring up web sites I most frequently visit. To make these pages your “homes pages”, click Tools (**circled in green**), then select Options. The following window appears:

Click Use Current Pages (**circled in blue**), then click OK.

The same process for Internet Explorer will be described on the next page.

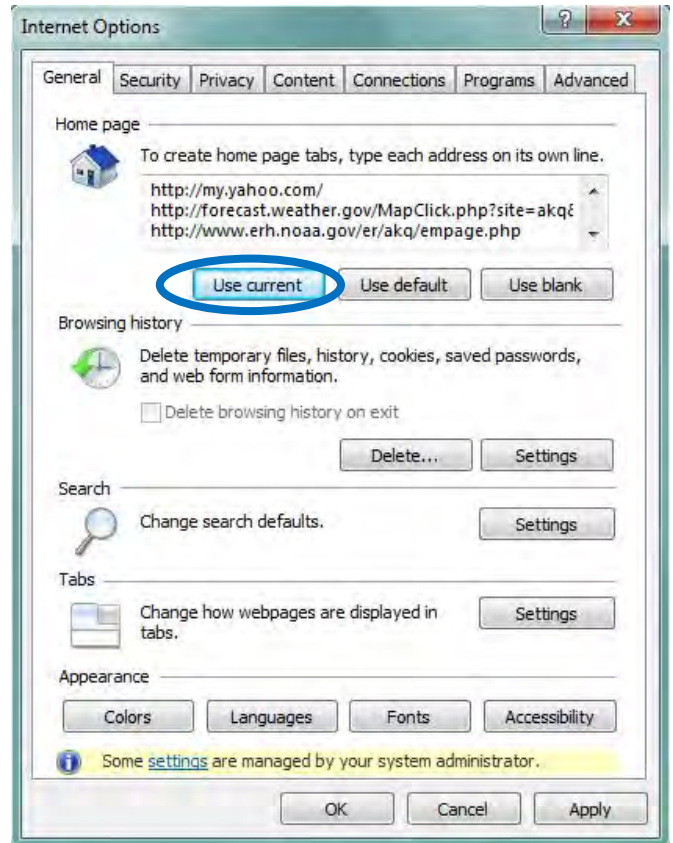


Internet Explorer



Simply click on the blank tab to the right of the “populated” ones to add a tab to this suite of pages. To make these pages your “homes pages”, click Tools (*circled in green*), then select Internet Options. The following window appears:

Click Use Current (*circled in blue*), then click Apply, then OK.

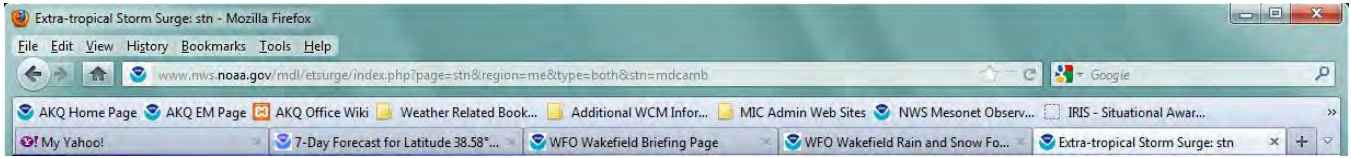


So What Pages Should I Use as Home Pages?

The answer to that question is personal preference. However, if we concentrate on weather, the simplest briefing would be having one tab be the 7 Day point forecast for a location near you, then have the main Briefing Web Page in another tab. Thus, if necessary, you get additional information on forecast rain or snow amounts, coastal flooding (if applicable), severe thunderstorms, etc. This is how I have the example tabs set up.

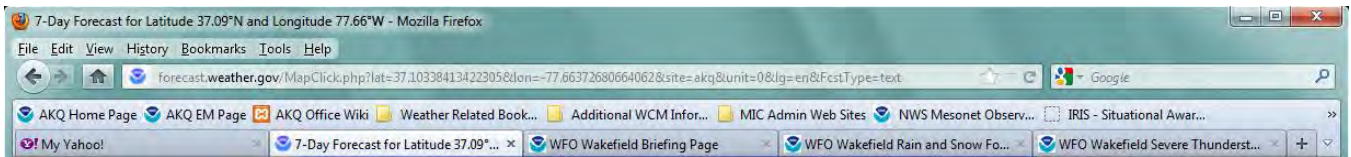
On the next page are a few options for a more robust, but efficient, weather briefing.

Coastal Location with Precipitation and/or Tidal Flooding Concerns



In this example, the Rain and Snow Forecasts page has been added, with the last tab being the Extratropical storm surge display for the location closest to the used (in this case Cambridge MD).

Inland Location with Precipitation and/or Severe Weather Concerns



In this example, the Severe Thunderstorms page has replaced the Extratropical storm surge display. Now the user can quickly determine precipitation amounts, as well as the severe weather potential over the next 2 days (if thunderstorms are anticipated in the 7 day point forecast).

Inland Location with Precipitation, Severe Weather, and/or River Flooding Concerns



In this example, a 5th tab (the Rivers/River Flooding tab) has been added. In addition to precipitation and severe weather, the user can now quickly assess any river flooding potential for the gauging point(s) closest to their location, or in their area of concern.

One Final Request

Please take time to become familiar with NWS Wakefield's Briefing Page. There is a lot of information on this page, both local and national, current and past. Much time has been spent to create a resource that can make any NWS customer a smarter, more informed user of weather information, without having to be a meteorologist.