



NOAA, National Weather Service Middle Atlantic River Forecast Center Briefing

1:30PM February 12, 2016

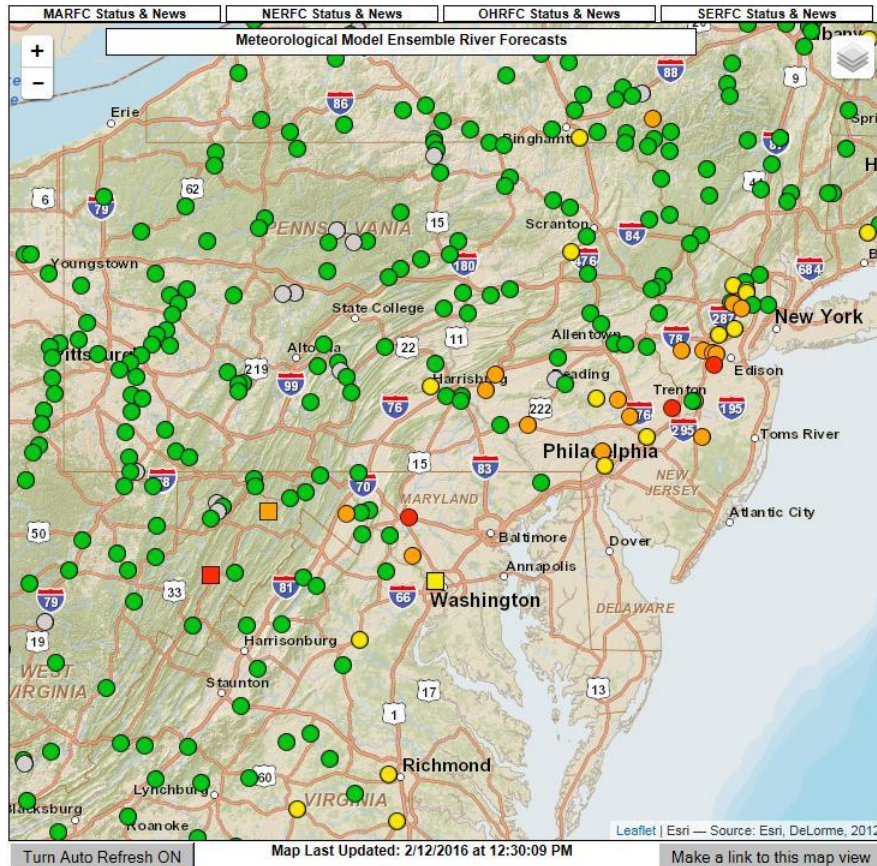
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Flood Potential Feb 16-18

- **Heads up in case early preparations are needed: Possibility of flooding.**
- **Risk:** Minor to Moderate Flooding possible across portions of Mid-Atlantic. Too early to name specific river basins that may be impacted
- **Timing:** Best chance for flooding is Tuesday night and Wednesday, but flooding could occur as early as Tuesday afternoon or as late as Thursday.
- **Uncertainty:** High. Number of locations impacted and severity of flooding depends on locations of heavier rainfall. This depends heavily on the track of the storm. Some parts of the region could see snow instead of rain, limiting runoff.
- **Note:** This briefing is for river flooding. Poor drainage flooding from heavy rainfall is also possible during the period.

Meteorological Model Ensemble River Forecasts (Potential River Levels)



Stay tuned: This map shows potential areas where we may see flooding. Since it is based on a forecast of rainfall and temperature four days from now, the predicted locations and severity of flooding will likely change over the next few days.

Chance of Exceedance		
30%	Level	70%
	Action	
	Minor Flood	
	Moderate Flood	
	Major Flood	
	= less than 30% chance of reaching Action level	
	= no critical levels defined for this point	

www.weather.gov/erh/mmefs

(above map based on 02/12/2016 00UTC NAEFS model)

High Uncertainty

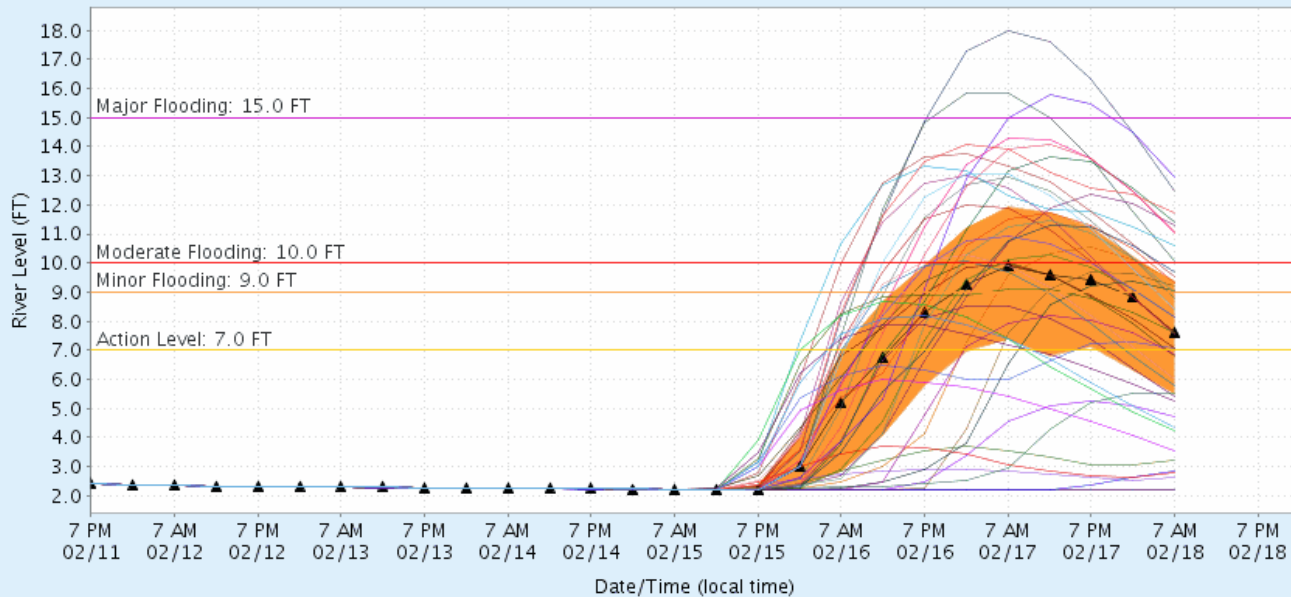


7 Day NAEFS River Level Simulations

Used to Estimate the Chance of Flooding and the Range of Possible River Levels
Each Line Shows an Individual Model Simulation (42 Total)



Millstone River at Blackwells Mills, NJ (BKWN4)

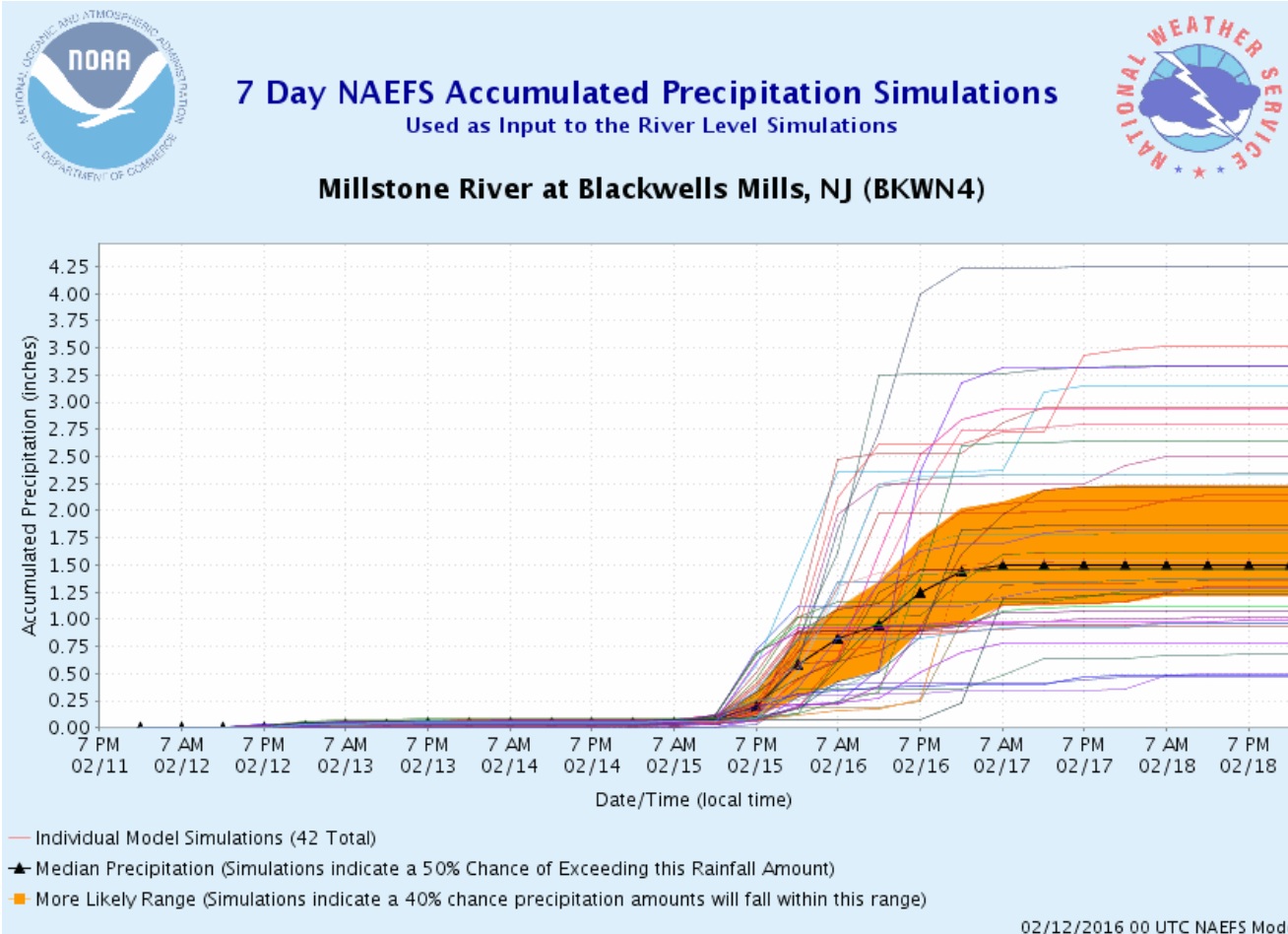


- Individual Model Simulations (42 Total)
- ▲ Median River Level (Simulations indicate a 50% Chance of Exceeding this Level)
- More Likely Range (Simulations indicate a 40% chance river levels will fall within this range)

02/12/2016 00 UTC NAEFS Model

As an example, here is the forecast for Blackwells Mills, NJ. Each trace represents a possible river level simulation. You see the river may not rise at all or may experience minor, moderate, or major flooding. See next slides for an explanation of why the uncertainty is so high.

Why is Uncertainty High?



First, we know that heavy rain is likely somewhere in the Mid-Atlantic, but we don't know exactly where. As an example, at Blackwells Mills, the precipitation could range anywhere from 0.25 inches to several inches.

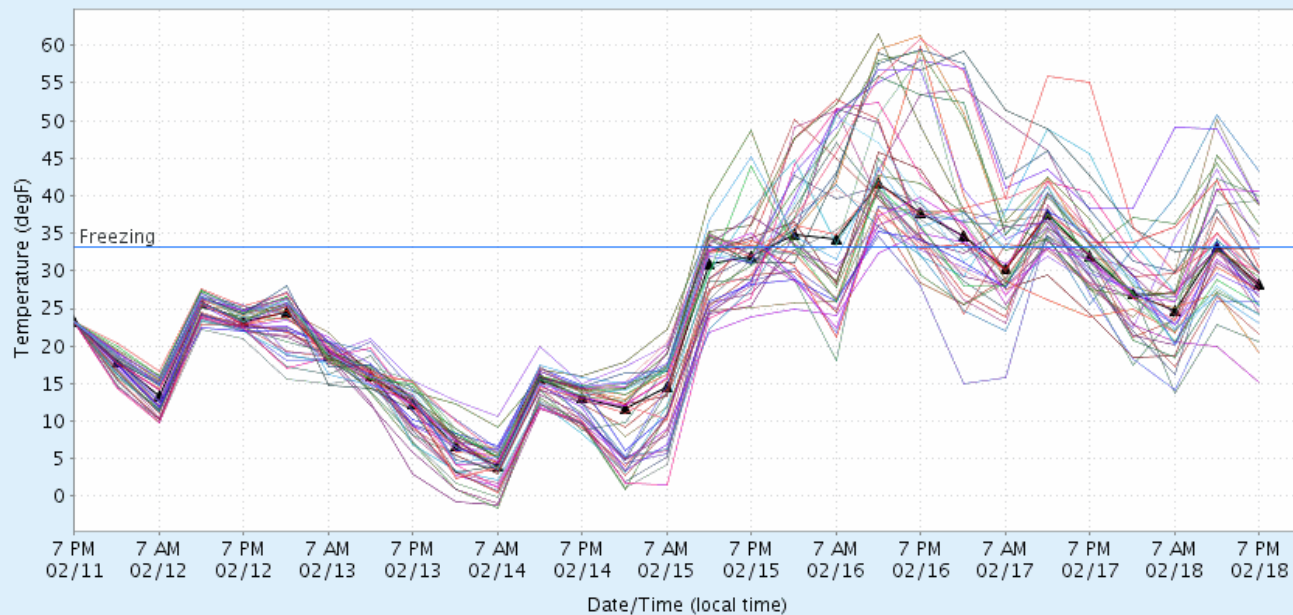
Why is Uncertainty High?



7 Day NAEFS Temperature Simulations Used as Input to the River Level Simulations



Millstone River at Blackwells Mills, NJ (BKWN4)



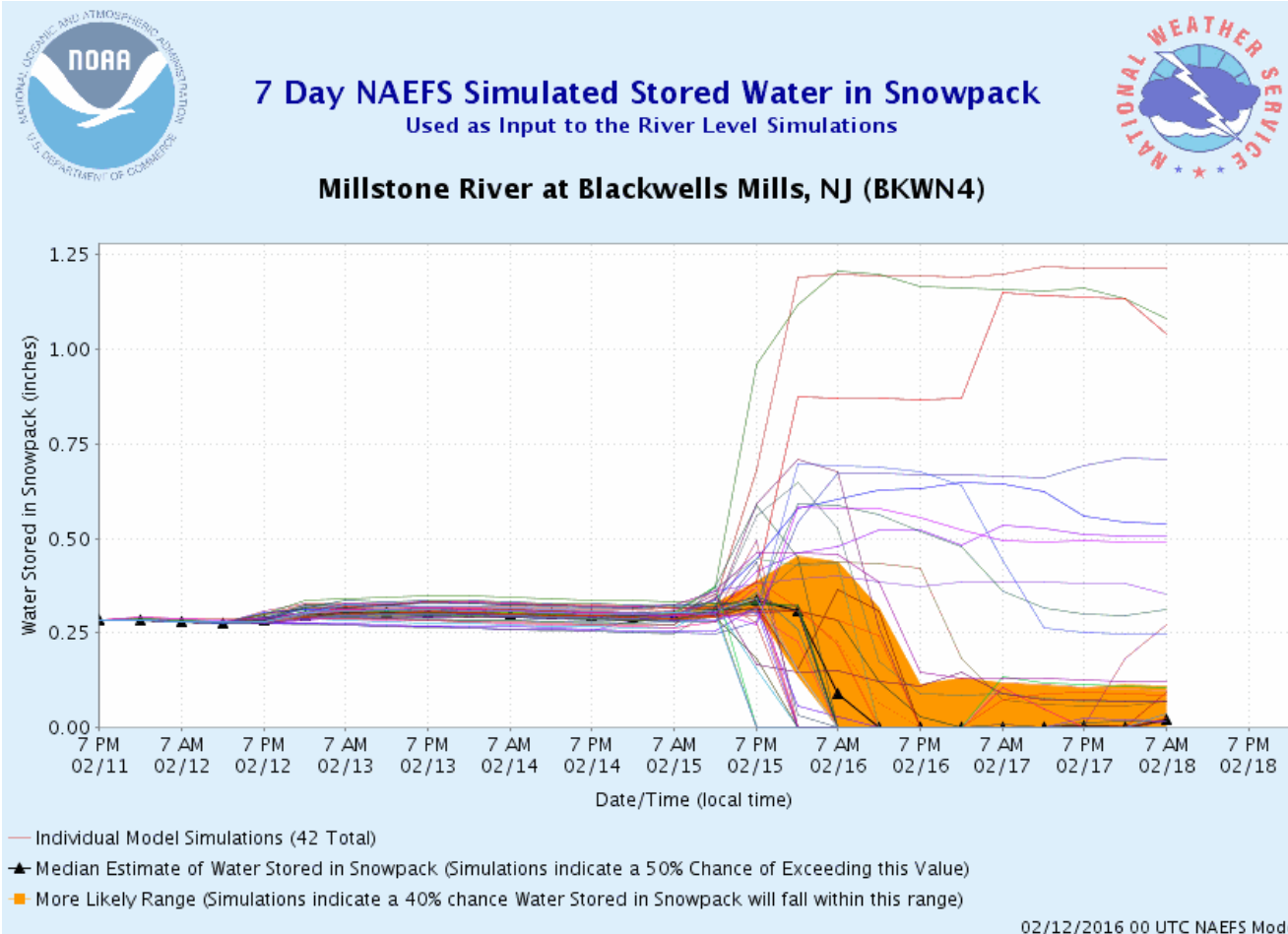
— Individual Model Simulations (42 Total)

▲ Median Temperature (Simulations indicate a 50% Chance of Exceeding this Value)

02/12/2016 00 UTC NAEFS Model

Second, at the time the precipitation is falling, mainly between 2/15 7PM and 2/16 7AM, we don't know if temperatures will be below or above freezing. If the storm track is further west, more locations will see warmer temperatures and rain. If the track is further east, more places will see colder temperatures and snow.

Why is Uncertainty High?



This graph shows simulations of the water in the snowpack. As you can see, some simulations indicate the precipitation falling more as snow (increases in water in snowpack) while others show the precipitation falling more as rain (decreases in the water in snowpack). This is tied closely to the track of the storm.

Stay Tuned....

- To see plots showing the river flood potential for other locations:
www.weather.gov/erh/mmefs
- To see the latest MARFC river forecasts and other hydrologic information:
- www.weather.gov/marfc

Need more info?

- Contact your local NWS Weather Forecast Office
 - Binghamton, NY <http://weather.gov/bgm>
 - Blacksburg, VA <http://weather.gov/rnk>
 - Mt Holly, NJ <http://weather.gov/phi>
 - State College, PA <http://weather.gov/ctp>
 - New York City, NY <http://weather.gov/okx>
 - Sterling, VA <http://weather.gov/lwx>
 - Wakefield, VA <http://weather.gov/akq>
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Next MARFC Briefing

- **The next MARFC briefing will be issued Saturday around 1pm.**