



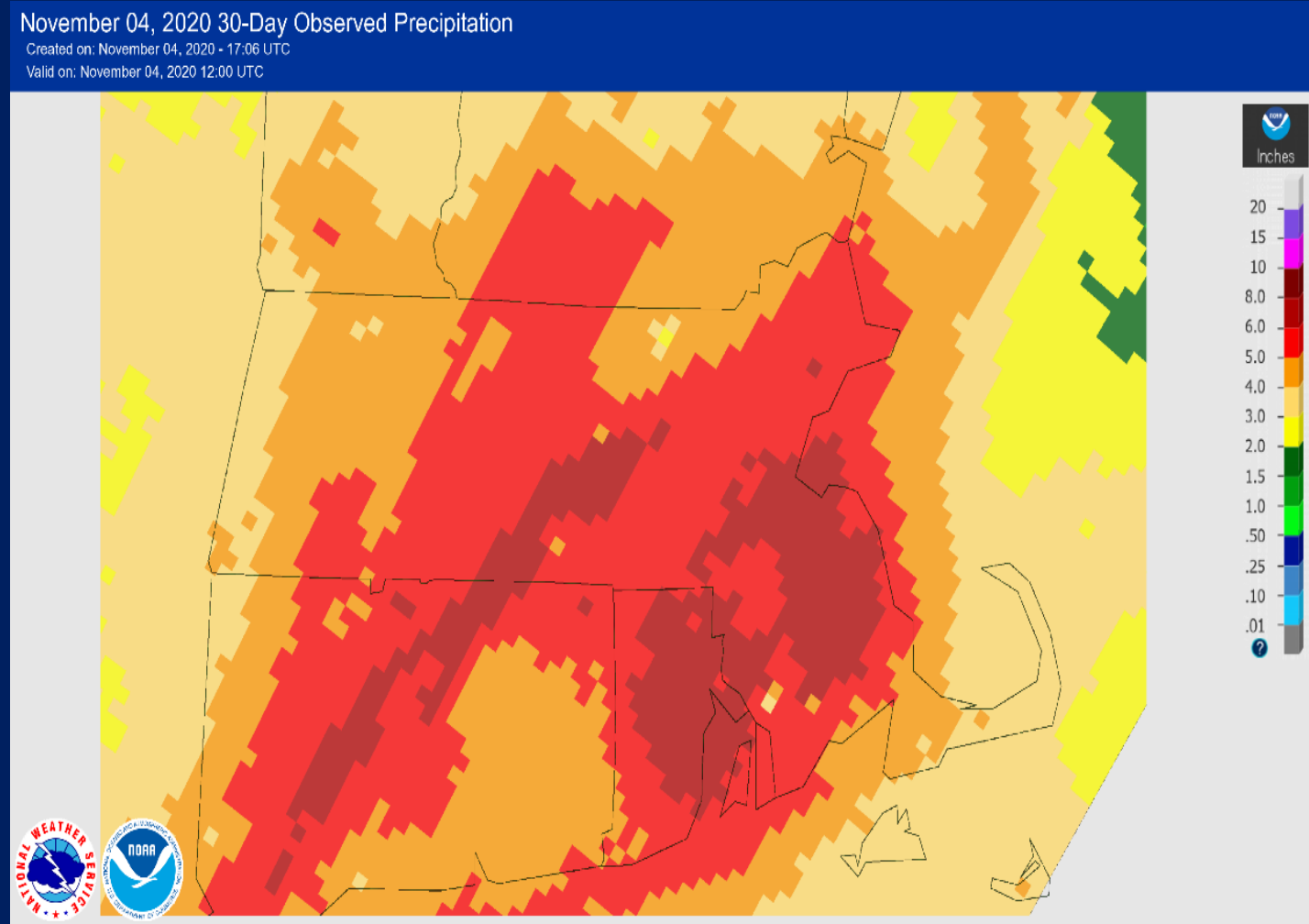
# MASSACHUSETTS RIVER OVERVIEW



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5 November 2020

# CURRENT RIVER FLOWS

- Recent rainfall has replenished river and stream flows across the Commonwealth but at least normal rainfall going forward will be necessary to sustain these flows.
  - Selected locations already dropping below normal again.

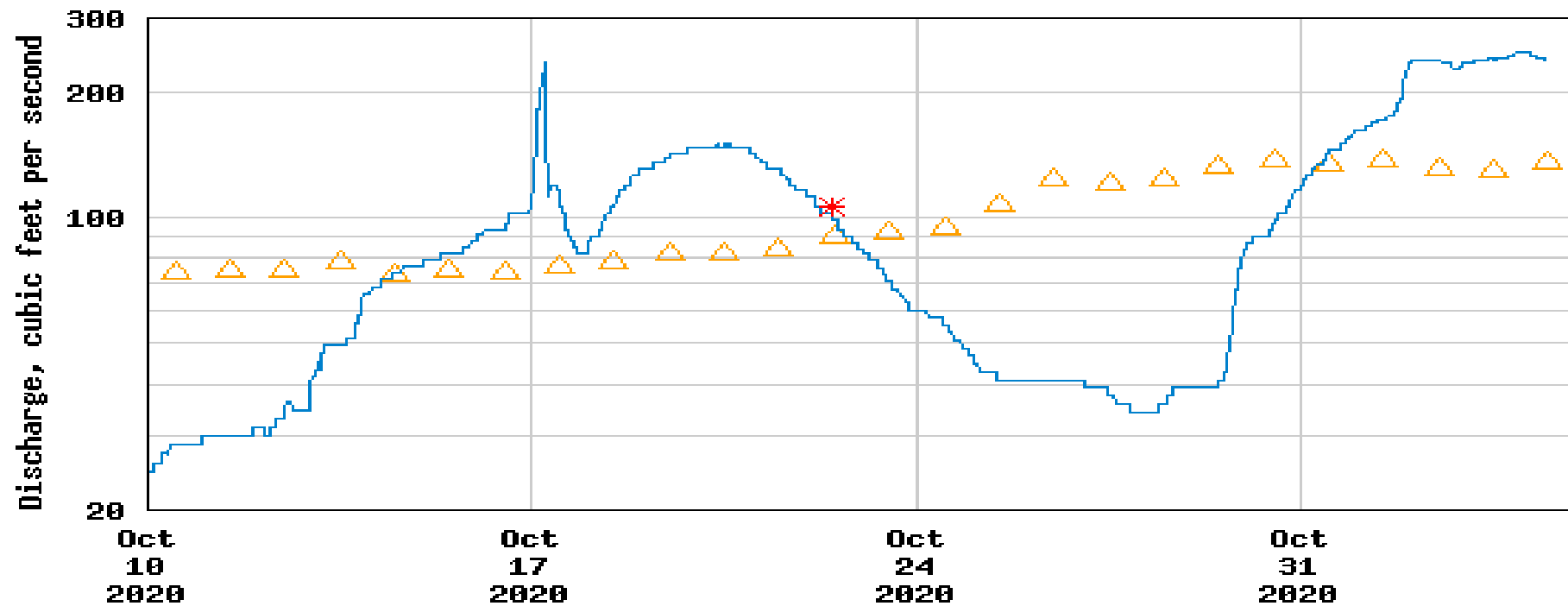


# CHARLES RIVER AT DOVER

## Discharge, cubic feet per second

Most recent instantaneous value: 238 11-04-2020 10:45 EST

USGS 01103500 CHARLES RIVER AT DOVER, MA



---- Provisional Data Subject to Revision ----

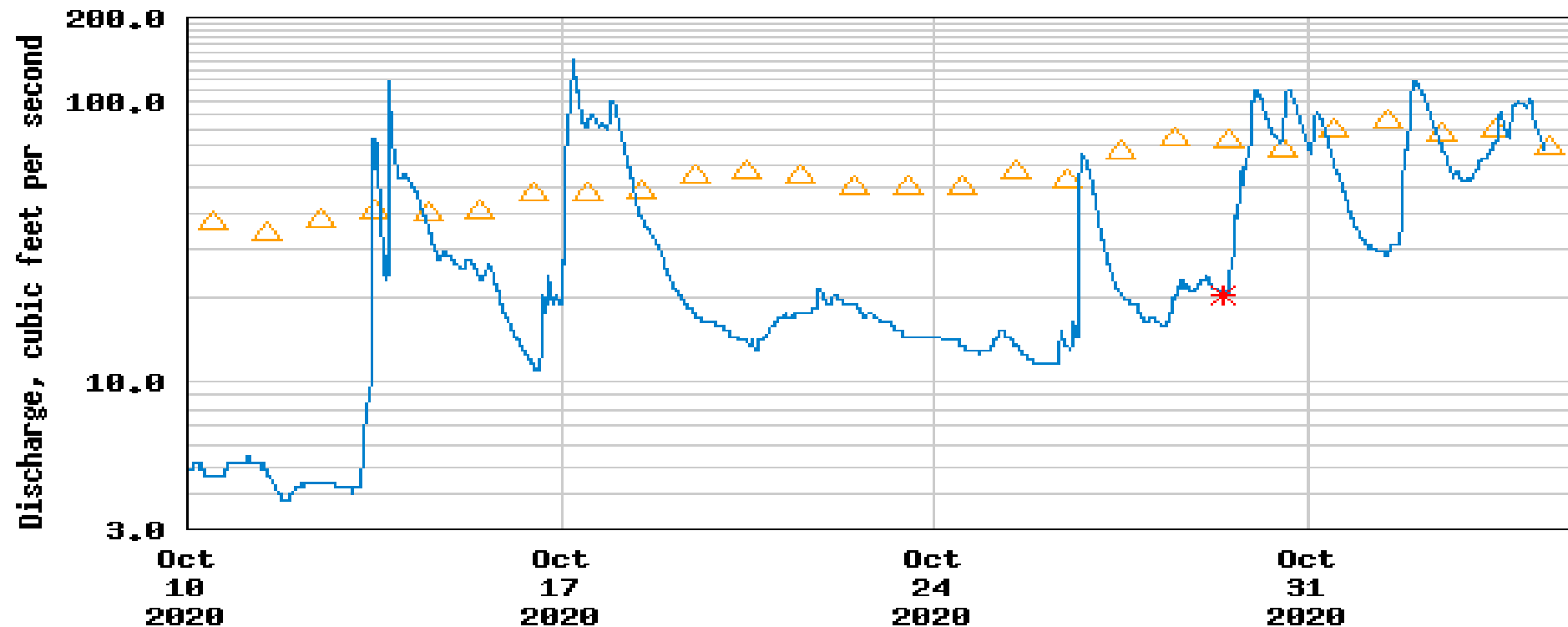
- △ Median daily statistic (83 years)
- \* Measured discharge
- Discharge

# NORTH NASHUA RIVER AT FITCHBURG

Discharge, cubic feet per second

Most recent instantaneous value: 68.0 11-04-2020 10:30 EST

USGS 01094400 NORTH NASHUA RIVER AT FITCHBURG, MA

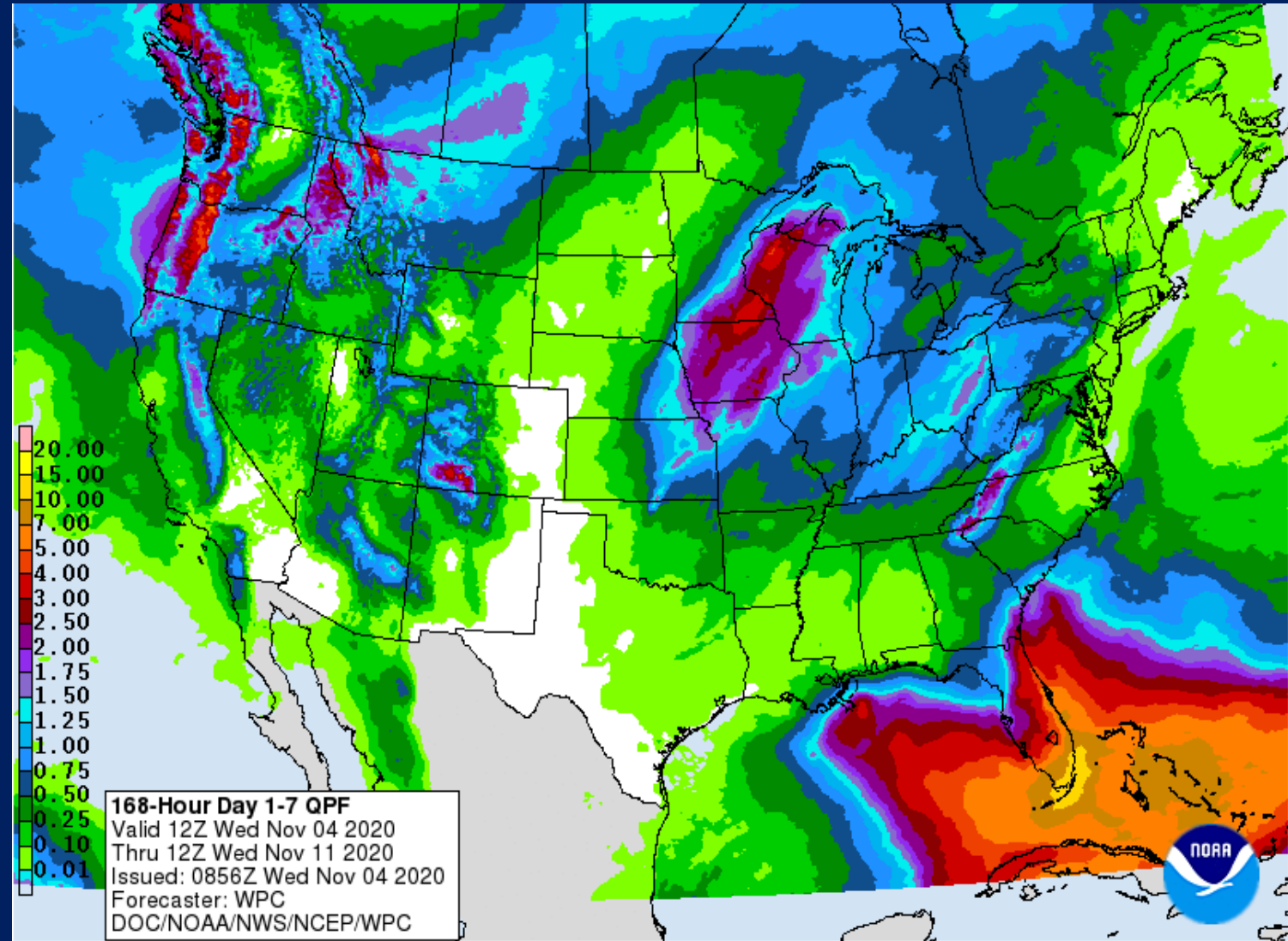


----- Provisional Data Subject to Revision -----

△ Median daily statistic (48 years) \* Measured discharge  
— Discharge

# RIVER FORECAST OUTLOOK

- Limited rainfall through early next week.



# NAEFS ENSEMBLE RIVER FORECAST OUTLOOK

- A 42 member ensemble run for all NERFC forecast points to give us an idea of the possible range of river flows out 10 days.
  - Basically 42 slightly different initial conditions lead to 42 different forecasts based on rainfall and temperature.
- Will show results for the North Nashua River at Fitchburg ( FBGM3 ) and the Charles River at Dover ( DOVM3 ).

# NAEFS – FBGM3

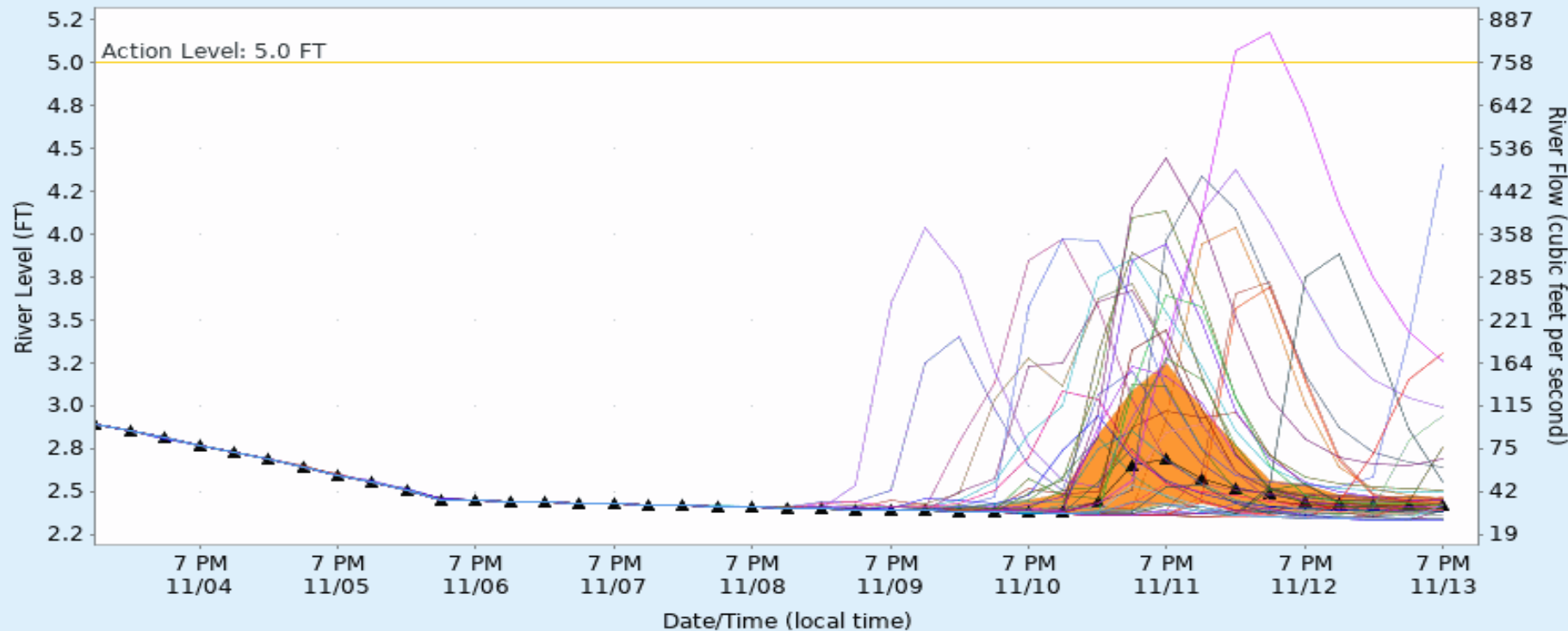


## 7 Day NAEFS River Level Simulations

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



### North Nashua River at Fitchburg, MA (FBGM3)



- 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)

Dry weather followed by a minor rain event by the middle of next week??

# NAEFS – DOVM3

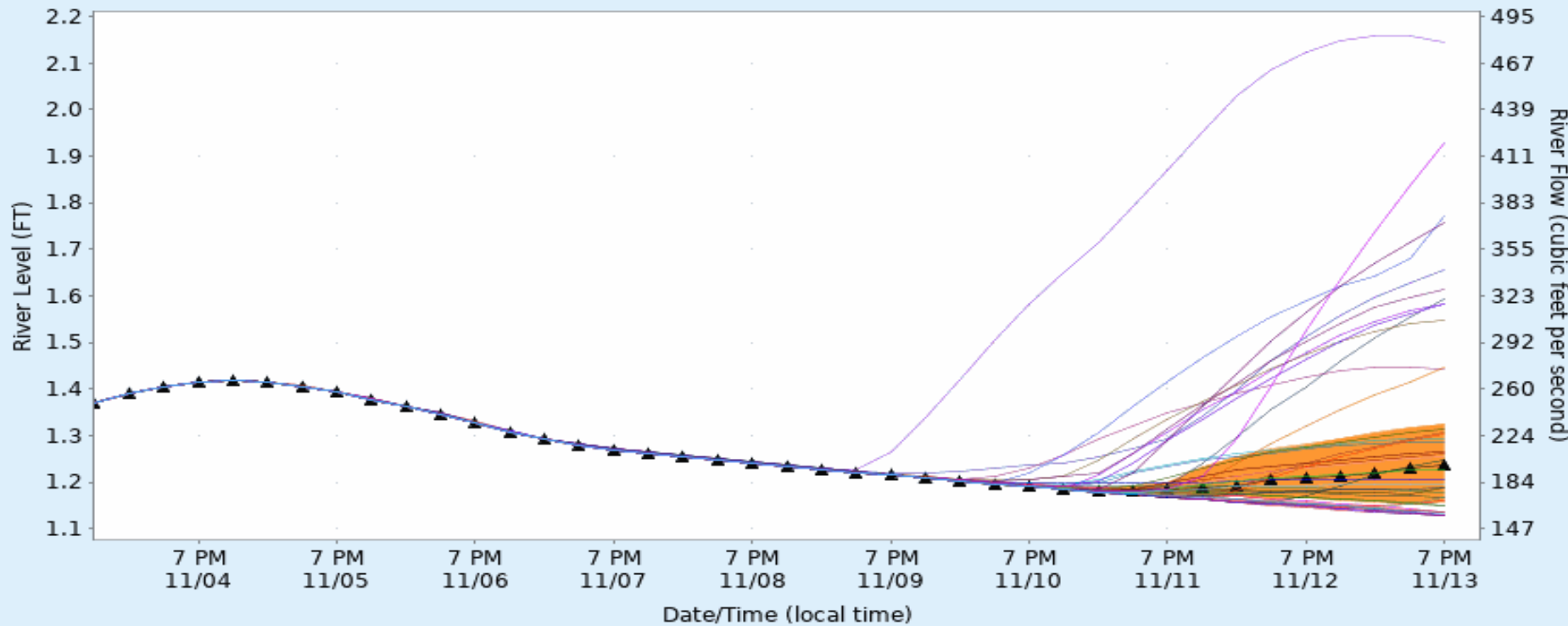


## 7 Day NAEFS River Level Simulations

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



### Charles River at Dover, MA (DOVM3)



- 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)

Minor rainfall event  
middle of next week??

Most likely range is shaded  
in orange ( still relatively  
low flow )



# CONCLUSIONS

- River flows have recovered from record lows across hard hit drought areas.
- Sustained at least normal rainfall will be needed to keep rivers from returning to below normal.
- Very dry and warm weather for November into early next week with a wetter weather pattern possible in the 10-14 November time frame.