

# Shawsheen River Gage Town Warrant Article

- P30 Warrant Article
- Cost
- Gage History
- Rational for Support
- Economic and Safety Benefits
- NOAA Web site
- Q/A

# Want to avoid this ever happening again



After a four-day deluge turned streets into rivers across New England, an elderly resident of Andover, Mass., was evacuated.

C.J. Gantner/European Pressphoto Agency

Help make The New York Times better:

# P30 Warrant Article 2022

- To see if the Town will appropriate from free cash the sum of \$ 75,000 for the purpose of operating and maintaining a Streamgage Station on the Shawsheen River in the vicinity of Balmoral Street and further to authorize the Town manager to enter into an agreement for the same with the United States Geological Survey.
- Submitted by John Mahoney for the Andover community.

# Cost of the StreamGage

- \$15,500 annually
- Constructed the kiosk at the Lower Shawsheen soccer field.
- Routine maintenance and repair
- Calibration
- Real time stream flow data
- Maintaining a website showing real time flow and forecast.



# River Gage History

- 2007-2010
  - Installed and funded by the MA Energy and Environmental affairs, Dept of Conservation and Recreation, Dept of Environmental Protection.
- 2010-2011
  - Cooperative funding , \$15,000/year, half from USGS and half from Balmoral, Washington Park, Tactician, Marland Place, SRWA, Town of Andover
- 2011- present
  - Gage funded by warrant article in 2013 and 2017 because USGS funding was curtailed.

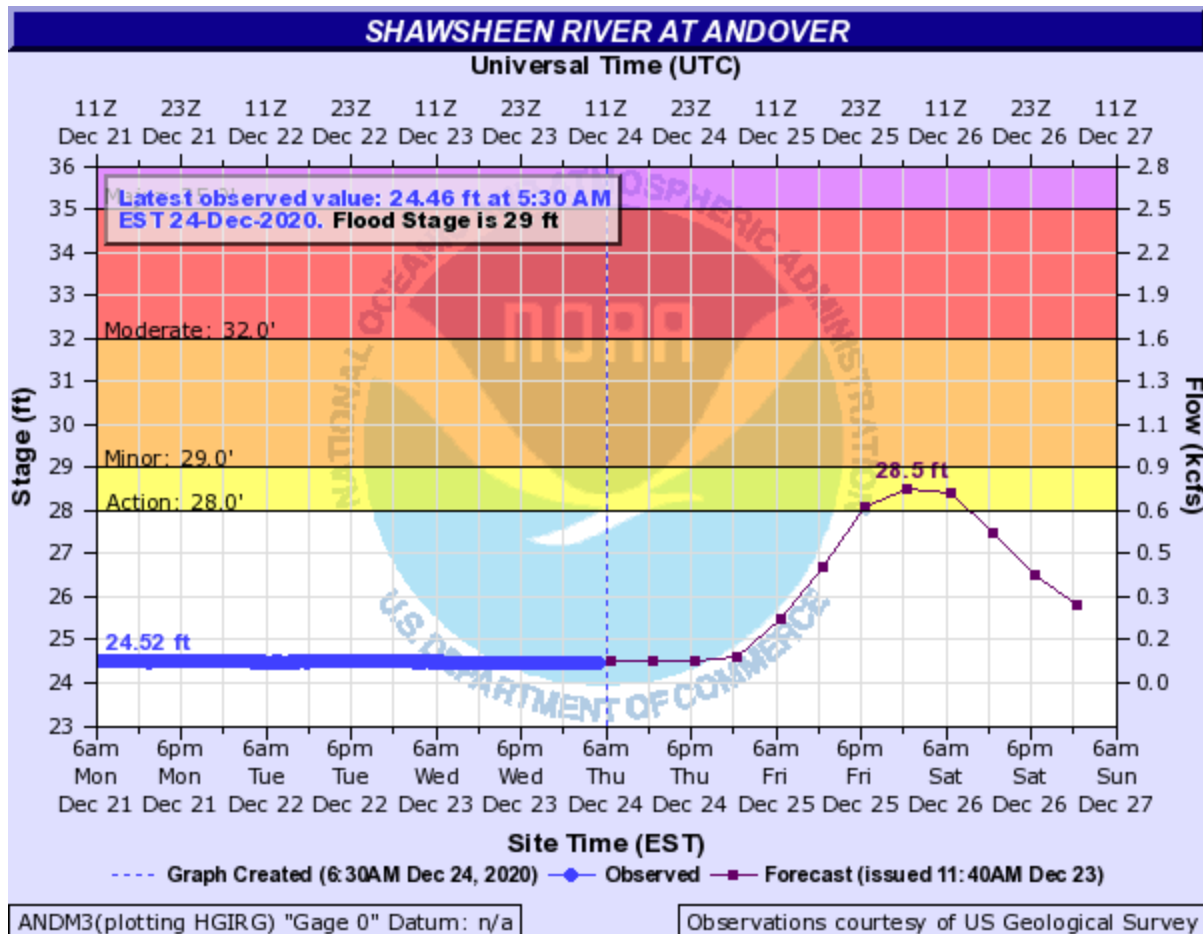
# Rational for Support

- **PUBLIC SAFETY:** Vital 72-hour forecast of advance flood notice for Andover to enable recreational users, residents and businesses to take action, and for Town emergency rescue operational guidance
- **UNIQUE RESOURCE:** River conditions could be quite different between Wilmington (nearest other USGS station upstream) and Andover due to compound flooding (Merrimack River) and localized rain.
- **CRITICAL DATASET:** Surface water discharge data is critical for future climate resilience and hazard mitigation studies, as well as Shawsheen Watershed Scale studies.
- Now researching the Community Rating System (NFIP) to save residents on flood insurance rates.
- A STEM tool for teaching environmental science and technology.

# Economic and Safety Benefits of Flood Forecasting - days to prepare.

- Benefits can be 4 to 10 times greater than the cost.
- Minimize evacuation hazards and reduce the risk of personal injury.
- More time to bring in resources for sandbagging and other flood proofing measures.
- Reduce damage to homes, businesses, and other structures.
- Minimize loss of property such as automobiles.
- Time for Fire, Police, and Rescue to prepare.

# Gage Data Analyzed by NOAA to Predict Flooding





# Flood History

Major Flood Stage:	35
Moderate Flood Stage:	32
Flood Stage:	29
Action Stage:	28

## Historic Crests

- (1) 37.45 ft on 05/15/2006
- (2) 36.16 ft on 03/16/2010
- (3) 34.15 ft on 04/18/2007
- (4) 33.98 ft on 04/01/2010
- (5) 31.37 ft on 12/17/2020 **(P)**

# Community Support for a Stream Gage

- Town of Andover - Conservation Commission, Sustainability
- Washington Park Condominiums
- Balmoral Condominiums
- Woodward Motors
- Marlin Place Senior Living
- Powder Mill Condominiums
- Single family Homes on North Main St.
- Shawsheen River Watershed Association -SRWA
- Avis
- Shawsheen Plaza, Stop & Shop
- Gillespie Hair Studio
- Shawsheen Luncheonette
- Shawsheen Sunoco
- Tactician Corporation soon to be converted to 28 apartments.

# Summary

- The funding of the streamgage on the Shawsheen river at the Balmoral will continue the previous 12 years of funding.
- This gage gives a 72 hr. forecast of imminent flooding. These precise 72 hrs. are critical as it gives residents, businesses, fire, police, and rescue personnel time to prepare.
- In addition to reducing injuries and possible loss of life, cost savings are estimated to be anywhere from \$4 to \$10 for each \$1 spent on flood mitigation.
- Previous floods in 2006 and 2010 resulted in evacuations by row boats, residents being displaced from their homes for months, cars floating down the river, and millions of dollars spent to restore flooded homes.