



## MEMO

**To:** File  
**From:** Jeff Wennberg, Commissioner of Public Works  
**Date:** May 20, 2019  
**Re:** 2018 Brook Temperature Monitoring

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The temperature monitoring program on Moon and other brooks in the City began in 2006, and has continued through 2018. The collected data through 2014 was used for the “third party review” (March, 2015) of the impairment of Moon Brook and all data sets since 2006 are available online.

The recording temperature monitors (HOBOS) were deployed in early June and recorded temperatures at 15 minute intervals until late September. Nine sites were monitored, six on Moon Brook, one on Mussey Brook, and two on Tenney Brook. All locations were consistent with locations used in prior years. Approximate locations are shown on the attached map.

According to the NWS monthly average temperatures throughout the period were consistently warmer than average for these months since 2000, with the exception of June which was slightly cooler. Precipitation was below average for June-August, and above average in September. July was unusually dry.

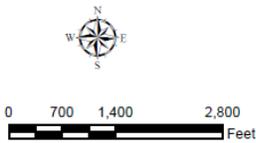
Using 75 degrees Fahrenheit as the maximum sustained temperature for brook trout, the following table gives the number of hours throughout the summer that this was exceeded at each location:

Location	Hours above 75 Deg F
Mussey at Main St	13.25
Mussey at Park St	73.5
Moon above Combination Pond	0.00
Moon below Combination Pond	1165.25
Moon above Piedmont Pond	284.5
Moon below Piedmont Pond	342.75
Moon at Perry St*	46.5
Moon at Forest St	89.75
Tenney at Swards	531.25
Tenney at Lincoln Ave	443.5

\*This is nearest to the only location on Moon Brook downstream of Combination Pond found to be in compliance with Vermont Water Quality Standards in summer 2014.

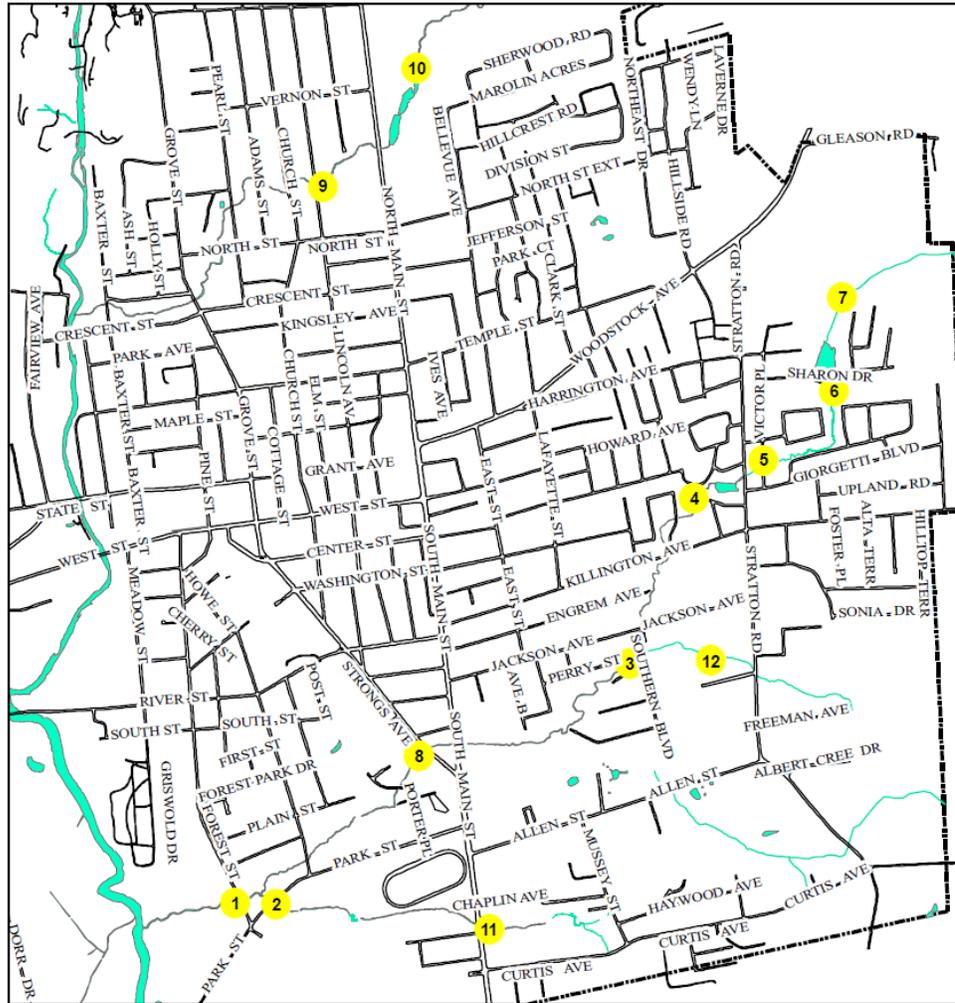
# HOBO Temperature Monitoring Locations

- 1-- Moon at Forest
- 2--Mussey at Park St.
- 3--Moon at Perry St.
- 4--Piedmont Pond Outfall
- 5--Above Piedmont Pond
- 6--Combination Pond Outfall
- 7--Above Combination Pond
- 8--Moon at Strongs Ave
- 9--Tenney at Lincoln
- 10--Tenney at Swards
- 11--Mussey at S Main
- 12--Paint Mine Brook



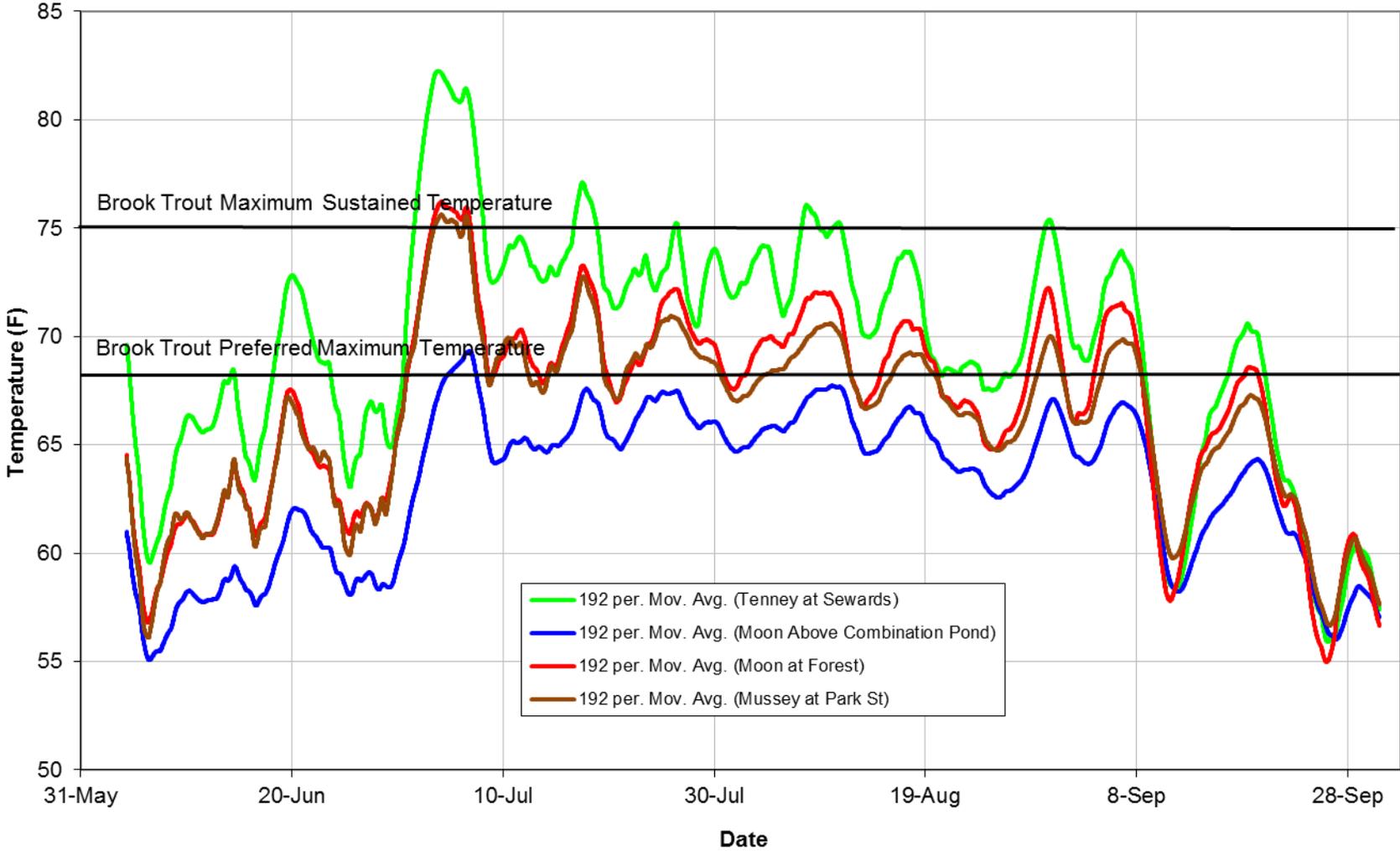
11/19/2014

features and contours based on aerial photos dated December 3, 2001  
 This sketch as supplied by DPW shows selected items visible on the aerial photos and may not be complete as to each feature class  
 Lot lines are approximate and are not to be used for construction location, property rights conveyance, or other purposes where the locations of such lines are important  
 All feature locations are approximate  
 Contour lines should not be used for fine grading

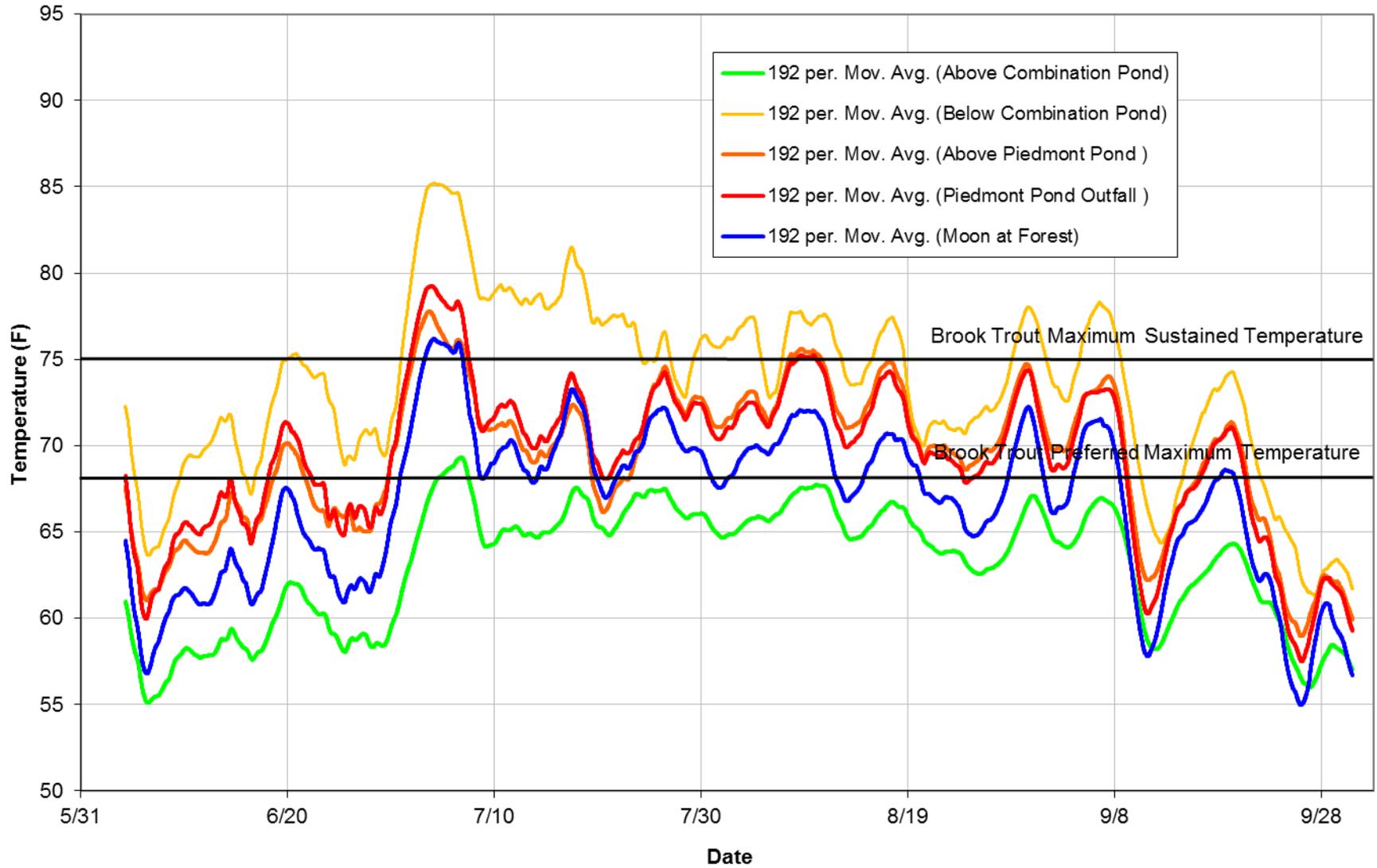


NOTE: Locations 8 and 12 were not deployed in 2018

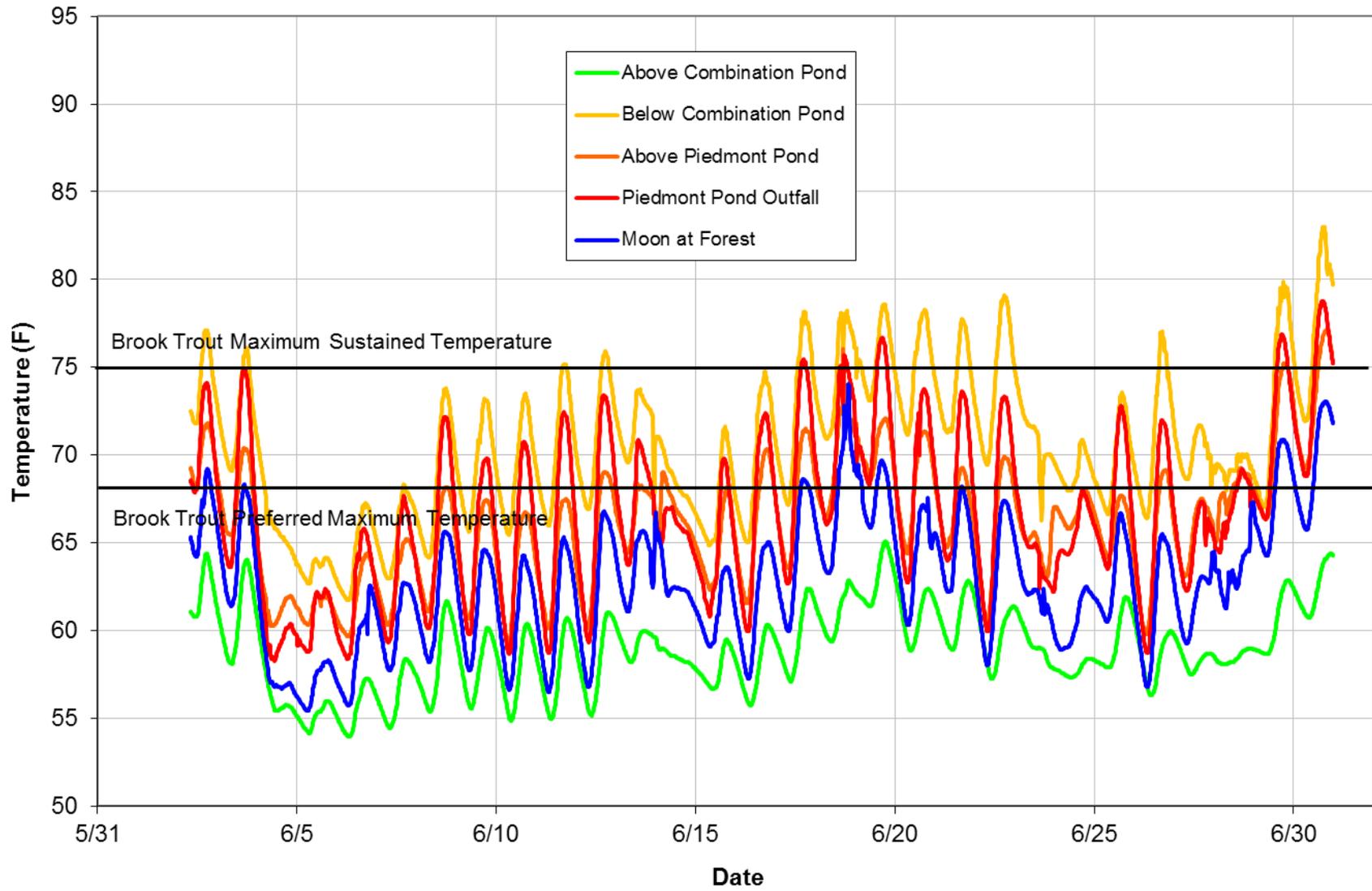
### 2018 Stream Temperature Comparison 2 Day Trendline



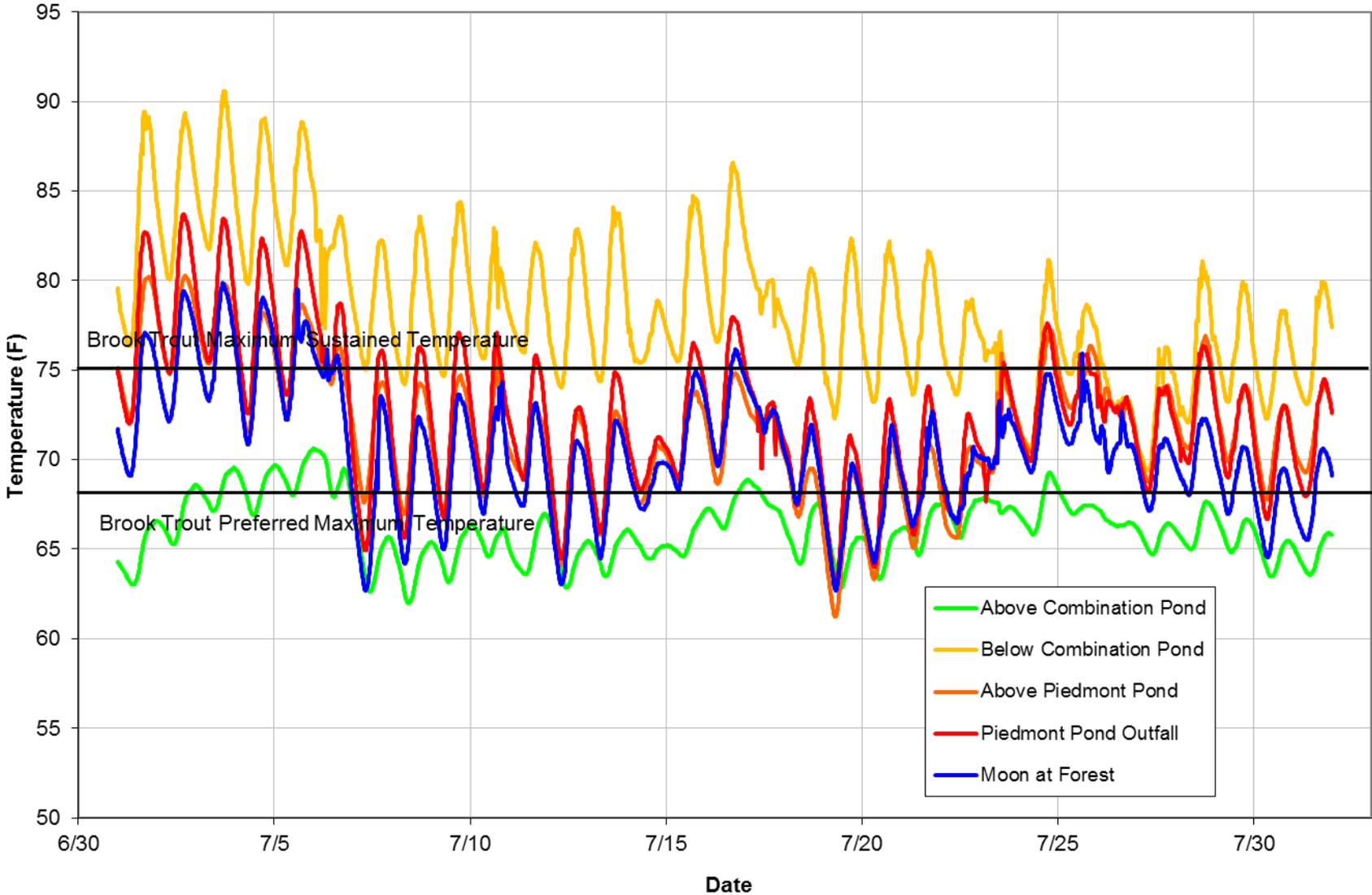
### Moon Brook Temperature 2018 With 2 Day Trend Line



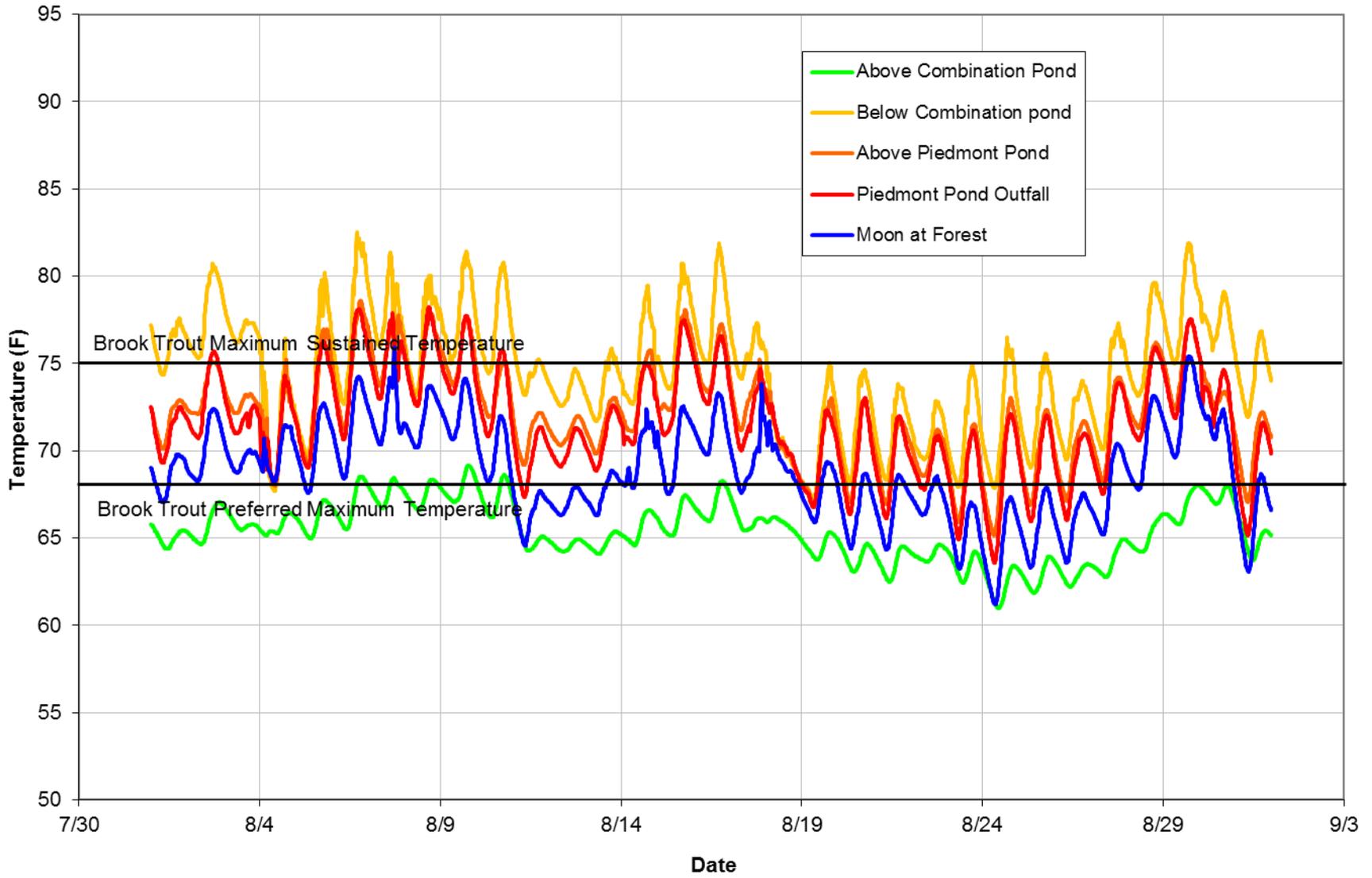
### June 2018 Moon Brook Temperature



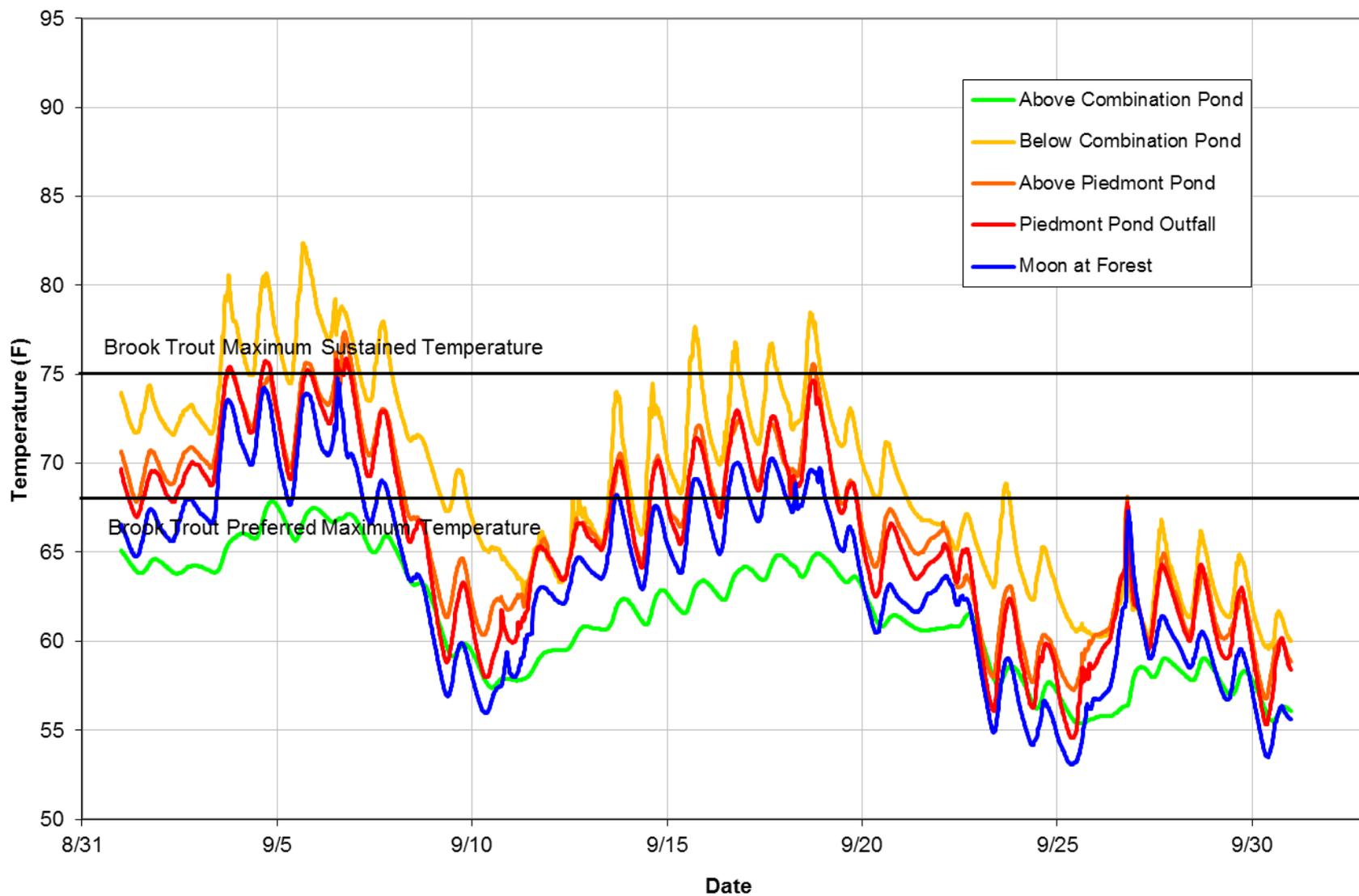
### July 2018 Moon Brook Temperature



### August 2018 Moon Brook Temperature



### September 2018 Moon Brook Temperature



# 2018 Mussey Brook Temperature

