



MEMO

To: File
From: Jeff Wennberg, Commissioner of Public Works
Date: April 4, 2018
Re: 2017 Brook Temperature Monitoring

The temperature monitoring program on Moon and other brooks in the City began in 2006, and has continued through 2017. 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. Ten sites were monitored, seven 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 below average for these months since 2006. Precipitation was slightly below average throughout the period.

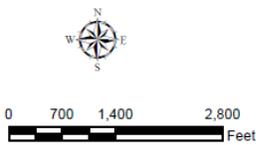
Using 75 degrees Fahrenheit as the maximum sustained temperature for brook trout, the following table gives the number of hours throughout the summer that this was exceeded at each location:

Location	Hours above 75 Deg F
Mussey at Park St	0.00
Moon above Combination Pond	0.00
Moon below Combination Pond	581.75
Moon above Piedmont Pond	60.25
Moon below Piedmont Pond	68.5
Moon at Perry St*	0.00
Moon at Strongs	2.00
Moon at Forest St	0.00
Tenney at Swards	90.5
Tenney at Lincoln Ave	126.00

*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.

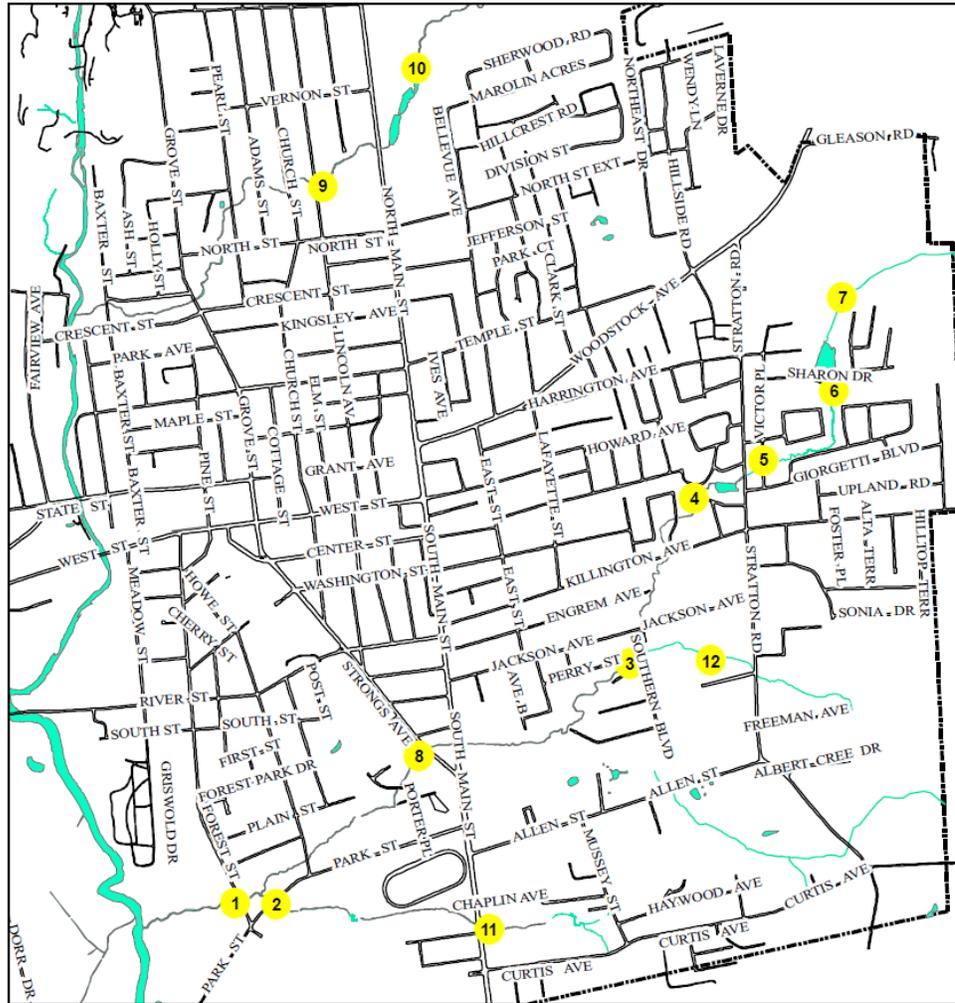
HOBO Temperature Monitoring Locations

- 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



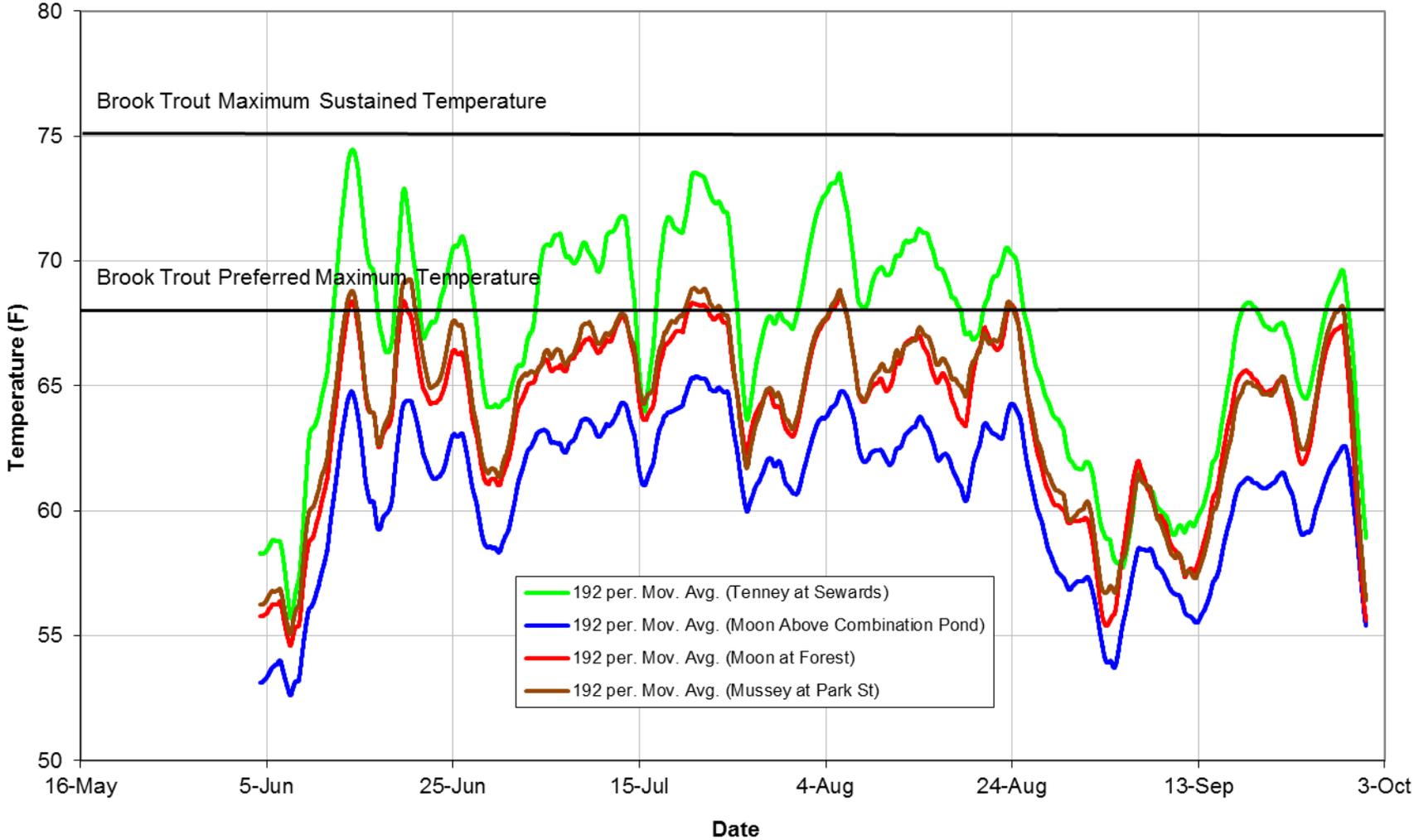
11/19/2014

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

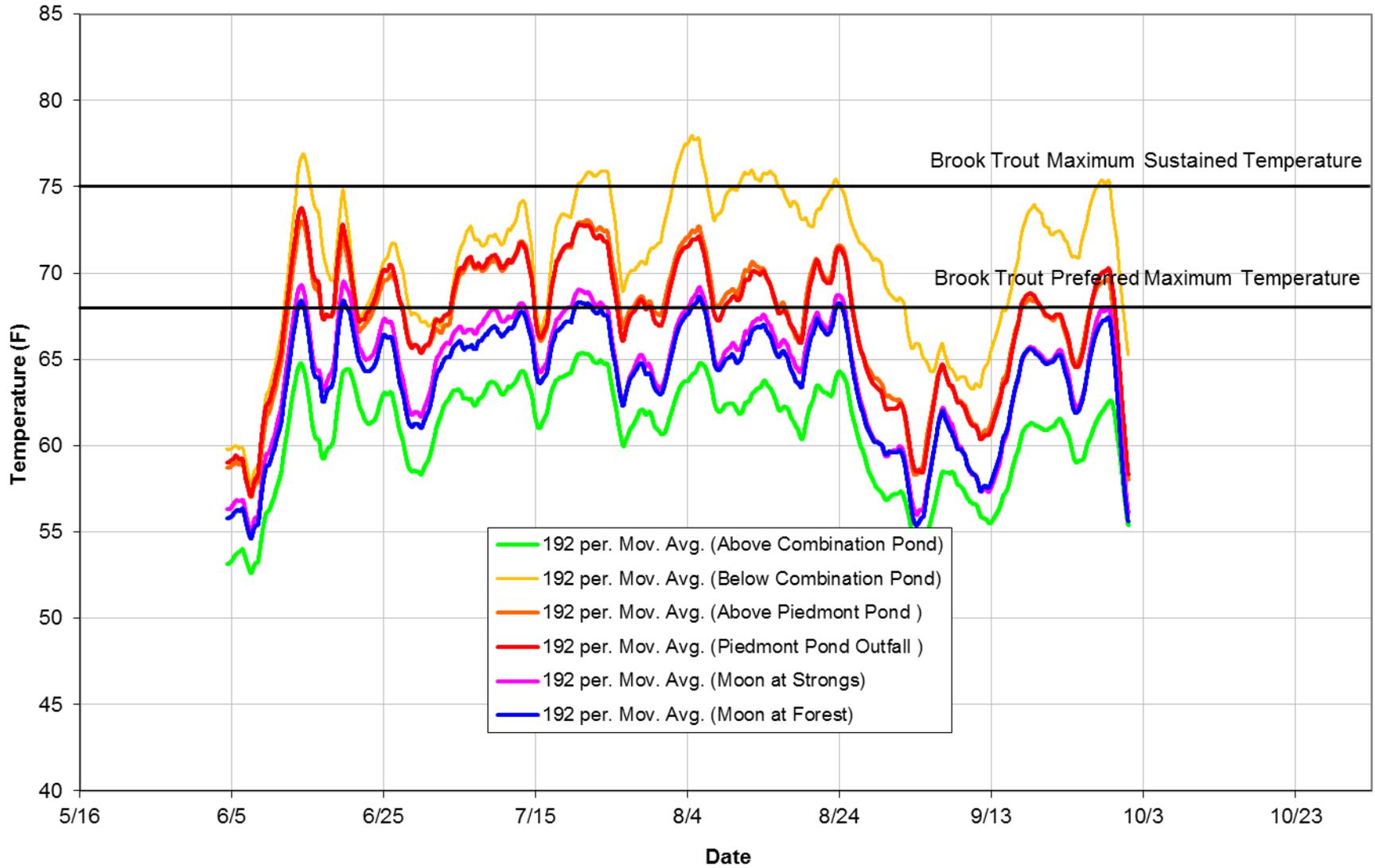


NOTE: Locations 11 and 12 were not deployed in 2017

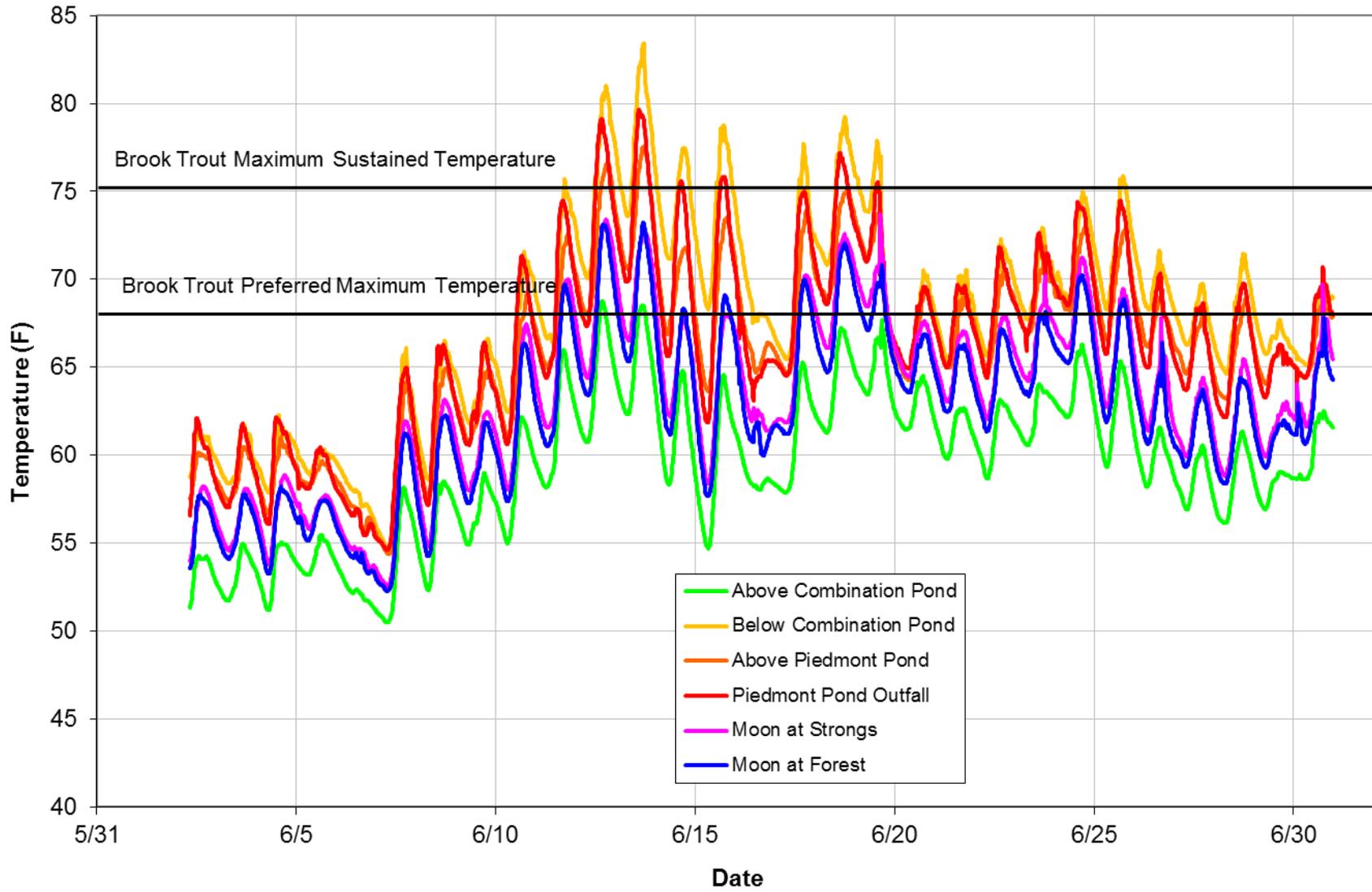
2017 Stream Temperature Comparison 2 Day Trendline



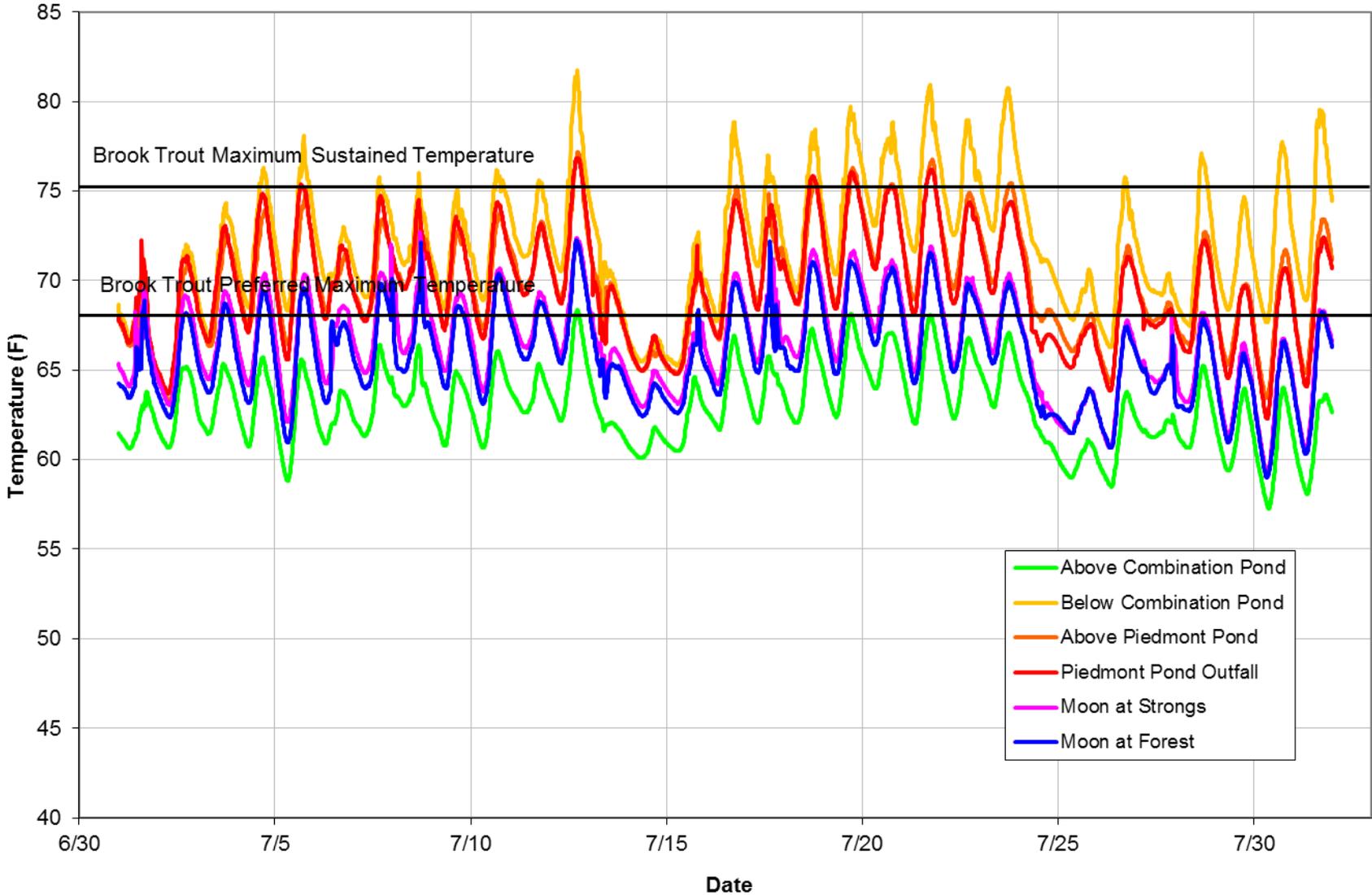
Moon Brook Temperature 2017 With 2 Day Trend Line



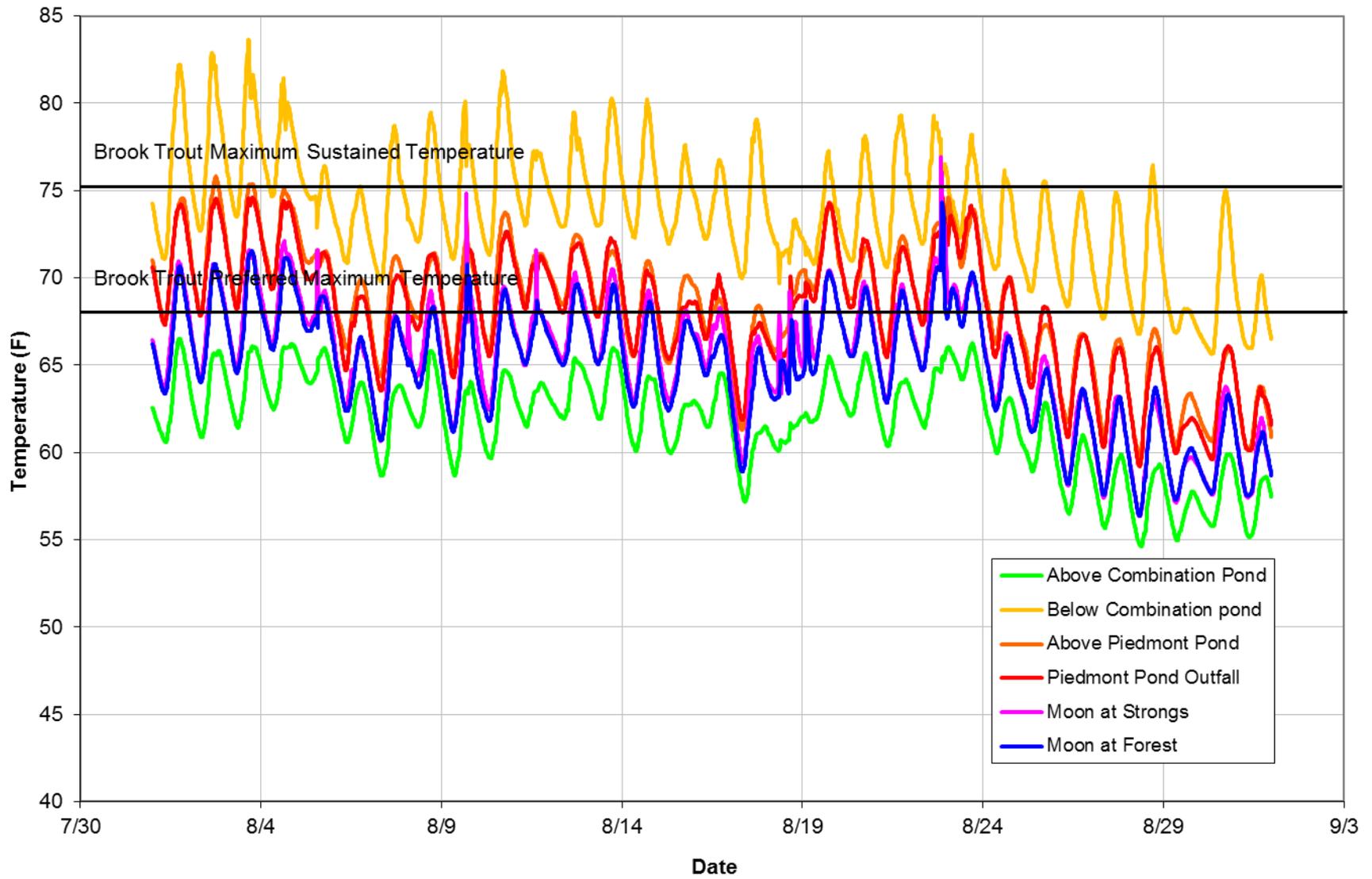
June 2017 Moon Brook Temperature



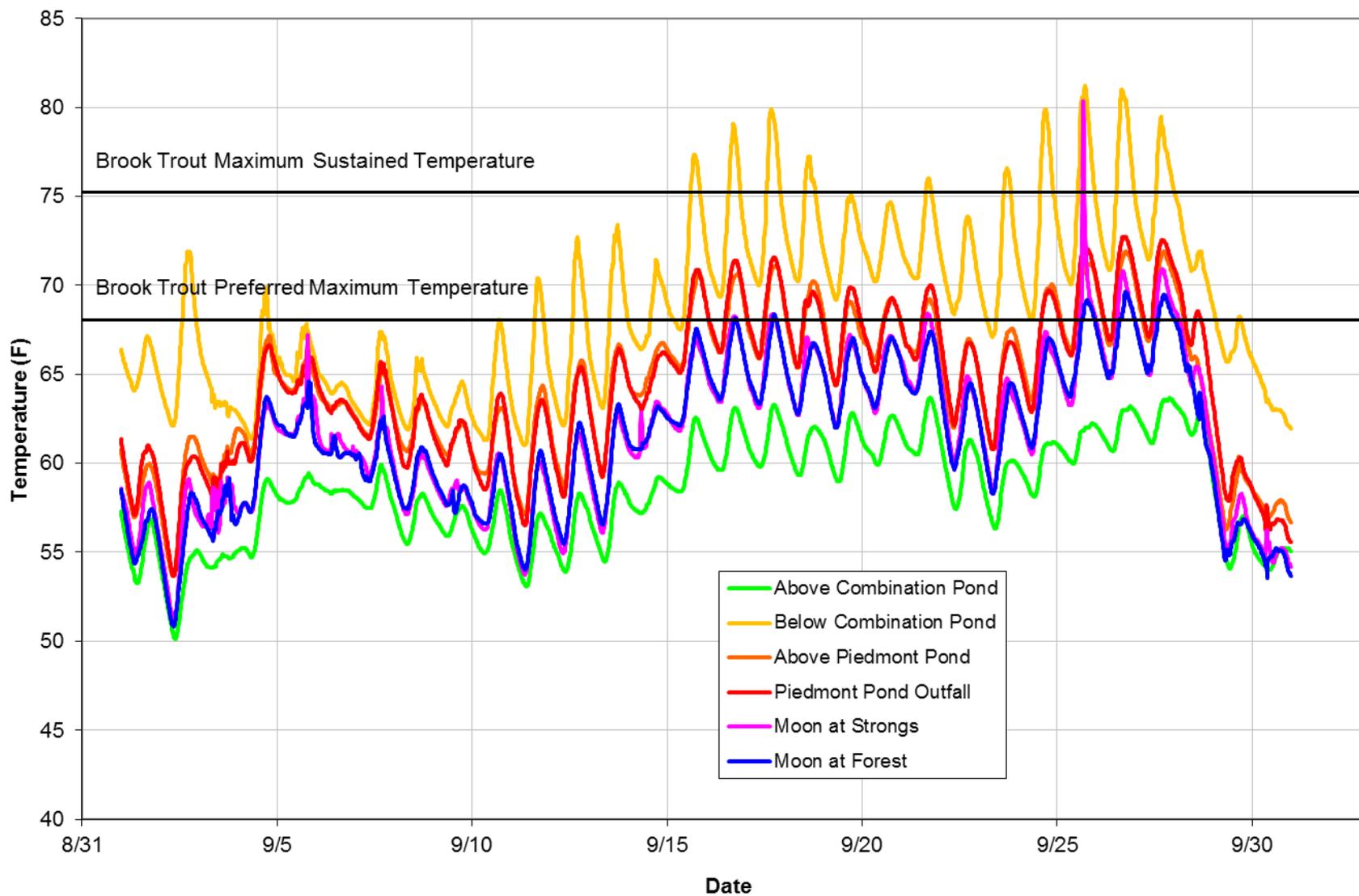
July 2017 Moon Brook Temperature



August 2017 Moon Brook Temperature



September 2017 Moon Brook Temperature



2017 Mussey Brook Temperature

