



Prescott Peninsula Beaver Survey Results 2017



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Massachusetts Department of Conservation and Recreation
Division of Water Supply Protection
Office of Watershed Management
Natural Resources Section

The annual Prescott Peninsula beaver colony survey took place in November 2017. Twenty-two people participated, including staff from DCR and volunteers from the USGS Cooperative Research Unit and UMass-Amherst, along with family members and friends. The traditional interior survey routes (i.e., all streams on the Prescott Peninsula) were walked on 12-15 November and surveyed for sign of active beaver colonies. A site was determined to have an active colony if it had some combination of the following key indicators: fresh mud or sticks on lodge, a fresh food cache, a maintained dam, recently chewed feeding sticks, fresh cuttings and feeding trails, or the presence of beaver. The shoreline portion of the annual beaver survey on the Prescott Peninsula was conducted from a boat on 20 November 2017. The reservoir elevation during this time averaged 522 ft. This is approximately 85% of capacity and considered within the Normal Operation Range.

There were 7 active beaver colonies (7 interior and 0 along the shoreline) documented on the Prescott Peninsula during the 2017 survey. This relatively low count of 7 was also recorded in 1960 and 1993. A downward trend has continued from a total of 23 active colonies in 2013 to 7 in 2017. There were 6 interior survey routes that were active in 2016 and still active this year, along with 1 re-colonized site. Detailed locations are provided in Table 1. Locations of active sites are shown in Figure 1. Long-term population trends for beaver on the Prescott Peninsula over the last 50+ years are summarized in Figure 2.

There are 39 defined interior routes (ponds, partial or complete drainages, etc.) that have been surveyed for beaver colonies for 51 years from 1952-2017. The numbers of beaver colonies in these routes have ranged from 2 when the surveys began in 1952 to a high of 39 in 1981. Beaver use of these survey routes ranged from 0 (never had an active beaver colony) to 46 (i.e., number of times, or years, a route had an active beaver colony or colonies). Eight of the survey routes have never been active and the remaining 31 of the 39 routes have had active beaver colonies at least 2 times. The number of times each survey route has been active is summarized in Figure 3.

The past 2 years had low rainfall and the reservoir remained in the below normal operating conditions found in 2016 until June 12th of this year. This lack of precipitation resulted in shallower shoreline coves and low flow in interior streams, limiting areas for suitable colony sites (i.e., deep enough water) and time for lodge establishment. Colony locations continue to be dynamic with some remaining active and others becoming inactive from year to year. Annual surveys will continue in the future to track these changes.

Table 1. Active beaver sites, Prescott beaver survey routes, Quabbin Reservation, 2017.

Route	# Active Sites	State Plane Coordinates (Meters)	
Shoreline:			
	0		
Interior:			
A			
AA			
B			
BB			
C	1	130770.070459	903315.500343
CC			
D			
D'			
D''			
DD			
E			
EE			
F			
FF			
G			
GG			
H			
HH			
I			
II			
J	1	129684.120306	908198.253869
JJ			
K	1	130261.843709	907869.312302
L			
M			
N			
O			
P			
Q			
R	1	128939.218564	909848.374674
S			
T			
U			
V	1	128641.295251	911934.705454
W			
X			
Y'	1	130692.960996	911789.125286
Y''	1	130907.078426	910456.87496
Z			
Total	0 Shoreline 7 Interior		

Figure 1. Active beaver sites on the Prescott Peninsula, Quabbin Reservation, 2017.

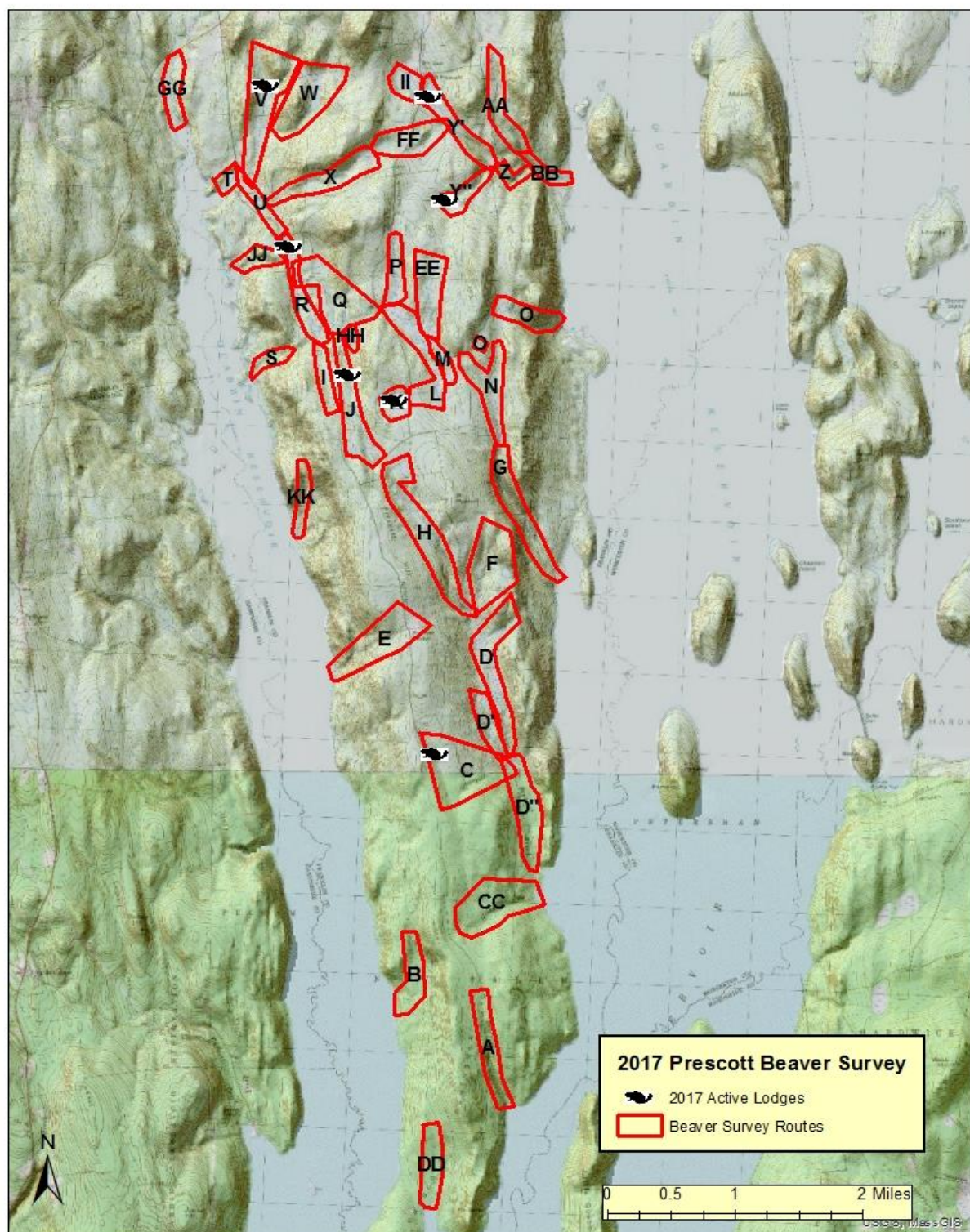


Figure 2. Number of active beaver colonies, Prescott Peninsula, Quabbin Reservation, 1952-2017.

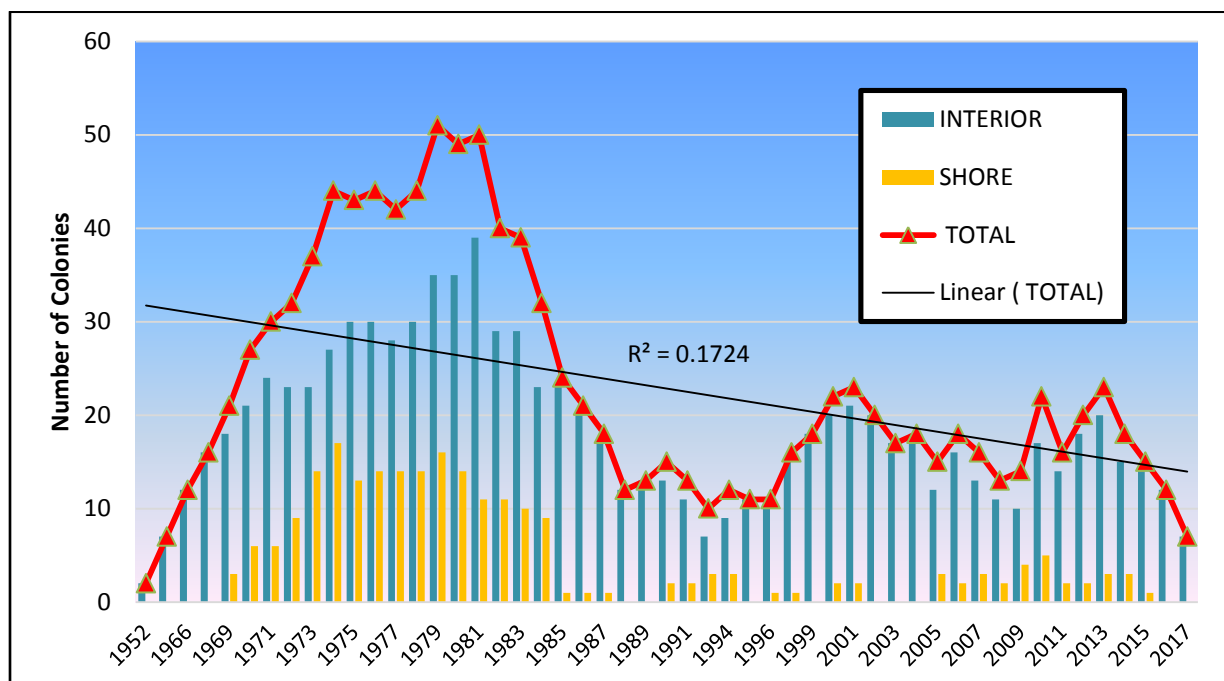


Figure 3. Number of times defined routes have had active beaver colonies on the Prescott Peninsula, Quabbin Reservation, 1952-2017.

