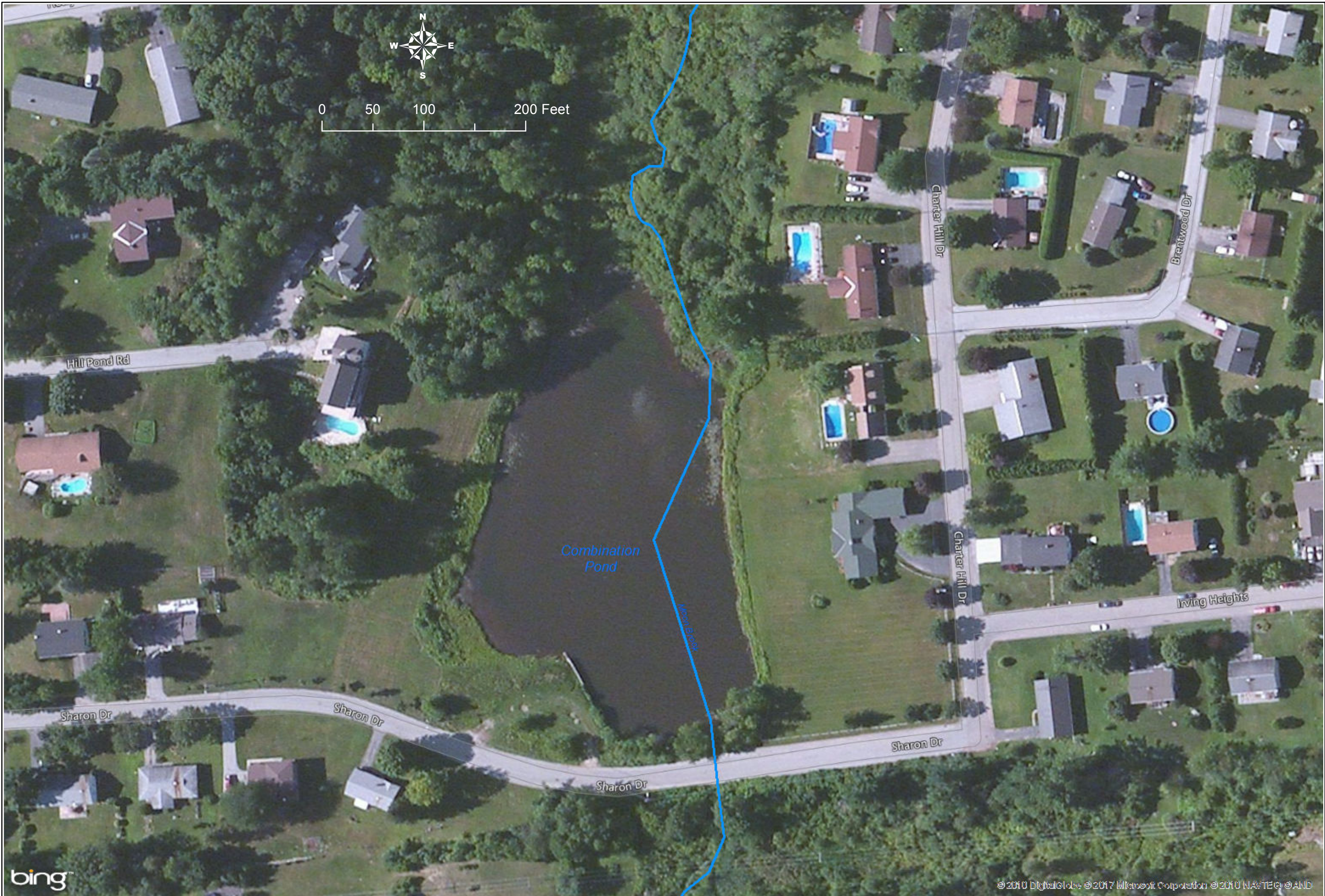


Combination Pond Alternatives Analysis  
 Last Updated February 22, 2017

KEY: ++ = best; + = good; o = moderate; - = poor

ID	Alternative	Improve Water Quality		Improve Public Safety			Reduce Liability				Support Community Values					NOTES	
		Reduce Water Temperature	Reduce Stormwater Inputs	Repair and Maintain Dam	Increase Spillway Capacity	Increase Flood Storage	Create Insurable Setting	Reduce Financial Exposure	Ballpark Construction Cost	Ballpark Maintenance Cost per year	Economics	Wildlife	Aesthetics	Recreation	Heritage		Education
A	No action - maintain existing conditions								\$ -	\$ 2,000							Not possible given court order to meet water quality thresholds and the need to improve dam safety.
B	Dredge pond sediment																Suggested by some to remove accumulated bottom sediment. Reported 2 feet to remove.
C	Increase spillway flow capacity and armor downstream slope of embankment								\$ 160,000	\$ 1,000							Needed to improve dam safety.
D	Perform dam maintenance (Clear vegetation, patch embankment, replace trash rack)								\$ 15,000	\$ 1,000							This maintenance is needed to improve current dam safety.
E	Existing outlet retrofit to mix colder bottom water with surface water outflow								\$ 20,000	\$ 1,500							Depends on temperature profile over year. Could drop oxygen levels? Could increase Fe, Mn, or other metals? -ANR Temperature may not be low enough at bottom?
F	Create new bottom-release outlet structure								\$ 100,000								Depends on temperature profile over year. Could drop oxygen levels? Could increase Fe, Mn, or other metals? -ANR
G	Lower pond level 2 feet, plant buffer								\$ 100,000								Pond elevation to 645. L: 430' to 410'. W: 260' to 225'. D: 9' to 7'.
H	Lower pond level 4 feet, plant buffer								\$ 100,000								Pond elevation to 643. L: 430' to 340'. W: 260' to 180'. D: 9' to 5'.
I	Lower pond level 6 feet, plant buffer								\$ 100,000								Pond elevation to 641. L: 430' to 280'. W: 260' to 150'. D: 9' to 3'.
J	Restore flowing stream and adjacent wetlands by dam removal								\$ 200,000								Best for dam safety and water quality. Large change at site and lose values associated with pond.
K	Create bypass channel								\$ 80,000								May lead to stagnant pond water and aesthetic impacts.
L	Install bypass pipe								\$ 100,000								May lead to stagnant pond water.
M	Groundwater mixing								\$ 80,000								Flow rates and temperature currently unknown.
N	Change pond level over year																Drop water level in summer low flow.
O	Create island with shade trees																Buffer plantings with view windows.

Alternatives from previous work by DuBois & King and Bear Creek Environmental, public meetings, landowner meetings, and Milone & MacBroom.



0 50 100 200 Feet

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Map By: RKS  
 MMI#: 4430-02  
 MXD: Combination\_baseemap.mxd  
 1st Version: January 12, 2017  
 Revision: ---  
 Scale: See scale bar.

**CMBN**

**COMBINATION POND BASEMAP**

**MOON BROOK POND MODIFICATIONS  
 RUTLAND, VERMONT**

SOURCE(S):  
 Bing Maps Aerial

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