dcr
Massachusetts

2017 **DCR DWSP Common Loon (*Gavia Immer)* Summary**

October 2017

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

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NHESP has listed the Common Loon as a species of Special Concern in Massachusetts and it is therefore protected under the Massachusetts Endangered Species Act (M.G.I. c. 131A). To protect them from unnecessary disturbance, detailed information regarding this species and their locations is not included in this edited version of the summary report.

The DWSP wildlife staff would especially like to thank George Dresser and Margaret McCandless, Emily Eaton, Dale Monette, Beverly and Richard Renaud, and Clayton Sydla for sharing their loon observations and photographs throughout the season.

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The summer of 1975 marked the official return of the Common Loon (*Gavia immer*) to Massachusetts. Loons were extirpated from the state in the early 1900s until a nesting pair on the Quabbin Reservoir successfully produced two chicks in 1975. Today, the lakes and reservoirs in the Massachusetts Department of Conservation and Recreation (DCR), Division of Water Supply Protection (DWSP) watersheds support the largest breeding concentration of Common Loons in Massachusetts. DWSP has an active monitoring and assessment program in cooperation with MassWildlife and Biodiversity Research Institute (BRI). DWSP wildlife staff, with assistance from BRI staff, monitors Common Loon activity on Quabbin Reservoir (Fig.1), Wachusett Reservoir (Fig.2), Hycrest Pond in Sterling, Paradise Pond in Westminster (Fig.3), O'Loughlin Pond in New Salem (Fig.4), Pottapaug Pond in Hardwick (Fig.5) and Sudbury Reservoir (Fig. 6). There are active nesting pairs on Quabbin Reservoir, Wachusett Reservoir and Hycrest Pond. Historically, a nesting pair fledged chicks on Paradise Pond. O'Loughlin Pond, Pottapaug Pond and Sudbury Reservoir have no record of nesting pairs but because of suitable habitat, they are included in our survey efforts.

The official loon monitoring period ran from April through September, 2017. This report summarizes the 2017 DWSP wildlife staff survey data. Observational data from additional DWSP staff, BRI, and volunteers were also collected to supplement the monitoring efforts. Twenty-two nesting pairs successfully hatched 17+ chicks (12 fledged). Refer to Table 1 for a summary of territories and nesting activity.

DWSP loon management efforts in 2017 included raft repair and maintenance, raft deployment, nesting observations (i.e., success and failures), collecting leg band returns to identify banded individuals (Table 2), and night time capture efforts to band loons in collaboration with BRI. DWSP contracts with BRI for annual loon capture and banding and the analysis of blood and feather samples. Six nights of banding resulted in the capture of three adults and one chick.

In 2017, one DWSP wildlife cameras monitored a Wachusett nesting pair. The camera was installed to capture mating and nesting activity, predation, and to help identify individual loons. Additionally, BRI installed four wildlife cameras at loon nesting locations on Quabbin Reservoir.

This year, most rafts were deployed several weeks prior to Memorial Day weekend. Raft deployment began April 14th, and all rafts were

deployed by May 30th. Eleven rafts were deployed on Quabbin and eight at Wachusett; six were used for nesting (five at Quabbin, three at Wachusett). The pair at Quabbin Boat Area 1 nested on the shoreline but due to rising water levels, the nest was moved by DWSP staff onto a small, camouflaged floating raft (Fig. 7). The pair successfully transitioned to the small raft and proceeded to incubate an unviable egg.

Egg fragments (from hatched or predated nests) and whole eggs (from abandoned nests) were collected (Table 3). These specimens were sent to BRI for contaminate testing. When a pair of loons successfully hatched chick(s), the fledging date was determined using the Loon Preservation Committee's (LPC) Standard Operating Procedure. Chick(s) observed six weeks or more after hatching were considered fledged.

In 2017, monitoring efforts are reflected in minutes spent at each territory and number of survey days (Table 4). If DWSP wildlife staff effort was not recorded during an observation period, a conservative time of five minutes was used. Additionally, the data collected include observations from other DWSP staff and non-DWSP observers; however, not all of their effort (time) was recorded and therefore is not reflected in the table. The total hours shown does not include time associated with banding efforts.

Unfortunately, several incidences involving loons and fishing tackle were reported to the ranger staff at Wachusett Reservoir. A mortality was reported and the cadaver was collected for necropsy at the Tufts Wildlife Clinic in Grafton, MA. During the spring of 2017, DWSP staff made repairs to the fishing line recycling canisters and installed lead tackle recycling canisters to the same locations throughout the Quabbin, Ware River and Wachusett Watersheds (Fig. 8). DCR-DWSP monofilament line and lead tackle recycling program brochures were distributed at the Quabbin fishing areas and made available to the public at the Quabbin Visitor Center and the main office at Wachusett Reservoir. Additionally, informational posters were placed at kiosks throughout the watersheds. These efforts to educate the public regarding the importance of monofilament line and lead tack recycling will continue.

Figure 1. Quabbin Reservoir Common Loon survey area, 2017.

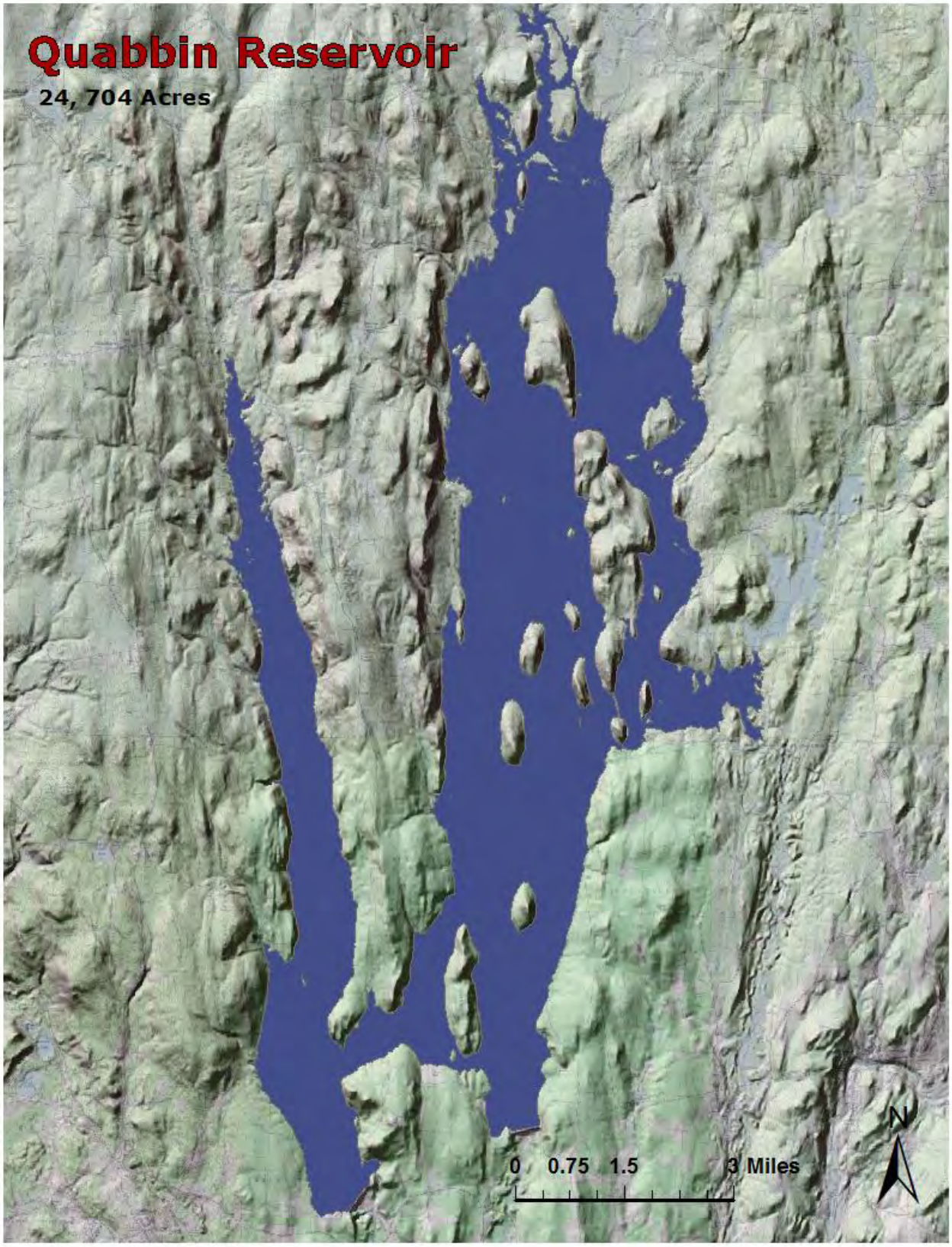

Figure 2. Wachusett Reservoir Common Loon survey area, 2017.

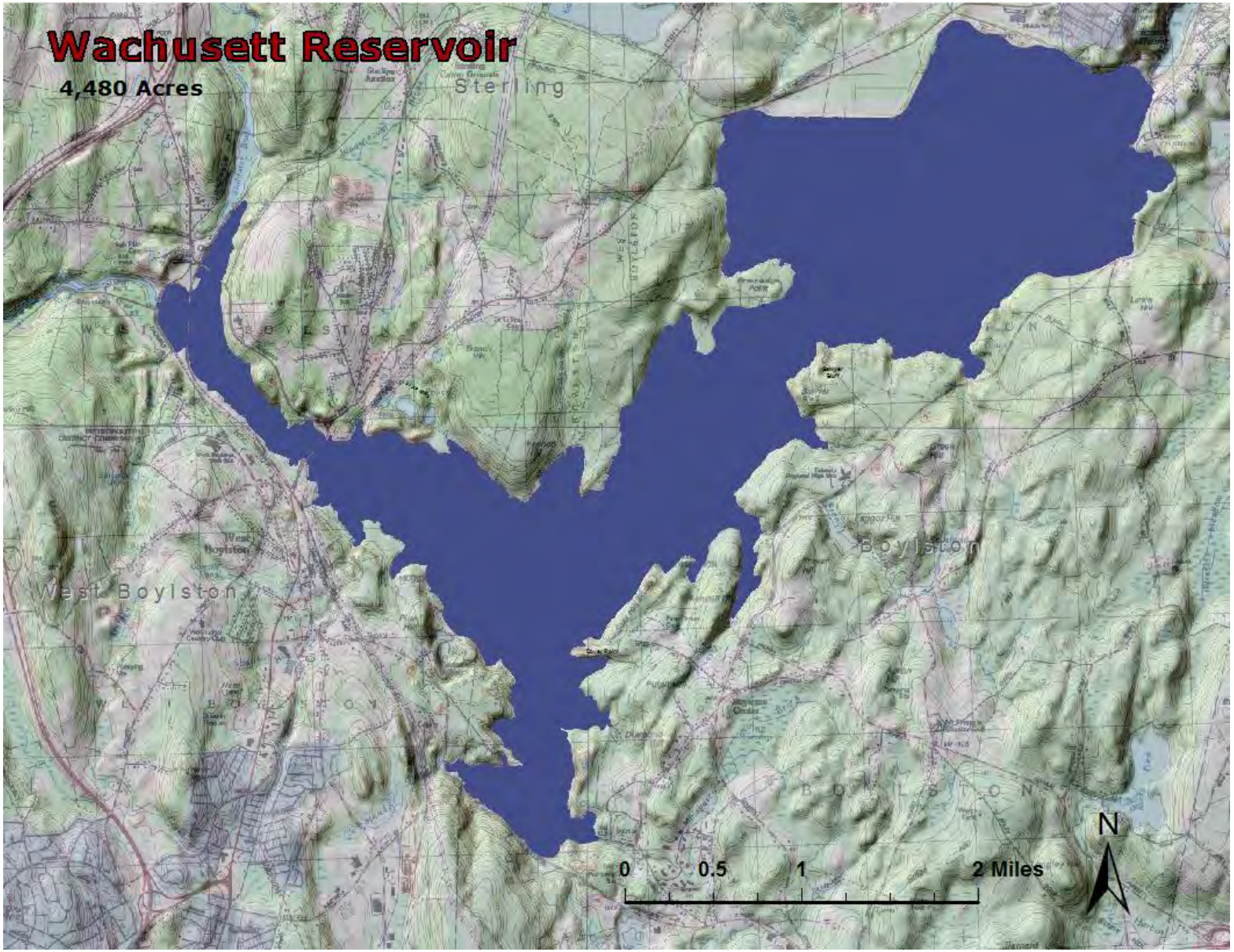

Figure 3. Paradise Pond, Westminster and Hycrest Pond, Sterling Common Loon survey areas, 2017.

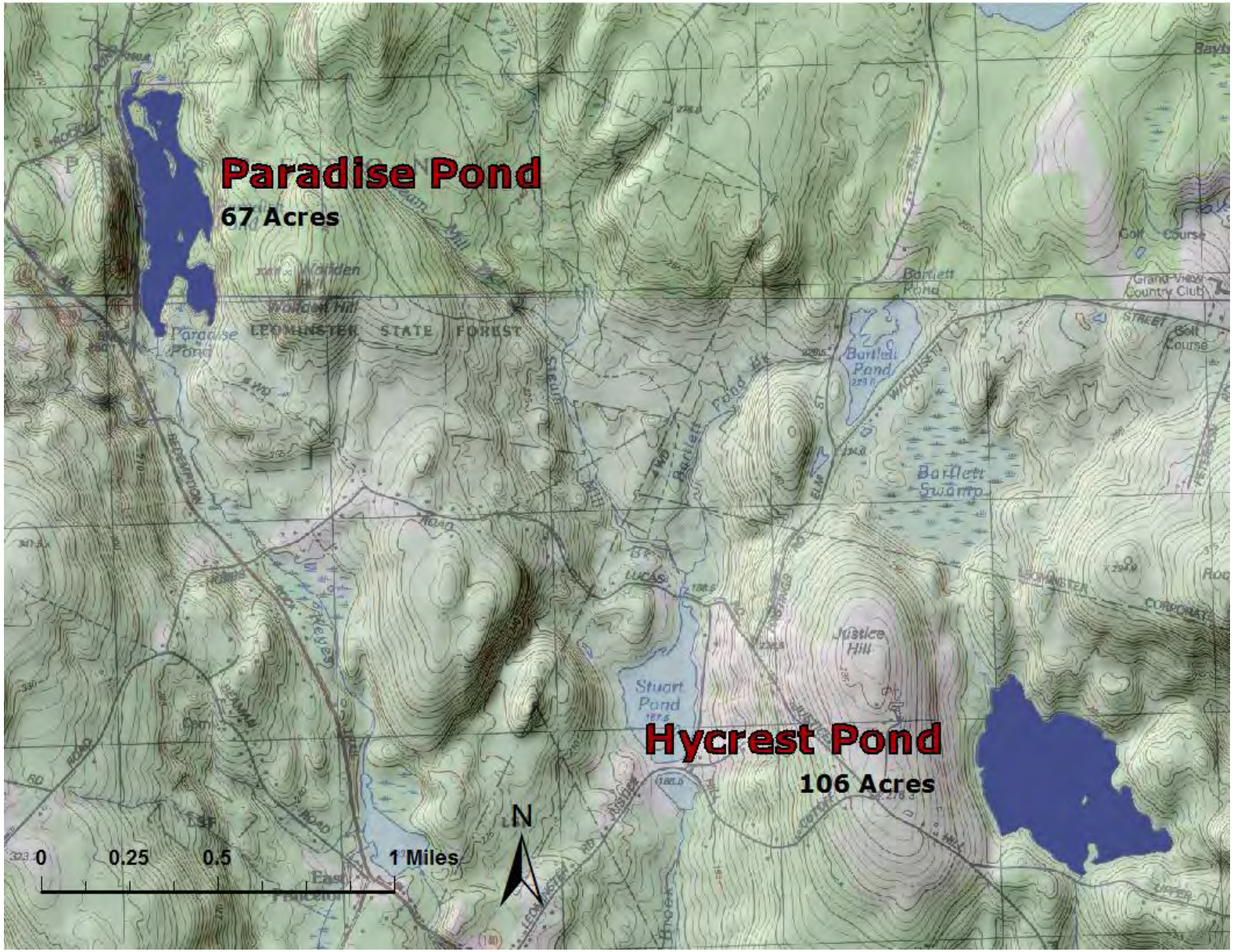

Figure 4. O'Loughlin Pond, New Salem, Common Loon survey area 2017

Figure 5. Pottapaug Pond, Hardwick, Common Loon survey area 2017.

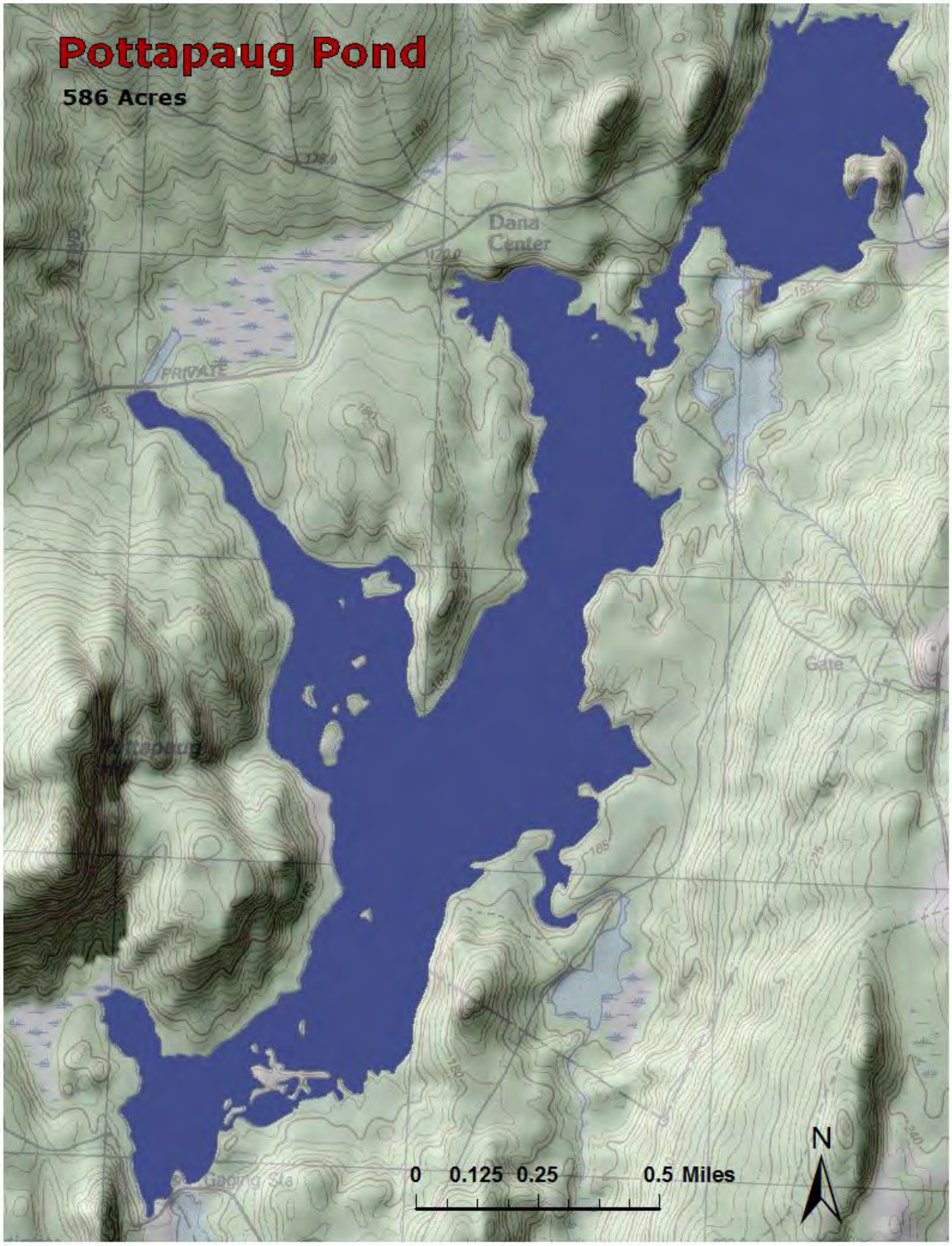

Figure 6. Sudbury Reservoir Common Loon survey area 2017.

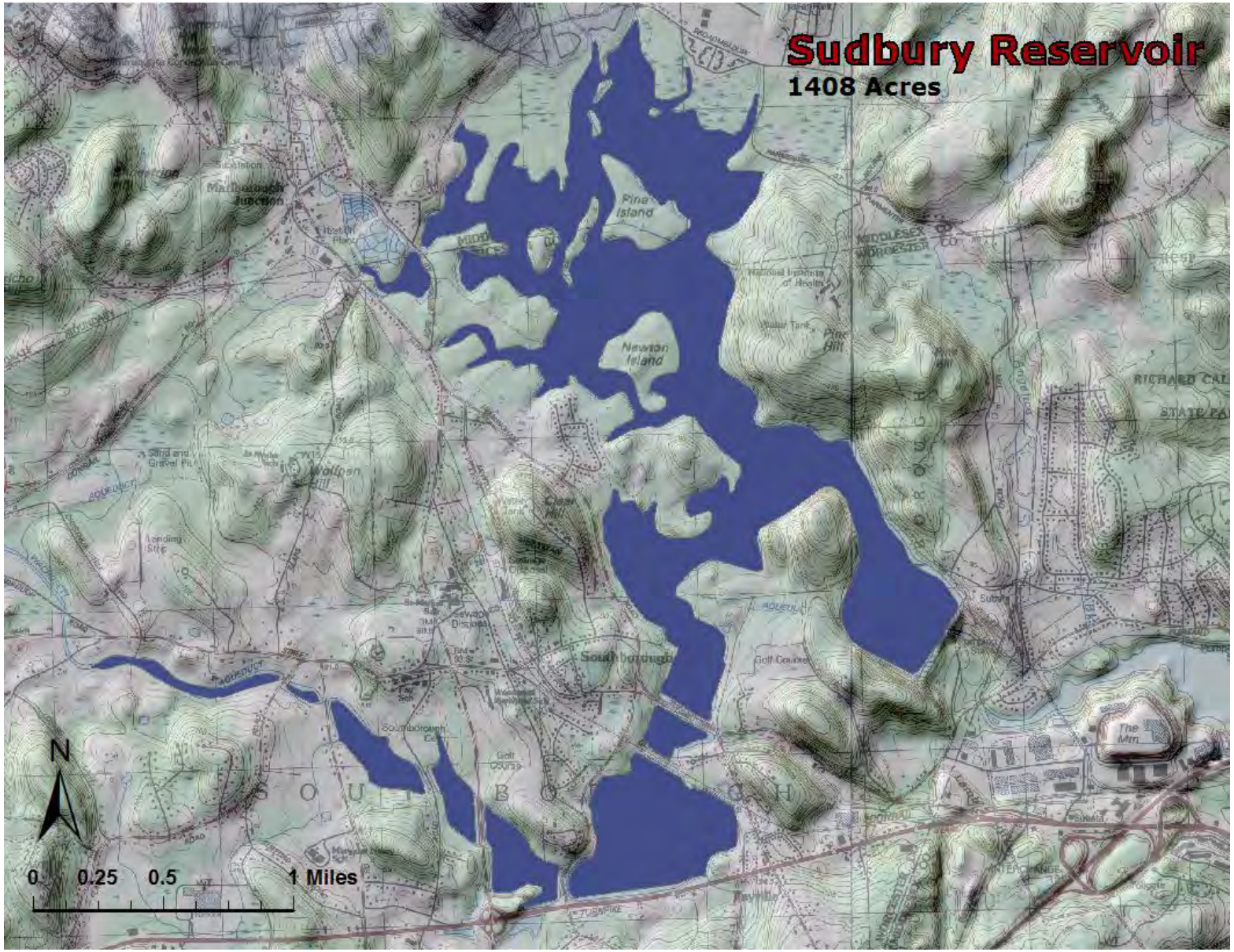

Figure 7. Boat Area 1, Quabbin Reservoir floating platform, 2017.

Figure 8. Fishing line and lead tackle recycling canisters with signage, 2017.

Table 1. Common Loon Summary 2017.

DCR-DWSP Common Loon Summary 2017			
	Quabbin Reservoir	Wachusett Reservoir	Other DCR-DWSP Survey Areas
Territorial Pairs	20	4	1
Single Territorial Loons	1	1	0
Nesting Pairs	17	4	1
Total Nests (includes renests)	20	4	1
Eggs Layed	22+	5+	2
Chicks Hatched	11	4+	2
Chicks Fledged	8	2	2
Rafts Deployed	11	8	0

Table 2. Colored band returns, 2017.

BAND RETURNS					
QUABBIN					
CURRENT TERRITORY	**PREVIOUS TERRITORY**	**SEX**	**BAND YEAR**	**LEFT LEG**	**RIGHT LEG**
Boat Area 2		F	2001	white/green	orange/silver
Boat Area 2		M	2014	orange dot/orange	silver/blue
Hamilton-West/Moosehorn	Boat Area 2	M	2005	blue/red stripe	green stripe/silver
Hamilton-West/Moosehorn		F	2014	green/red	blue/silver
Hop Brook		F	2012	red/white	green stripe / silver
Hop Brook	Carrick	M	2010	orange/blue stripe	silver/red stripe
Russ	Boat Area 2	M	2001	blue/red	silver/orange
Russ		F	?	silver or white	Yellow
Sandbar		F	2015	red dot/red	orange stripe/silver
Sandbar		M	2015	yellow stripe/yellow	white/silver
Phragmites		M	2009	orange/green stripe	silver/red dot
Pipe-Moore		F	2015	blue stripe/yellow stripe	orange stripe/silver
Pipe-Moore		M	2015	red stripe/red	white/silver
Eagle Tree-Moore		M		UNBANDED	
Eagle Tree-Moore		F	2017	red/red	orange dot/silver
Boat area 3		M	2014	blue/white	silver/orange
Boat area 3		F	2011	yellow/green stripe	red stripe /silver
Den Hill	Boat Area 3	F	2006	red X/blue	yellow stripe/silver
Den Hill		M		UNBANDED	
Townsend		M	2005	white /green	silver /green stripe
Townsend		F	?	pink or red	
Graves		M	2014	green/white	blue/silver
Graves		F		UNBANDED	
Target		F	2003	blue / white	silver / blue stripe
Target		M	2008	white/green	Green Dot / Silver
Fever Brook		M	2009	red/yellow stripe	red dot/silver
Fever Brook		F	2016	white stripe/red	orange/orange dot
Parker		M	2007	red/white	pink/silver
West Arm		F		UNBANDED	
West Arm		M	2014	Yellow/Green	Orange/Silver
Boat Area 1		M		UNBANDED	
Boat Area 1		F		Yellow/Blue	Silver/Orange Dot
WACHUSETT					
CURRENT TERRITORY	**PREVIOUS TERRITORY**	**SEX**	**BAND YEAR**	**LEFT LEG**	**RIGHT LEG**
South Bay		F	2014	blue/white	blue/silver
South Bay		M	2016	green stripe/orange	red/orange dot
Wood Island	Crescent	F	2000	orange/orange	green stripe/silver
Wood Island		M		UNBANDED	
OTHER DCR-WSP LOON SURVEY WATER BODIES					
CURRENT TERRITORY	**PREVIOUS TERRITORY**	**SEX**	**BAND YEAR**	**LEFT LEG**	**RIGHT LEG**
Hycrest Pond		F	2014	yellow/green stripe	silver/red dot
Hycrest Pond		F		UNBANDED*nesting female	
Hycrest Pond		M	2005	white /orange	red stripe /silver

Table 3. common Loon egg and egg fragment collection, 2017.

2017 Quabbin Egg and Fragment collection			
COLLECTION DATE	TERRITORY	NUMBER OF EGGS COLLECTED	SHELL FRAGMENTS
6/28/17	Russ	1	
7/5/17	Russ		X
7/5/17	Target	1	
7/5/17	Eagle Tree-Moore		X
7/5/17	Boat Area 1	1	
7/26/17	Prescott	1	
8/1/17	Den Hill		X
8/9/17	Boat Area 3	2	
2017 Wachusett Egg and Fragment collection			
COLLECTION DATE	TERRITORY	NUMBER OF EGGS COLLECTED	SHELL FRAGMENTS
06/29/17	Hastings Cove		X

Table 4. DCR staff survey effort, 2017.

Effort by Hours	
Quabbin	Wachusett
70.4	29.8
Total	100.2
Effort by Days	
42	27
Total	69