

**Quabbin Watershed Advisory Committee Meeting**  
**December 12<sup>th</sup>, 2022**  
**6:30 PM**

**Location:** DCR Quabbin Visitor Center, 100 Winsor Dam Road, Belchertown, MA 01007

**Members:** (members in **BOLD** were present)

Massachusetts Council of Sportsmen: **Bill Pula**

Alternate: Robert Sagan

Trout Unlimited: **Jerry Eves**

Alternate: Joe Babineau

Quabbin Fisherman's Association: **Clayton Sydla**

Alternate: **Mike Laprade; Bill Kimball**

Worcester County League of Sportsmen: **Ronald Komar**

Alternate: John Root

North Worcester County Quabbin Anglers Association: Samantha Robinson

Alternate: **Tom Barnes; Mike Polchlopek**

Mass Audubon: **Tom Lautzenheiser**

Alternate:

Swift River Valley Historical Society: James Boyko

Alternate: Jane Peirce

Massachusetts Wildlife Federation:

Alternate:

New England Sierra Club:

Alternate:

Friends of Quabbin, Inc.: **J.R. Greene (vice chairperson)**

Alternate: **Gene Theroux**

General Public: **Ralph Lapinskas**

Alternate:

**DCR staff present:** Dan Clark, Justin Gonsor

**Members of the public present:** Larry Bandolin, Elena Palladino, Andrew Robinson, Scott Robinson

### **Meeting Start Time: 6:31 PM**

J.R. Acknowledged that Tom Berube stepped down from the committee as of the last meeting. Tom had been the chairperson for QWAC for many years.

Ralph made a motion to appoint J.R. Greene as the new chairperson for QWAC. Clayton seconded the motion. The motion was unanimously approved.

Tom Barnes made a motion to appoint Clayton Sydla as the vice chairperson for QWAC. Ralph seconded the motion. The motion was unanimously approved.

### **Approval of Minutes of Meetings on June 27<sup>th</sup>, 2022 and September 19, 2022**

Ralph made a motion to accept the minutes from the QWAC meetings held on June 27<sup>th</sup>, 2022 and September 19<sup>th</sup>, 2022. Ron seconded the motion. The motion was unanimously approved.

### **2022 Quabbin fishing season report**

Dan gave an overview of the 2022 Quabbin Fishing Program Annual Report. The full report can be viewed at the end of these minutes.

Revenue from rentals, private boat launching, shore fishing, and parking was \$193,983. Almost identical to 2021 revenues (\$193,617). Season pass sales totaled \$30,150. Combined total revenue was \$224,133.

Season pass sales began on February 14, 2022. All season pass sales were done online; no season pass cash sales were available at the boat launch areas (BLAs).

The BLAs switched to credit card sales only on June 1, 2022. In order to accommodate visitors that did not have a credit card but wanted to rent a boat, park, etc. the BLA's developed a process. These customers were allowed on to the water but were given the original of a three-part form and were told they were required to send in their payment as a check or money order. This exception was only allowed once for each individual. In addition, customers who owed DCR money were not allowed access on the water until their payment had been received.

The 2022 fishing season drew a total of 29,132 visitors. This year usage was comprised of rental boats, canoes, kayaks, private boaters, shore fishing and parking.

Since the 2020 season, the BLA foreman has been out of work with an injury. As a result, the Field Operations Team Leader (FOTL) for the Quabbin/Ware region assumed responsibilities for managing day to day operations of the fishing areas. New for 2022 was the creation of 3 additional seasonal attendant positions. The rationale for this pilot program was to provide two-person coverage for every morning shift (Tues.-Sat.). Adding a second attendant provides extra help in the morning and provides redundancy if someone had to call in sick. Unfortunately, only 2 of the 3 vacancies were filled because of lack of suitable candidates.

The refund process was also discussed. BLA sales are conducted through a third-party company, Ncourt, and refunds are processed through them.

### **2022 Quabbin deer hunt preliminary results**

Dan updated the committee on the preliminary results of Quabbin's deer hunt season.

Shotgun season for deer ended on December 10.

Pelham, New Salem, and Hardwick was open for walk-in hunting during the 2-week shotgun season. Harvest numbers for these areas are not yet available.

Prescott was hunted December 7<sup>th</sup> and 8<sup>th</sup> via a controlled hunt where people were allowed to drive in. Weather was not good for hunting, scattered showers occurred over both days. 47 deer were harvested in total (16 female; 31 male). Anecdotal feedback from hunters is that multiple females were seen but not able to be shot at, for various reasons. 262 hunters showed up on day 1. 258 hunters showed up on day 2. Most, but not all, hunters were allowed to purchase doe tags. Data from the moose survey is not yet available.

### **Quabbin Park Cemetery proposal for cleaning bronze plaques**

Gene gave an overview of a Friends of Quabbin (FOQ) proposal for cleaning bronze plaques at the Quabbin Park Cemetery. The detailed proposal can be viewed at the end of these minutes.

The project calls for restoration and conservation of a Civil Ware sculpture in Quabbin Park Cemetery (QPC), and various plaque restorations.

Bronze conservation: Propose cleaning the sculpture using a 100 wat Yag laser to remove corrosion. This method is considered the absolute safest method to remove

corrosion. A light brown patina is commonly used for sculptures and would be FOQ's recommendation for this one. Multiple coats of conservation wax will be applied, followed by hand buffing.

Bronze conservation: A poultice is used to extract the copper staining, followed by washing the entire surface with a light detergent.

Plaque conservation: Memorial plaques will be manually cleaned to remove dirt, grime, mold, etc. Additional cleaning may be completed with a light setting of a power washer. The existing finish and sealers will be removed. Recessed areas will be painted in dark bronze, while the numbers, letters, and trim will be highlighted to a #4 US Satin Finish. The Plaques will then be sealed with three coats of oxidation-inhibiting lacquer.

Price:

Enfield Civil Ware Sculpture and Affixed Plaques:	\$22,000
Dana Honor Roll Plaque:	\$3,000
Honor Roll Plaque on QPC Administration Building:	\$3,000
Hosea Ballou Plaque:	\$1,500
James Madison Stone Plaque:	\$1,500
<b>Total Restoration and Conservation:</b>	<b>\$31,000</b>

J.R. made a motion to approve the above project/concept concerning the restoration/cleaning of bronze, granite, and plaques at QPC. Ralph seconded the motion. The motion was unanimously approved.

A member of the public expressed appreciation for the project and supports the proposed preservation/restoration methods.

### **Keystone bridge status update**

Dan updated the committee on the status of the Keystone Bridge.

FOQ funded a formal engineering study of the bridge. A dry stone mason was hired to assess the bridge. He will be giving a public presentation of his work and assessment in March at the Quabbin Visitor Center.

The general conclusion is that the bridge is too unsafe to walk on; it was recommended that it stay closed to the public. It is unclear how long the bridge will last. He recommended the following:

- DCR monitor the bridge over the next couple years to see how quickly things are shifting.
- Getting rid of the trees on/near the structure was recommended.
- Shoring up the slumping that has taken place will need to be done.
- Experts would need to be hired for these tasks.
- Construct an alternative pathway across the river so that the keystone bridge is viewable

To preserve or restore the bridge would cost around \$2,000,000. It would have to be rebuilt/restored in a slightly different manner.

### **Road discussion inside gates 8, 31, and 43**

Clayton commented that booms are placed along the docks at BLA3 so boats don't get scratched when launching. BLA2 seems to be missing these booms. The plan is to get up to BLA2 for the coming season.

Clayton inquired about the gate 8 road. Small stones on the roads cause cars get flat tires on it from time to time. He is hoping something can be done to get the road improved. In the past, blowing excess stones of the road has seemed to help.

Clayton asked how Long Pond got a new boat ramp. Dan answered that a different office (Office of Fishing and Boating Access) manages that ramp, determines the priorities there, and they decided to upgrade their ramp at Long Pond. The condition of the boat ramps at Quabbin were discussed.

Clayton asked about the BLA shacks and suggested getting them rebuilt and upgraded, starting with the oldest one. Dan answered that he can talk with the carpenter about what upgrades are possible.

Dan updated the committee on getting the gate 43 road repaved. He was recently contacted by representative Smola's office. \$300,000 has been earmarked, with caveats, to be spent on repaving the gate 43 road and cannot exceed \$300,000. This money is coming from the federal American Rescue Plan Act (ARPA). The funds must be committed by the end of 2024 and spent by the end of 2026. This should take care of repaving the gate to the bridge.

### **Discussion from Bill Kimball about fire breaks around watershed boundaries**

Dan commented that fire breaks were put in place around the watershed when Quabbin was created. In the 1930's and 40's, there was more concern over large

wildfires in the state. At some point, the decision (for multiple reasons) was made to stop maintaining the fire breaks. It was a massive workload to maintain them. Fire management and the response to fires has also changed since Quabbin was created. Wildfire prevention has gotten better over the past 50 years. There are no immediate plans to go back to maintaining the many miles of fire breaks around the watershed.

### **Member Issues**

Bill Pula asked about the status of the update to the Ware River Public Access Plan. Dan answered that updates to the plan include the following proposals:

- close a significant amount of roads to vehicles in the watershed for most of the year
- permits will no longer be given for motors larger than 25hp at Long Pond
- the watershed will be open from sunrise to sunset
- distance swimming/open water swimming to be prohibited at Comet Pond

The public comment period has been extended through the end of February. The link to leave comments is as follows: <https://www.mass.gov/forms/dcr-public-comments>

Tom Lautzenheiser commented about the Connor Pond dam in Petersham. It has some serious structural deficiencies. Audubon is starting the conversation about possibly removing the dam. It was destroyed by a hurricane in the 1950's and repaired/rebuilt in the 1970's. Removing the dam could potentially improved fishing at the Quabbin Reservoir.

**Meeting End Time: 7:43 PM**

### **Upcoming QWAC Meetings:**

- Monday, March 20<sup>th</sup>, 2022, at 6:30 PM – DCR Quabbin Visitor Center, 100 Winsor Dam Road, Belchertown, MA 01007



**Quabbin Fishing Program**  
**2022 Annual Report**



*Curtis Island*



## I. Introduction

The Quabbin Fishing Program began in 1946 when the reservoir was opened to the public for shore fishing. The program was expanded in 1952 to establish limited boat fishing within defined areas and parameters. Rules governing the operation of the Quabbin Fishing Program are outlined in *Watershed Protection Regulations 313 CMR 11.9*.

In accordance with *313 CMR 11.09(2)(b) Special Regulations for Quabbin Reservoir*, “Fishing from the shorelines of Quabbin Reservoir and its tributaries within the Watershed System or fishing from boats shall be allowed only during a season designated by the Commissioner”. The Quabbin fishing season runs for a period of six months beginning around the third Saturday of April, weather and conditions permitting. In 2022, the Quabbin Fishing Program operated from April 16th to October 15th. There were 183 days to the season, and the program operated three boat launch areas seven days per week.

The Quabbin Fishing Program is a collaborative effort between multiple sections of the DWSP Quabbin/Ware Region. Twelve Recreational Facility Supervisors and one Boat Launch Area Foreman run the three Boat Launch Areas (BLAs) in a variety of weather conditions and situations that arise during the season.

Administrative support is provided by the Office Support Specialist I who processes BLA receipts and revenue, tabulates data, generates the Quabbin Fishing program report, and produces Boater I.D. cards. Additional support is provided by the Office Support Specialist II who provides data on Season pass sales, produces season pass cards and processes credit card refunds. Interpretive Services staff provide information such as the annual Fishing Guide and schedule boat decontaminations for the Boat Seal program. Watershed Rangers provide security support to all three Boat Launch Areas, and operational support is provided by Watershed Maintenance staff. Environmental Quality staff conduct the Quabbin Boat Seal, Boat decontamination and Cold Weather Quarantine Programs.

Revenues related to the operation of the Quabbin Fishing Program came from two sources – user fees (rental boats, private boater fees-launching and shore fishing/parking fees) and season pass sales. This year Season Passes were only available for purchase on-line beginning in February 2022.

This year there were a total of 29,132 visitors to the three Boat Launch areas. The revenue generated by the Quabbin Fishing Program was \$193,983.00. Revenue generated by Season Pass sales was \$30,150.00.

The following is a summary of revenues and usage of the Quabbin Fishing Program for the 2022 season. In addition, this report includes a description of the Quabbin Boat Decontamination and Quabbin Boat Seal programs.

### I. Quabbin Fishing Program Revenues

The revenue from rentals, private boat launching, shore fishing and parking was \$193,983.00  
Season Pass sales totaled \$30,150.00. Combined total revenue was \$224,133.00

#### a. Revenues by Month

2022 BLA Revenue by Month			
Month	BLA Fees-Cash	BLA Fees-Credit	Total
April	\$8,942.00	\$7,737.00	\$16,679.00
May	\$20,819.00	\$19,555.00	\$40,374.00
June	\$715.00	\$41,306.00	\$42,021.00
July		\$39,836.00	\$39,836.00
August		\$28,768.00	\$28,768.00
September		\$19,601.00	\$19,601.00
October		\$6,704.00	\$6,704.00
Total	\$30,476.00	\$163,507.00	\$193,983.00

#### b. Revenues by Year

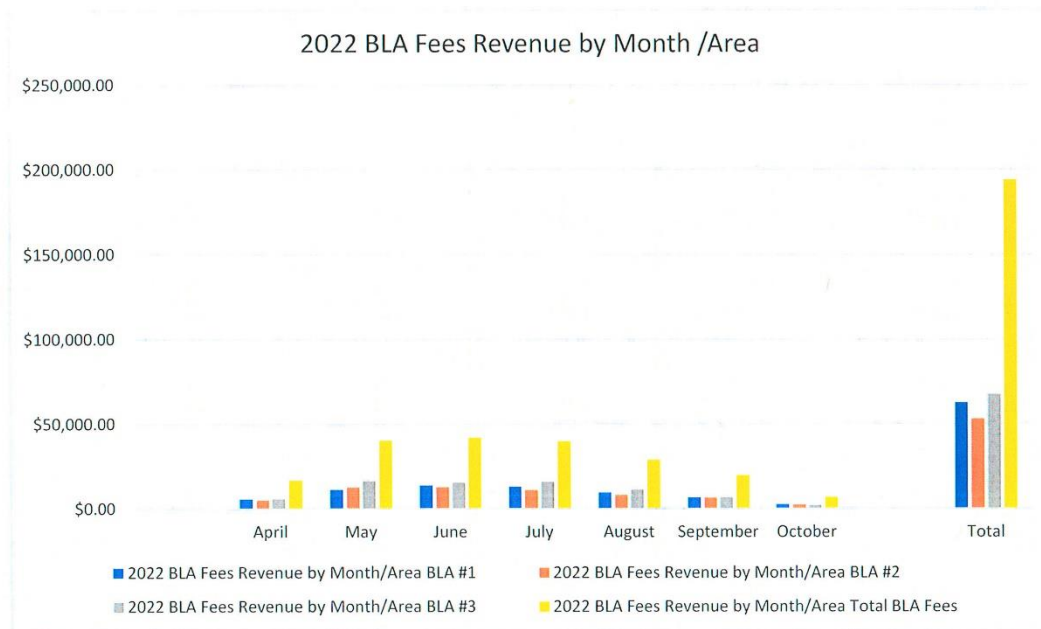
YEAR	FEE REVENUE	SEASON PASS REVENUE	TOTAL REVENUE
2022	\$193,984	\$30,150	\$224,133
2021	\$193,617	\$29,945	\$223,562
2020 <sup>1</sup>	\$22,983	\$27,045	\$50,028
2019	\$204,400	\$28,434	\$232,834
2018	\$184,594	\$24,065	\$208,659

<sup>1</sup>There were no boat rentals in 2020 due to the Covid-19 pandemic.

**c. Boat Launch Area Fees**

Boat launch area revenues were comprised of fees for rentals, private boat launching, shore fishing and parking.

<b>2022 BLA Revenue by Month and Area</b>				
<b>Month</b>	<b>BLA #1</b>	<b>BLA #2</b>	<b>BLA #3</b>	<b>Total BLA Fees</b>
April	\$5,719.00	\$5,134.00	\$5,826.00	\$16,679.00
May	\$11,316.00	\$12,538.00	\$16,520.00	\$40,374.00
June	\$13,795.00	\$12,731.00	\$15,495.00	\$42,021.00
July	\$13,070.00	\$10,946.00	\$15,820.00	\$39,836.00
August	\$9,519.00	\$8,169.00	\$11,080.00	\$28,768.00
September	\$6,691.00	\$6,356.00	\$6,554.00	\$19,601.00
October	\$2,495.00	\$2,193.00	\$2,016.00	\$6,704.00
<b>Total</b>	<b>\$62,605.00</b>	<b>\$52,933.00</b>	<b>\$67,485.00</b>	<b>\$193,983.00</b>



#### d. Season Pass Sales

Season pass sales opened February 14<sup>th</sup>, 2022. All season pass sales were online; no season pass cash sales were available at the Boat Launch Areas. A total of 854 passes were sold. Out of state residents accounted for 5% of total sales – 30 from Connecticut, 2 from Florida, 4 from New Hampshire, 4 from Rhode Island, and 3 from Vermont.

On-Line Season Pass Sales/ Credit Card Transactions							
Month	# of Regular	Total \$	# of Senior	Total \$	#of Handicaped	Total	Total \$
February	53	\$2,650.00	112	2800	7	175	\$5,625.00
March	107	\$5,350.00	145	3625	5	125	\$9,100.00
April	114	\$5,700.00	135	3375	7	175	\$9,250.00
May	51	\$2,550.00	45	1125	3	75	\$3,750.00
June	19	\$950.00	11	275	0	0	\$1,225.00
July	14	\$700.00	8	200	1	25	\$925.00
August	2	\$100.00	3	75	0	0	\$175.00
September	1	\$50.00	1	25	0	0	\$75.00
October	0	\$0.00	0	0	1	25	\$25.00
<b>Totals</b>	<b>361</b>	<b>\$18,050.00</b>	<b>460</b>	<b>11500</b>	<b>24</b>	<b>600</b>	<b>\$30,150.00</b>
Replacement Fees	20	\$400.00			Total On-Line Sales		\$30,150.00

Number of Season Passes used by Month /Area				
Month	Area #1	Area #2	Area #3	Total SP Used
April	203	358	310	871
May	381	808	737	1926
June	306	564	631	1501
July	348	454	557	1359
Aug	313	306	423	1042
Sept	321	262	321	904
Oct	107	148	118	373
<b>Totals</b>	<b>1979</b>	<b>2900</b>	<b>3097</b>	<b>7976</b>

**e. BLA Payment Vouchers**

The BLAs switched to credit card sales only on June 1, 2022. In order to accommodate visitors that did not have a credit card but wanted to rent a boat, park, etc. the Boat Launch Areas developed a process. These customers were allowed on to the water but were given the original of a three-part form and were told they were required to send in their payment as a check or money order. This exception was only allowed once for each individual. In addition, customers who owed DCR money were not allowed access on to the water until their payment had been received.

These payments were processed and deposited. Delinquent customers were contacted and reminded to send in their payment. The table below summarizes the number of payments that were received and the total amount uncollected.

<b>BOAT LAUNCH AREA PAYMENT VOUCHERS</b>			
<b>AREA 1</b>	<b>FEE AMOUNT</b>	<b>AMOUNT PAID</b>	<b>AMOUNT OUTSTANDING</b>
JUNE	\$377.00	\$131.00	\$246.00
JULY	\$99.00	\$63.00	\$36.00
AUGUST	\$152.00	\$66.00	\$86.00
SEPTEMBER	\$0.00	\$0.00	\$0.00
OCTOBER	\$0.00	\$0.00	\$0.00
<b>TOTAL</b>	<b>\$628.00</b>	<b>\$260.00</b>	<b>\$368.00</b>
<b>AREA 2</b>	<b>FEE AMOUNT</b>	<b>AMOUNT PAID</b>	<b>AMOUNT OUTSTANDING</b>
JUNE	\$188.00	\$106.00	\$82.00
JULY	\$92.00	\$86.00	\$6.00
AUGUST	\$46.00	\$0.00	\$46.00
SEPTEMBER	\$0.00	\$0.00	\$0.00
OCTOBER	\$0.00	\$0.00	\$0.00
<b>TOTAL</b>	<b>\$326.00</b>	<b>\$192.00</b>	<b>\$134.00</b>
<b>AREA 3</b>	<b>FEE AMOUNT</b>	<b>AMOUNT PAID</b>	<b>AMOUNT OUTSTANDING</b>
JUNE	\$279.00	\$128.00	\$151.00
JULY	\$262.00	\$134.00	\$128.00
AUGUST	\$220.00	\$46.00	\$174.00
SEPTEMBER	\$0.00	\$0.00	\$0.00
OCTOBER	\$33.00	\$33.00	\$0.00
<b>TOTAL</b>	<b>\$794.00</b>	<b>\$341.00</b>	<b>\$453.00</b>
<b>TOTAL AMOUNTS ALL 3 AREAS</b>	<b>\$1,748.00</b>	<b>\$793.00</b>	<b>\$955.00</b>

## II. Usage

### a. Boat Launch Area Usage

The 2022 fishing season drew a total of 29,132 visitors. This year usage was comprised of rental boats, canoes, kayaks, private boaters, shore fishing and parking,

	Boat Launch Area Usage by Category					
<b>Area #1</b>	Number of	Regular	Senior	Handicapped	Minors	# of Vehicles Parked
Private Boats	3308	2275	1011	10	85	3308
Motor Boats	1425	2337	361	39	280	1425
Shore Fishing	459	703	77	11	163	459
Row Boats	23	17	17	0	4	23
# of Additional Vehicles parked	542	695	135	14	107	542
<b>Area # 1 Totals</b>	5757	6027	1601	74	639	5757
<b>Area #2</b>	Number of	Regular	Senior	Handicapped	Minors	
Private Boats	4677	2930	1480	32	96	4677
Motor Boats	1339	2213	368	35	223	1339
Shore Fishing	692	857	247	53	167	692
Row Boats	19	24	10	1	1	19
Canoes	28	34	14	0	0	28
Kayaks	14	11	3	0	0	14
# of Additional Vehicles parked	315	257	95	25	35	315
<b>Area # 2 Totals</b>	7084	6326	2217	146	522	7084
<b>Area #3</b>	Number of	Regular	Senior	Handicapped	Minors	
Private Boats	3320	4715	2012	14	220	3320
Motor Boats	1705	2740	494	32	224	1705
Shore Fishing	453	657	81	5	87	453
Row Boats	8	12	2	1	0	8
Canoes	24	28	10	0	4	24
Kayaks	48	34	10	1	0	48
# of Additional Vehicles parked	105	151	28	1	17	105
<b>Area # 3 Totals</b>	5663	8337	2637	54	552	5663
<b>Totals All Areas</b>	18504	20690	6455	274	1713	18504
<b>Total # of Visitors</b>	29132					



**2022 One Day Fishing Licenses Sold at Boat Launch Areas**

<b><u>2022 April - October Quabbin One Day Fishing Licenses</u></b>				
<b><u>Month</u></b>	<b><u>Licenses Sold Cash</u></b>	<b><u>Licenses Credit Card</u></b>	<b><u>Amount Cash Sales</u></b>	<b><u>Amount Credit Sales</u></b>
April	93	58	\$465.00	\$290.00
May	265	156	\$1,325.00	\$780.00
June	49	361	\$245.00	\$1,805.00
July	56	507	\$280.00	\$2,535.00
August	47	363	\$235.00	\$1,815.00
Sept.	33	223	\$165.00	\$1,115.00
Oct.	9	60	\$45.00	\$300.00
Total	552	1728	\$2,760.00	\$8,640.00
<b>Total Cash and Credit</b>			\$11,400.00	

**E. Boater ID Cards** This season there were 148 Boater I.D cards issued /mailed to Quabbin boaters.

2022 BOATER ID CARDS					
MONTH	# OF CARDS ISSUED	CARD TYPE	STATE	STATE	STATE
JANUARY	1	NEW BOAT	MA		
<b>TOTAL</b>	<b>1</b>				
FEBRUARY	1	REPLACEMENT	MA		
<b>TOTAL</b>	<b>1</b>				
MARCH	14	NEW CARD	11 MA	2 CT	
	3	NEW BOAT	3 MA		
	2	REPLACEMENT	8 MA	1 RI	
<b>TOTAL</b>	<b>19</b>				
APRIL	16	NEW CARD	14 MA	1CT	1NH
	6	NEW BOAT	6 MA		
	9	REPLACEMENT	9 MA		
<b>TOTAL</b>	<b>31</b>				
MAY	8	NEW BOAT	8 MA		
	13	NEW CARD	12 MA	1 CT	
	9	REPLACEMENT	9 MA		
<b>TOTAL</b>	<b>30</b>				
JUNE	3	NEW BOAT	3 MA		
	15	NEW CARD	15 MA		
	4	REPLACEMENT	4 MA		
<b>TOTAL</b>	<b>30</b>				
JULY	4	NEW BOAT	4 MA		
	8	NEW CARD	7 MA	1VT	
	1	REPLACEMENT	1 MA		
<b>TOTAL</b>	<b>13</b>				
AUGUST	3	NEW BOAT	3 MA		
	6	NEW CARD	6 MA		
	4	REPLACEMENT	4 MA		
<b>TOTAL</b>	<b>13</b>				
SEPTEMBER	4	NEW BOAT	4 MA		
	2	NEW CARD	2 MA		
<b>TOTAL</b>	<b>6</b>				
OCTOBER	3	NEW CARD	2 MA	1 NH	
<b>TOTAL</b>	<b>3</b>				
NOVEMBER	1	NEW CARD	1 MA		
<b>TOTAL</b>	<b>1</b>				
<b>TOTAL CARDS ISSUED</b>	<b>148</b>				



### **III. Personnel Update**

Since the 2020 season, the Boat Launch Area Foreman has been out of work with an injury. As a result, the Field Operations Team Leader (FOTL) for the Quabbin/Ware Region assumed responsibilities for managing day to day operations of the fishing areas. It is unclear how long the foreman will be out of work or when the position might become available to fill.

New this year was the creation of 3 additional seasonal attendant positions. The rationale for this pilot project was to provide two-person coverage for every morning shift (Tues-Sat). Mornings are the busiest times at the fishing areas, and historically only one attendant has worked the morning shift on Tuesdays-Fridays. Adding a second attendant would provide extra help in the morning and provide redundancy if someone had to call in sick. Unfortunately, only 2 of the 3 vacancies were filled because of a lack of suitable candidates. However, early indications suggest that the addition of a second morning crew member was helpful. It is likely this expanded staffing will continue in the future.

### **IV. Quabbin Boat Decontamination and Quabbin Boat Seal Programs**

Since 2010, the DWSP has implemented a comprehensive Aquatic Invasive Species (AIS) prevention program for Quabbin Reservoir. The program assesses risks from AIS and implements prevention strategies for all vectors that might introduce alien species into Quabbin Reservoir. A major component of the program is a decontamination procedure for all boats, motors, trailers and other equipment that are launched or otherwise used in Quabbin Reservoir. Before a private or public agency boat is allowed to launch onto the reservoir, it must be inspected and decontaminated to remove any possible AIS. This process can occur via a high-temperature wash that is conducted at a local carwash, or via a “cold weather quarantine” period.

During the high temperature wash procedure, the boat’s hull, all through-hull fittings, live wells, bilge, downriggers, anchors, anchor ropes, and trolling motors, as well as the boat trailer or any other piece of equipment that may come in contact with the water, are thoroughly washed with pressurized water that is maintained at a minimum of 140 °F. Boat motors are also flushed with hot water and are run until a thermometer registers that the water flowing from the exit hole in the motor has reached 140°F for 10 seconds.

Cold weather quarantine (CWQ) dates were initially determined using the 100<sup>th</sup> Meridian Calculator. CWQ is typically conducted up to 5 dates during the months of October, November, and December; in 2022, CWQ was conducted on 2 dates in November and scheduled for 3 dates in December. Boats and trailers are inspected to be sure that they are clean, do not have excessive amounts of rust, and all compartments are dry. By the time the fishing season begins at Quabbin, any possible AIS would be killed from a combination of desiccation and freezing.

Boats going through one of these decontamination processes are ultimately sealed with a Quabbin-specific, numbered security seal affixed to the trailer. Only boats/trailers with intact seals are allowed to launch on the Reservoir or Regulating Ponds at the Boat Launch Areas

during the Quabbin Boat Fishing Season. Prior to the launch, the seal is inspected by the attendants, documented for validation and tracking purposes, and removed. Upon leaving the reservoir, the Boat Launch Area attendants affix a new seal. The unique numbers on the individual boat seals allows them to be traced through a database for program validation, monitoring, and analyses.

In 2018, DWSP made significant changes to streamline data management related to the collection and storage of boat decontamination and boat launch records. This included the use of iPads to electronically track boat seal records both at boat decontamination stations and at the three boat launch areas. In order to quickly and efficiently collect boat-seal records, Quabbin boaters were issued unique boater ID cards that allowed boat launch area attendants to quickly scan boaters on and off the water. The use of iPads coupled with ArcGIS software helped eliminate the need for paper records and time-intensive data entry work. Records from Quabbin Boat Decontamination are also collected in real-time and stored in a database for enhanced record-keeping and information sharing across DWSP programs.

In 2022, 160 boats were inspected and decontaminated, and 59 went through CWQ (Table 1). Two additional CWQ dates are scheduled in December, with an estimated 25 additional boats to be inspected and sealed. There are currently 2,410 unique boats in the Quabbin Boat Decontamination/Boat Seal database following an update and standardization of Boater Records. To date, a total of 3,197 decontaminations have been conducted. CWQ accounted for another 1,337 boats sealed since 2010.

**Table 1. Number of boat decontaminations, 2019-2022.**

<b>Year</b>	<b>Warm Weather Decontamination</b>	<b>Cold Weather Quarantine</b>
2019	164	96
2020	173	105
2021	201	92
2022	160	74*

\*Estimated through the end of 2022

There were approximately 8,108 boat launches across the three BLAs during the 2022 fishing season (Table 2). QA/QC on boat tag records is ongoing, and some minor data entry errors and subsequent changes to these records are anticipated. Since 2010, the first year of full-season Boat Seal Program operations, there have been approximately 108,357 “sealed” boat visits to the 3 BLAs: 25,508 to BLA 1; 37,233 to BLA 2; and 45,616 to BLA 3. See Table 2 for the number of “sealed” boat visits processed for 2022 and the previous 3 years.

**Table 2. Number of Boat Launches at Quabbin Boat Launch Areas, 2019-2022**

<b>Year</b>	<b>BLA 1</b>	<b>BLA 2</b>	<b>BLA 3</b>
2019	2,054	2,797	3,647
2020	2,049	2,763	3,939
2021	2,286	3,294	3,879
2022	2,041	2,766	3,301





**Friends of Quabbin, Inc.**  
485 Ware Road  
Belchertown, MA 01007

December 2, 2022

Soldiers' Monument and four affixed plaques: Conservation Quote: \$ 22,000

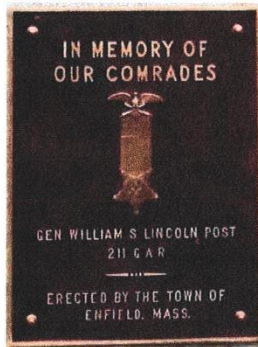


The Soldiers' Monument that once stood on the Enfield Common was dedicated on July 4, 1816 during the town's Centennial Celebration (photo on left). The bronze sculpture was manufactured by W.H. Mullins Co. of Salem, Ohio. The monument, undedicated since its erection several years earlier, was formally accepted, following an oration by Alfred Seelye Roe of Worcester who was the Department of Massachusetts Grand Army of the Republic Commander and a member of the George H. Ward Grand Army of the Republic Post 10 (Worcester).

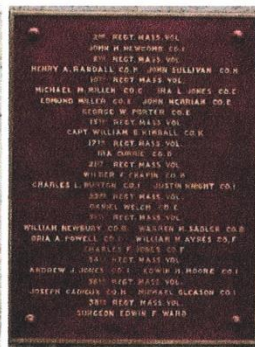


Alfred Seelye Roe was also an author and wrote, "In a Rebel Prison" where he wrote of his experiences as a Prisoner-of-War (POW) in the Confederate POW prison at Danville, Virginia. He was a POW for almost 8 months. The book, In a Rebel Prison is available at the Internet Archive website. Roe was in the Massachusetts state legislature for three terms from 1892-1895 and state senator for the second Worcester district from 1896-1898.

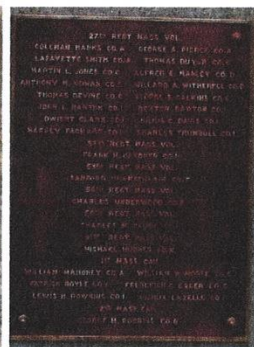
The William S. Lincoln Grand Army of the Republic Post 211 (Enfield, MA) and the town of Enfield donated the memorial and located it on the Common near the Congregational Church. The memorial's base of Quincy (Mass) granite was surmounted by the bronze statue of a soldier of the Civil War. The names of eighty-one Enfield men who participated in battle were placed on bronze plates attached to the shaft. Near the monument was a Confederate cannon and some cannon balls given the Post by then Congressman Frederick H. Gillett of Springfield. The Enfield GAR Post was named after Worcester native William Sever Lincoln who served in the 34th Massachusetts Infantry Regiment (Brigadier General by Brevet).



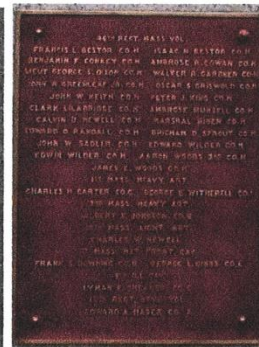
Dedication Plaque



Gettysburg



Winchester

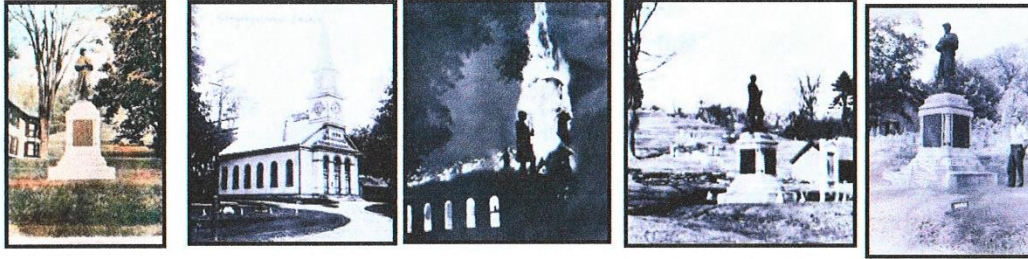


Newbern

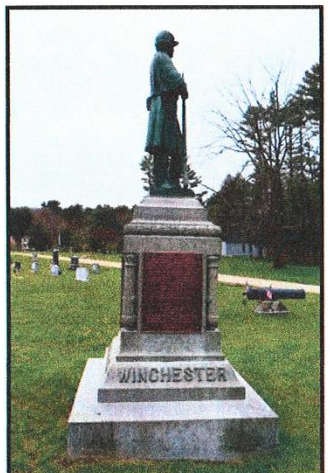
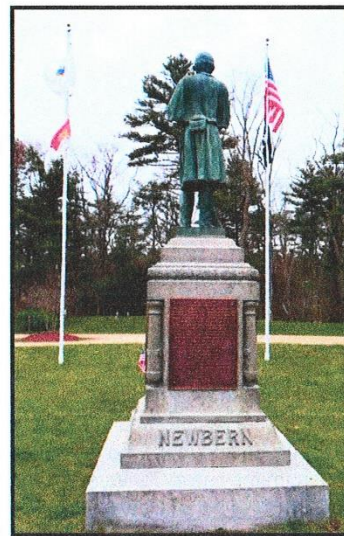
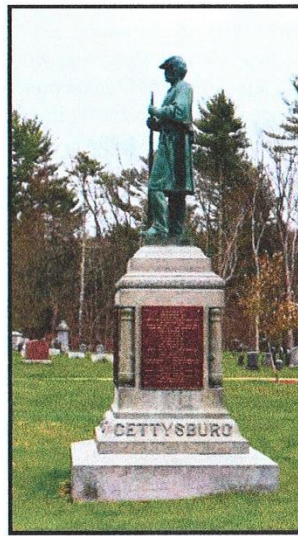
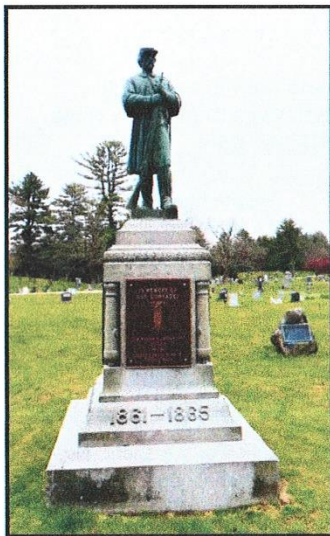
The plaques on the Enfield Soldiers Monument identify the Civil War battles with the unit and names of the unit members from the town of Enfield.



The Enfield Civil War Soldier had endured the mysterious burning of Enfield's Congregational Church on August 1, 1936. The following historic photos depict the Enfield Soldier's Monument on the Enfield town green from prior to and after the fire of August 1, 1936 and prior to moving to Quabbin Park Cemetery.



The below photos are recent photos of the Enfield Civil War Soldier. The bronze sculpture has a lot of corrosive patina and is in dire need of conservation. The four sides each have a bronze plaque.



The front of the monument plaque is "In Memory of Our Comrades" General William S. Lincoln Post 211 G.A.R. Erected by the Town of Enfield, Mass and the other three identify the units and roster of those from Enfield who served and participated in the Battles of Gettysburg, Newbern, and Winchester.



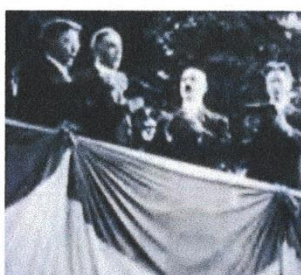
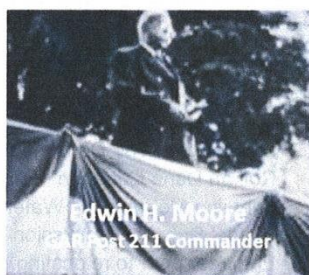
Left: BGen (by Brevet) William S. Lincoln (photo courtesy of American Civil War Database, Historical Data Systems, Inc., Duxbury, MA. William S. Lincoln was the son of Levi Lincoln Jr. whose term of governor is the longest consecutive service in the state's history. Only Michael Dukakis, John Hancock, and Caleb Strong served for more years, but their terms were not all consecutive. William S. Lincoln was wounded at New Market, VA on May 15, 1864 and taken as a Prisoner-of-War.





## Scenes from 1916 Centennial Celebration

Parade, GAR Post Commander E.H. Moore, Henschel Male Quartet, GAR Members

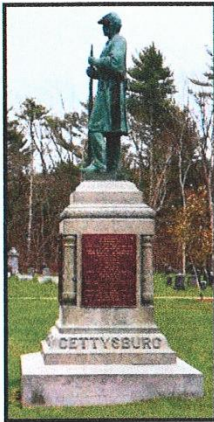


Bottom left: Edwin H. Moore at the dedication of the Enfield Soldier Monument, Enfield Centennial Celebration, July 4, 1916.

Edwin H. Moore served in Company I, 34th Massachusetts Infantry Regiment whom he served with William S. Lincoln. He took part in a number of engagements, and witnessed the surrender by General Robert E. Lee. He was at one time hospitalized for typhoid fever, but rejoined his regiment at Petersburg, VA. Moore was captured by the enemy at Shenandoah but was soon rescued by his comrades. He was originally a member of the E. J. Griggs G.A.R. Post 97 in Belchertown. Moore was active in the establishment of the William S. Lincoln Grand Army of the Republic Post 211. He served as commander of the Griggs G.A.R. Post 97 and the new Enfield Post 211, and was also an official who served both as Assistant Inspector and as an Aide-de-Camp in the Department of Massachusetts Grand Army of the Republic. Edwin H. Moore was an undertaker by profession.

Of the Civil War soldiers attributed to Enfield, one was killed-in-action (Lafayette Smith, Co. A, 27th Regiment Massachusetts Volunteers), one died as a Prisoner-of-War (Francis Saunders, Co. G, Massachusetts 2nd Heavy Artillery, Date of Death September 9, 1864 and buried at Andersonville National Cemetery, Andersonville, GA (grave # 8281). Three had died of disease that included Edmund Miller (buried at Arlington National Cemetery, Arlington, VA Gravesite: 13-7353); George A. Pierce (Co. A, 27th Regiment Massachusetts Volunteers who died at Newbern, NC on September 1, 1864), and John W. Sadler (Co. H, 46th Infantry Regiment who died at Foster General Hospital, Newbern, NC PM February 3, 1863). Nine were discharged for disabilities (John L. Barton, Ira Currie, Lewis H. Downing, Frederick C. Eager, Michael McMullen, Edmund Miller (Co. E, 10th Mass Inf, discharged for disability on September 26, 1862 who later was mustered into Co. K, Mass 2nd Cavalry and died of disease on July 5, 1864 at Falls Church, VA), John H. Newcomb, Harvey Packard, and Aaron Woods. Lastly, there were three deserters.





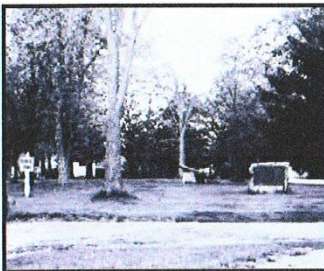
**Condition:** The bronze has significant corrosion and surface loss on the horizontal surfaces. The original patina is no longer visually evident. Despite the corrosion, the bronze detail on the relief sculptures is surprisingly crisp. The four bronze plaques had previously been conserved twice by a conservator whose first attempt resulted in the patina peeling off the plaques in just over a year. The second effort achieved better results, but inconsistencies in the color of the patina from plaque to plaque. Lastly, the granite is in good condition, but stained.

**Recommended Treatment:** The bronze surfaces should be cleaned using a 100 watt Yag laser to remove corrosion. This method is considered the absolute safest method to remove corrosion. A light brown patina is commonly used for sculptures and would be the recommendation for this one and the four plaques on the base. Multiple coats of conservation wax will be applied, followed by hand buffing.

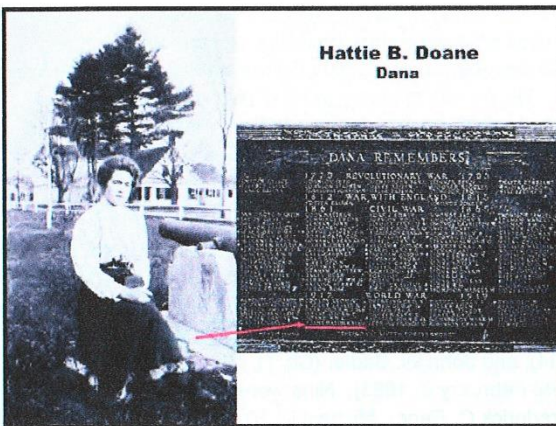
The other bronze plaques recommended for conservation at Quabbin Park Cemetery include the Dana Honor Roll, the Hosea Ballou plaque, the James Madison Stone plaque, and the Honor Roll on the Administration Building at Quabbin Park Cemetery.

**Dana Honor Roll** Conservation Cost: \$ 3,000

The Dana Honor Roll once stood on the green at Dana Common;



Left to right: The Dana Honor Roll on Dana Common. Far right is a Metropolitan Water District Supply Commission Engineer prior to relocating the monument to Quabbin Park Cemetery.



Above left to right: Hattie Belle Doane, daughter of Albert Ernest and Lottie Wright Doane. Hattie attended Technical High School (Springfield, MA) nursing program, and then graduated from Holyoke Hospital Nursing School in 1914. She was appointed assistant superintendent of Elizabeth (New Jersey) Hospital in 1916.



She served with the Red Cross in France in World War I and later associated with a clinic in Pasadena, California. She attended as a delegate to the first convention of The American Legion Department of Massachusetts. Hattie B. Doane Van Hoy is interred at Arlington National Cemetery. The Dana Honor Roll has veterans attributed to have lived in what became Dana in 1801 through World War 1.

There were several men who lived in the territory that would become Dana who fought during the war of the Colonies, and they include: [Jonathan Parkhurst](#), John Towne, Stephen Johnson, Stephen Witt, Benjamin Richardson, Bazeliel Amsden, Ruggles Spooner, Thomas Stimpson, Elijah Babbitt, Benjamin Skinner, Elisha Flagg, Abijah Sibley, Elisha Sibley, Seth Johnson, Ephraim Thayer, Jacob Whipple, and Stephen Witt. Most of these men were among the first citizens of Dana following the establishment of the community, and many took a prominent role in the town's affairs. In fact, their descendants were among those active during the last days of the town in 1938.

In the War of 1812, Asa Hoyt and Joseph Simonds are recorded among the enlistees who served throughout the conflict. [Elisha Foster](#) held a captain's commission and commanded a company in defense of Boston Harbor. A total of eighty-eight men from the town served in the Civil War. This was thirteen more than the town's quota, and the extra men were enrolled in service and credited to other communities. Four of the eighty-eight men were killed-in-action, and fourteen more died of wounds or disease, one of which was [Anson P. Peckham](#) who served in Company B, Massachusetts 15th Infantry who was taken as a Prisoner-of-War on June 22, 1864 at Petersburg, Virginia and died of disease on August 22, 1864 at Andersonville Prisoner of War Camp, Georgia.

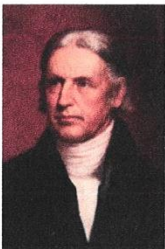
Dana's contribution to World War I totaled twenty-nine, including the previously mentioned nurse, Miss Hattie B. Doane. All but seven saw service overseas. Two were killed-in-action, John E. Hunter, Jr. in the Argonne, and George H. Ryan, who was with the Canadian forces. Mr. and Mrs. John E. Hunter, Sr of North Dana received a letter of commendation from their son's company commander following his death on October 15, 1918. In the missive the officer told of the bravery of Private Hunter as he was going over the top in the Argonne Forest in France. Company C, 326th Infantry had met stubborn resistance and suffered heavy casualties. The young man, regarded as an excellent soldier was struck by shrapnel. His father was a veteran was a veteran of the Civil War who served in Company E, 42nd Massachusetts Infantry.

#### **Rev. Hosea Ballou Monument**

Conservation Cost: \$ 1,500



Hosea Ballou (1771-1852) was born in Richmond, New Hampshire, to a family of Huguenot origin. The family claimed to be of Anglo-Norman heritage. The son of Maturin Ballou, a Baptist minister, Hosea Ballou was self-educated, and devoted himself early on to the ministry. In 1789 he converted to Universalism, and in 1794 became pastor of a congregation in Dana, Massachusetts.



While in Dana, he exerted a tremendous effect on all who knew him; he was respected and loved, so much so that the Woman's Club of Dana erected a monument in his honor on the Common, now in Quabbin Park Cemetery.

Ballou was also a high-ranking freemason, who attained the position of junior Grand Warden of the Grand Lodge of New Hampshire in 1811. He founded and edited *The Universalist Magazine* (1819—later called *The Trumpet*), and *The Universalist Expositor* (1831—later *The Universalist Quarterly Review*), and wrote about 10,000 sermons as well as many hymns, essays and polemic theological works.



Ballou is best known for *Notes on the Parables* (1804), *A Treatise on Atonement* (1805) and *Examination of the Doctrine of a Future Retribution* (1834). These works mark him as the principal American expositor of Universalism.

The [Rev. Hosea Ballou](#) is buried at Mount Auburn Cemetery in Cambridge Massachusetts.

#### Honor Roll Plaque on QPC Administration Building      Conservation Cost: \$ 3,000



The Honor Roll plaque had previously been conserved twice by a conservator whose first attempt resulted in the patina peeling off the plaque in just over a year. The second effort achieved better results but there is an inconsistency of the patina on the plaque,

There are 105 names on the Honor Roll from the total of the four towns of Dana (30), Enfield (51), Greenwich (11), and Prescott (13).

There are ten residents from amongst the four town that gave their lives that democracy might live.

#### James Madison Stone Plaque:      Conservation Cost: \$ 1,500



[James Madison Stone](#) (1841-1930) was born in Dana, the son of James Humphrey and Azubah Williams Stone. He spent his early life on a farm and was a veteran of the Civil War. His remarkable physical condition helped him to fully recover when he was seriously wounded on July 29, 1864 at Petersburg, Virginia. He had enlisted with Company K of Barre's 21st Massachusetts Infantry and served three years. He was shot in the thigh in the battle near Petersburg and lay on the battlefield several hours before he was removed and later spent several months in Emory Hospital in the nation's Capitol in a successful effort to save his leg from amputation.

On his return home, he entered Powers Institute in Bernardston. In 1868, he entered the Cooper Institute in New York, later the National Academy of Design, and then attended the Royal Academy in Munich, Germany. Five years later, he returned to the United States and opened a studio in Boston.



His excellent paintings were numerous, and he was widely acclaimed for his portrait of "Leukopis," a Greek girl, which created a sensation when exhibited in Boston in 1879. A life-size portrait of [Sergeant Thomas Plunkett](#), who lost both arms at Fredericksburg, while holding the Union colors, hangs in Mechanics Hall in Worcester. Sgt Plunkett was awarded a full pension and the Medal of Honor on March 30th, 1866. James Madison Stone author of *Personal Recollections of the Civil War* wrote of his experiences as a Private soldier in the 21st Volunteer Regiment of Infantry from Massachusetts.

Mr. Stone conducted a large school in Boston and later on headed the Art Department in Cambridge. He then went to Worcester to supervise art instruction in the schools of that city. In 1903, Stone went to Paris when he opened a studio, but failing eyesight soon put an end to his art work. He spent four years of travel on the Continent and returned in 1907. He spent the summers with a sister, Mrs. Eliza Gould, the wife of Dr. Frank Gould of Greenwich. His winters he spent in Florida. He died October 23, 1930.



**Observation:** The City of Westfield, Massachusetts had two bronze sculptures conserved in 2022 and a number of bronze plaques in three locations (Park Square, 104th Infantry at Apremont Park, and Elizabeth Parker Memorial Park) and the Yak 100 watt laser was used by Gordon Ponsford, a conservator who had worked as a conservator at Arlington National Cemetery for over 20 years and the owner of [Ponsford, Ltd.](#) On the Ponsford, Ltd website, there are examples of the sculptures and monuments they have conserved as well as a page describing how the light laser works. The laser emits an intense, pure form of light in a very short pulse. The pulses of light, which can be adjusted in intensity and repetition rate, are delivered to the soiled surface.

The following are two articles on the conservation of the General William Shepard Sculpture at Park Square and the Civil War Sculpture at Park Square in downtown Westfield, MA:

1. Westfield restores Revolutionary War monument, similar projects in the works, Masslive, published July 19, 2021, article with photos available [HERE](#)
2. Westfield Green monuments, plaques get makeover with help of 350th Celebration Committee, Masslive, published August 15, 2021, article with photos available [HERE](#)
3. Westfield local access channel 15, September 22, 2021 interview Gene Theroux by Harry Rock available [HERE](#)

The following are some before, during, and after photos of some of the work from the Westfield projects:



Above, left to right: [Major General William Shepard bronze sculpture](#) before, Major General William Shepard after photo, Civil War soldier bronze sculpture before, Civil War soldier bronze sculpture as the patina is being applied after having been cleaned with the Yak 100 watt light laser.

The following are photos from using the laser at Apremont Park on the 104th Infantry Regiment plaques:



Above, left to right: Chris Henry of Ponsford, Ltd using the LightCase CL100 light laser to remove the patina from the Apremont Park gift plaque, patina is applied with a brush and heated, the 104th Infantry monument plaques after being cleaned with the laser, and an after photo from the patina applied, waxed, and buffed.



Examples of conservation project of Westfield War Memorials continued:

The following photos are from the plaques mounted on the Civil War Soldier monument before/after:



The top two rows are of the four plaques mounted on the base of the Westfield Civil War Soldier monument.

This statue was dedicated on May 31, 1871, and it memorialized the 66 Westfield residents who died in the war. The model for the soldier atop the monument was Captain Andrew Campbell of Westfield, with whom Mosman had served in the 46th Regiment during the war. Captain Campbell was a charter member and a Past Commander of Lyon Grand Army of the Republic Post 41. Captain Andrew Campbell is buried in Pine Hill Cemetery, Westfield, Massachusetts, Find a Grave Memorial is available [HERE](#)



### Laser Corrosion Removal

Oxidation occurs when atmospheric and environmental conditions interact with metal surfaces, causing the metal to corrode, or rust. This significantly hinders the lifespan and performance of parts and equipment. While traditional methods of rust removal and corrosion control involve blasting and lots of protective equipment, laser cleaning provides a better way forward.

Laser cleaning offers a safe and much faster way to remove rust from any type of metal. It fully removes corrosion to the bare metal without altering the integrity of the metal. It also eliminates the hassle of having to dispose of hazardous waste. This means that once the cleaning is done, the job is done – providing the perfect solution for aircraft, ship, and armored vehicle maintenance.

It's fast, safe, and it cleans without the need of any harsh media or chemicals. The quick setup and teardown time also makes laser cleaning a time saver for you and your team.

### HOW LASER RUST REMOVAL WORKS

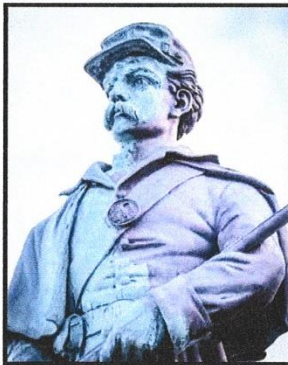
Laser cleaning — also known as laser ablation — uses thousands of focused laser light pulses per second to remove contaminants from products like military vehicles, aircraft, and car manufacturing parts. Unlike other alternatives of cleaning and welding prep, laser ablation doesn't damage the substrate. You'll receive a precision cleaning without requiring additional cleanup or producing added waste. While laser solutions aren't efficient for large surface areas, they work effectively on smaller, targeted areas — often cleaning 15 times faster than media blasting options like sandblasting.

### BENEFITS OF LASER RUST REMOVAL

- Removes oxidation without harming underlying or surrounding surfaces
- Easy setup and teardown
- Handheld and automated options available
- Cost-effective
- Environmentally friendly
- Customized for your application

#### References:

1. [ADAPTLaser LightCASE CL100](#), [Mobile Laser System](#), the LightCASE CL100 (is the specific laser system used in the Westfield MA bronze sculpture & bronze plaques conservation projects)
2. [ADAPTLaser](#), [How Laser Cleaning Works](#)
3. [Ponsford, Ltd](#), [How the Laser Works](#)



Above left to right: Gordon Ponsford using the light laser on the Civil War Soldier sculpture, Civil War Soldier sculpture photos - right side illustrates after the use of the 100 watt light laser.

**Recommendation:** That Ponsford, Ltd be contracted to accomplish preservation and conservation of the Enfield Civil War Soldier monument and the four plaques on the base of the monument and the other plaques contained herein, Honor Roll on QPC Administration Building, the Dana Honor Roll, the Hosea Ballou plaque, and the James Madison Stone plaque for a total restoration and conservation cost of \$ 31,000. That the statement of work contain must use the Yak 100 watt laser or equivalent to remove the corrosive patina.

**What is Conservation?** The profession that melds art with science to preserve the cultural material for the future. Conservation protects our heritage, preserves our legacy, and ultimately, saves our past for generations to come. The inventory of the bronze Civil War Soldier and four attached plaques, and other plaques in Quabbin Park Cemetery provided a reminder to the rich heritage and of the contributions of its citizens.

Attachment:

Proposal by Gordon Ponsford, Senior Conservator

# Gordon Ponsford

Conservation & Restoration

5441 Woodstock Rd.

Acworth, GA 30102

Phone (770) 529-2277 Fax: (770) 529-2278

Email: [Gordon@Ponsford.com](mailto:Gordon@Ponsford.com)

Website: [www.Ponsford.com](http://www.Ponsford.com)

## **Monument Conservation**

**for**

**Friends of Quabbin  
Quabbin Park Cemetery  
Ware, Massachusetts**

**Date: 10/06/2022**

*Restoring The Past For The Future*

Prepared by Gordon Ponsford, Senior Conservator

### **PROJECT DESCRIPTION**

Perform Restoration and Conservation of a Civil War Sculpture in Quabbin Park Cemetery, Ware, Massachusetts, and various plaque restorations.

#### **Bronze Conservation:**

We propose cleaning the sculpture using a 100 wat Yag laser to remove corrosion. This method is considered the absolute safest method to remove corrosion. A light brown patina is commonly used for sculptures and would be our recommendation for this one. Multiple coats of conservation wax will be applied, followed by hand buffing.

#### **Granite Conservation:**

A poultice is used to extract the copper staining, followed by washing the entire surface with a light detergent.

#### **Plaque Conservation**

Memorial plaques will be manually cleaned to remove dirt, grime, mold, etc. Additional cleaning may be completed with a light setting of a power washer. The existing finish and sealers will be removed. Recessed areas will be painted in dark bronze, while the numbers, letters, and trim will be highlighted to a #4 US Satin Finish. The plaque will then be sealed with three coats of oxidation-inhibiting lacquer.

#### **Price**

Enfield Civil War Sculpture and Affixed Plaques:	\$22,000
Dana Honor Roll Plaque:	\$3,000
Honor Roll Plaque on QPC Administration Building:	\$3,000
Hosea Ballou Plaque:	\$1,500
James Madison Stone Plaque:	<u>\$1,500</u>
<b>Total Restoration and Conservation:</b>	<b>\$31,000</b>

This treatment proposal is based on the following documents:

American Institute for Conservation of Historic and Artistic Works (AIC) "Code of Ethics" and "Guidelines for Practice."

Ponsford strives to maintain goals of appropriate intervention, preservation, and conservation of historical artifacts, and these guidelines are followed in the proposal of all treatments.

***Restoring The Past For The Future***