

Federated Women's Club State Forest – Federated Women's Club Campground Lot**Overview:**

This post-harvest inventory was conducted on the ±44 acre Federated Women's Club Campground lot, harvested primarily in February 2014. The lot is in the Federated Women's Club State Forest in the Town of Petersham. The expanding gap irregular shelterwood was applied on this lot to begin the process of converting the stand from an even- to uneven-age structure. Over time, these gaps will be expanded upon in successive entries which will create the uneven aged conditions being desired. Within each gap (½ acre in size), all merchantable trees > 6 in. DBH were harvested while protecting advance regeneration. Large trees in gaps were retained for legacy and wildlife goals. The harvesting was done with a tracked cut-to-length harvester/processor and a wheeled forwarder with chains. Portions of the harvest area had been previously treated and contained fair amounts of advanced regeneration; other untreated areas had less advanced regeneration.

A post-harvest inventory was conducted in which, to ensure a reasonable representation of both the gaps and areas between, the harvest area was stratified and sample points systematically located in those two types of areas. Seven points were located in the gaps, and 13 points were located in areas between gaps. At each point, overstory trees (≥ 1 in. DBH) were sampled using horizontal point sampling with a basal area factor (BAF) 40 angle gauge; understory trees (< 1 in. DBH, ≥ 3 in. tall) were sampled using circular plots of radius 3.7 ft.; and CWD was sampled using line intersect sampling with a single 10 ft. long transect at each point. Field inventory was conducted during late October 2019, under late fall conditions (after deciduous leaf-drop) using standards set forth in the DCR: DSPR Post-management Inventory Protocol. Photographs were taken at four of these points.

Overstory observations:

Pre-harvest conditions were a result of recovery from the 1938 hurricane which heavily impacted this portion of Petersham. One silvicultural treatment was completed between 1938 – 2014 on approximately one-third of the project area. Recent gypsy moth infestations have caused extensive mortality nearby, but not in, the harvest area. Northern red oak and eastern white pine compose 74% of the 87 ft²/ac BA of overstory trees, and there are ±30 snags per acre ≥ 5 in. DBH.

Understory observations:

Advance regeneration of white pine was dominant in previously thinned areas, and red maple more prevalent in unthinned areas. Since the 2014 harvest, advanced regeneration in the gaps and along skid trails has responded well, as have herbaceous understory species like low bush blueberry, witch hazel, and an assortment of fern species. No invasive species were observed during field reconnaissance. Red maple and northern red oak compose 68% of the 5,159 trees per acre < 1 inch DBH.

Coarse woody debris observations:

Harvesting operations scattered CWD evenly throughout the project area. Slash was run over by equipment during harvesting and no observed piles exceed 2 feet tall. Most of the FWD is decomposing or non-existent. Bark is loose or sloughing off many large and some smaller pieces. Approximately 869 ft³/ac of CWD were present, with 100% of that in pieces.

Photographs:



Figure 1. A panoramic photograph that was taken in the northern portion of the harvest area in-between harvested gaps.*



Figure 2. A panoramic photograph taken in the southern portion of the harvest area within a harvested gap.*

*Much of the deciduous leaf drop had occurred prior to the field work conducted for this report.

STANDING LIVE TREES;
ALL SIZES -
STAND TABLE

| COMMON NAME SPCD HT (FT) / DBH (IN) CLASS | eastern white pine | | red maple | | sweet birch | | American chestnut | | white oak | |
|---|-----------------------|------------|-----------|------------|-------------|------------|----------------------|------------|-----------|------------|
| | 129 BA | 129 TPA | 316 BA | 316 TPA | 372 BA | 372 TPA | 421 BA | 421 TPA | 802 BA | 802 TPA |
| 3.0 IN ≤ HT < 4.5 FT. | 0 | 549 | 0 | 1898 | 0 | 407 | 0 | 0 | 0 | 293 |
| 4.5 FT ≤ HT < 10.0 FT. | 0 | 141 | 0 | 136 | 0 | 71 | 0 | 141 | 0 | 0 |
| 10.0 FT ≤ HT < 15.0 FT. / < 1.0 IN. DBH | 1 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 3 | 15 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 3 | 5 | 3 | 5 | 0 | 0 | 3 | 5 |
| 12 | 3 | 4 | 8 | 11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ≥50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 23 | 773 | 11 | 2050 | 6 | 498 | 0 | 141 | 3 | 299 |

STANDING LIVE TREES;
ALL SIZES -
STAND TABLE

| COMMON NAME SPCD HT (FT) / DBH (IN) CLASS | northern red oak | | black oak | | Other or unknown live tree | | TOTAL BA | TOTAL TPA |
|---|------------------|------------|-----------|------------|-------------------------------|------------|-------------|--------------|
| | 833 BA | 833 TPA | 837 BA | 837 TPA | 999 BA | 999 TPA | | |
| 3.0 IN ≤ HT < 4.5 FT. | 0 | 1382 | 0 | 0 | 0 | 0 | 0 | 4529 |
| 4.5 FT ≤ HT < 10.0 FT. | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 489 |
| 10.0 FT ≤ HT < 15.0 FT. / < 1.0 IN. DBH | 0 | 71 | 0 | 0 | 0 | 0 | 1 | 141 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 15 |
| 8 | 3 | 8 | 0 | 0 | 0 | 0 | 3 | 8 |
| 10 | 1 | 1 | 3 | 5 | 0 | 0 | 12 | 22 |
| 12 | 3 | 4 | 0 | 0 | 0 | 0 | 14 | 18 |
| 14 | 3 | 3 | 0 | 0 | 0 | 0 | 3 | 3 |
| 16 | 6 | 4 | 0 | 0 | 0 | 0 | 8 | 6 |
| 18 | 9 | 5 | 0 | 0 | 0 | 0 | 15 | 9 |
| 20 | 8 | 4 | 0 | 0 | 0 | 0 | 11 | 5 |
| 22 | 8 | 3 | 0 | 0 | 0 | 0 | 14 | 5 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ≥50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 41 | 1484 | 3 | 5 | 0 | 0 | 87 | 5250 |

STANDING DEAD TREES;

≥ 1 IN. DBH -

STAND TABLE

| COMMON NAME SPCD HT (FT) / DBH (IN) CLASS | eastern white pine | | red maple | | sweet birch | | American chestnut | | white oak | |
|---|-----------------------|------------|-----------|------------|-------------|------------|----------------------|------------|-----------|------------|
| | 129 BA | 129 TPA | 316 BA | 316 TPA | 372 BA | 372 TPA | 421 BA | 421 TPA | 802 BA | 802 TPA |
| 3.0 IN ≤ HT < 4.5 FT. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4.5 FT ≤ HT < 10.0 FT. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10.0 FT ≤ HT < 15.0 FT. / < 1.0 IN. DBH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 3 | 15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ≥50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 6 | 5 | 6 | 20 | 0 | 0 | 0 | 0 | 0 | 0 |

STANDING DEAD TREES;

≥ 1 IN. DBH -

STAND TABLE

| COMMON NAME SPCD HT (FT) / DBH (IN) CLASS | northern red oak | | black oak | | Other or unknown live tree | | TOTAL | TOTAL |
|---|------------------|------------|-----------|------------|-------------------------------|------------|-------|-------|
| | 833 BA | 833 TPA | 837 BA | 837 TPA | 999 BA | 999 TPA | BA | TPA |
| 3.0 IN ≤ HT < 4.5 FT. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4.5 FT ≤ HT < 10.0 FT. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10.0 FT ≤ HT < 15.0 FT. / < 1.0 IN. DBH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 6 | 34 | 9 | 48 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 |
| 14 | 3 | 3 | 0 | 0 | 0 | 0 | 3 | 3 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ≥50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 3 | 3 | 0 | 0 | 6 | 34 | 20 | 61 |

COARSE WOODY DEBRIS SUMMARY (DEAD; >45° FROM VERTICAL; ≥ 3.0 IN DIA; ≥ 3.0 FT LENGTH)

| PIECES/ AC | PIECE CF/AC | PILES (DIMENSIONS)/AC | PILE CF/AC | PILE DEPTH CF/AC | TOTAL CWD CF/AC: PIECES + PILE DIMENSIONS | TOTAL CWD CF/AC: PIECES + PILE DEPTH |
|---------------|----------------|--------------------------|---------------|------------------------|---|--|
| 773.6 | 869.4 | 0.0 | 0.0 | 0.0 | 869.4 | 869.4 |