



**WATER SUPPLY CITIZENS
ADVISORY COMMITTEE**
to the Mass. Water Resources Authority

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WSCAC, Tuesday, June 09, 2026, In-person Meeting Minutes

Meeting Time: 10:00 AM – 1:00 PM

Location (DCR Office): 180 Beaman St, West Boylston, MA 01583

WSCAC Members in Attendance in Bold:

- Christine Bennett, MWRA Advisory Board
- **William Copithorne**, Town of Arlington
- Steven Daunais, Tata & Howard
- **Bill Fadden**, OARS
- **Bill Kiley**, BWSC
- **Paul Lauenstein**, Neponset (Chair)
- **Paul Rybicki**, Partially Supplied Community
- **Martin Pillsbury**, MAPC
- Janet Rothrock, League of Women Voters
- Bill Merriam, Framingham resident, Foss Reservoir abutter
- **Erin Bonney Casey**, Ipswich River Watershed Association
- **Warren Kimball**, Nashua River Watershed Association
- Lydia Olson, Mass Rivers Alliance
- Evan Pesut, Trout Unlimited
- **Nina Gordon-Kirsch**, CT River Conservancy
- Christopher Dreher, Educational Institute

Non-Members in Attendance:

- Michael O'Keefe, MWRA
- John Scannell, DCR-DWSP
- Dan Clark, DCR-DWSP
- Ken MacKenzie, DCR-DWSP
- Ken Canfield, DCR-DWSP
- Greg Buzzell, DCR-DWSP
- Brian Keevan, DCR-DWSP
- Andreae Downs, WAC
- Moussa Siri, WSCAC

I. Introduction, attendance check, and votes on May 12th meeting minutes

a. Introduction and attendance check

Moussa Siri, WSCAC Executive Director, opened the meeting, welcomed attendees, and reminded them that the meeting was being recorded for the meeting minutes. He reviewed the agenda, including the presentations, lunch, and field visit. Because the originally planned invasive-species site visit would require additional travel time, the group discussed using a closer DCR project site for the field portion. After checking attendance, the quorum was confirmed, and the meeting proceeded.

b. Votes to approve the May 12th meeting minutes

Paul Lauenstein, WSCAC Chair, led the review of the May 12, 2026 meeting minutes. He asked members whether they had any corrections or comments before calling for a motion to approve the minutes. Moussa Siri noted that Michael had previously submitted a correction by email and that the correction would be incorporated. Following the review, Warren Kimball moved to approve the May 12, 2026 meeting minutes as amended. Bill Fadden seconded the motion. With no opposition expressed, the minutes were approved as amended.

II. Briefings

a. WSCAC Updates

- Moussa Siri, WSCAC Executive Director, updated attendees on ongoing drought conditions, WSCAC activities, and upcoming Committee work. He reported that drought conditions had continued for an extended period and worsened in May compared with April. He also noted WSCAC participation in the Drought Management Task Force and field observations of lower tributary flows.
- With summer demand expected to rise, the Water Conservation Working Group was continuing work on recommendations concerning state water-conservation standards. The subject would return to the full Committee for discussion and decision.
- Moussa discussed a possible special meeting later in June to help members understand the Interbasin Transfer Act (ITA) processes from MWRA before WSCAC comments are prepared on the MWRA 20 MGD request and the Wayland and Weymouth requests to join MWRA. He proposed coordinating dates with MWRA to maximize attendance.
- The WSCAC annual report was in preparation and would be circulated for member feedback. Members were invited to propose FY27 agenda topics.
- The next regular meeting was identified in discussion as a September 24, 2026 joint meeting with WAC and the MWRA Advisory Board.

b. WAC Updates

Andreae Downs, WAC, updated attendees on WAC activities and priorities.

- Andreae Downs reported that WAC had completed its organizational year and FY27 planning. Dan Winograd was elected Chair, and Alfredo Vargas was elected Vice Chair.
- She explained that WAC's principal focus remained the court-mandated Combined Sewer Overflow (CSO) Long-Term Control Plan for the Charles, Mystic, and Alewife systems.

- Andrae emphasized the financial consequences of the court-mandated CSO program. Because the approved CSO work cannot easily be reduced or postponed, its cost could limit funding available for flexible projects, including maintenance at Deer Island and other essential wastewater infrastructure.

c. MWRA Updates

- Michael O’Keefe, MWRA Senior Program Manager for Planning, updated attendees on reservoir and drought conditions, water-system demand, and related MWRA activities. He explained that Quabbin was in the below-normal operating range and that seasonal thresholds change through the year. The discussion addressed spring inflow, snowmelt, seasonal target levels, and the actions associated with drought-management categories. Michael clarified that a below-normal designation does not itself impose mandatory customer reductions, although MWRA increases outreach and conservation messaging. Current system demand was discussed as roughly 200 million gallons per day, substantially below historic levels.
- He indicated that the Metropolitan Water Tunnel redundancy work is continuing, including the design and land-acquisition activities.
- Michael O’Keefe discussed EPA’s proposed revisions to federal PFAS regulations, including retaining standards for PFOA and PFOS, removing four other compounds from the federal rule, and extending the compliance deadline from 2029 to 2031. He explained that Massachusetts regulates the combined concentration of six PFAS compounds, while the federal standards apply to individual compounds, making direct comparison difficult. He noted that Massachusetts may maintain requirements stricter than the federal standards.

Question (Q): Why does the normal reservoir target change during the year?

Answer (A): Michael explained that operating ranges are seasonal and reflect expected hydrologic conditions, including spring inflow and snowmelt, as well as anticipated summer demand.

Q: Does below-normal reservoir status automatically require mandatory conservation?

A: No. Michael O’Keefe explained that below-normal status triggers attention and outreach, but does not by itself impose mandatory reductions on customers.

d. Paul Lauenstein’s forestry view sharing

- Paul Lauenstein stated that the presentation reflected his personal views and not necessarily those of WSCAC. He focused on the role of watershed forests in removing and storing atmospheric carbon.
- He explained that northern temperate forests create a strong seasonal carbon cycle: atmospheric carbon dioxide declines during the growing season as forests absorb it and rises during winter dormancy. In his view, this sequestration materially slows the buildup of atmospheric carbon dioxide.
- Paul connected watershed-forest carbon storage to Massachusetts’ statutory goal of net-zero greenhouse-gas emissions by 2050. He said this ecosystem service complements MWRA investments in renewable energy and energy efficiency and should be considered in decisions about public forests.

- Using the 12.5-acre Fisk Hill Young Forest Focus Area as an example, he raised concerns about carbon loss, deer and moose browsing, invasive plants, and delayed regeneration after clearcutting. He contrasted the site with thinning near Gate 31, where trees of different ages and species remained and could support continued forest structure and regeneration.
- He emphasized below-ground forest functions. Heavy equipment can compact soil and affect fine roots and mycorrhizal networks, with potential long-term effects on soil function, carbon storage, and other ecosystem services. He noted that visible ruts were present at both sites, including the thinned area.
- Paul cited research comparing carbon accumulation in harvested and unharvested hardwood forests and argued that foregone carbon storage should be considered as part of the cost of harvesting. He also used the high cost of engineered direct-air carbon removal to illustrate the economic value of natural forest sequestration.
- He noted research indicating that climate change may reduce viable seed production in major tree species. He said this adds uncertainty to the rate and reliability of regeneration following intensive harvests.
- Paul recommended that each annual forestry project summary estimate the carbon dioxide expected to be stored through 2050 under the proposed treatment and compare that estimate with a no-harvest alternative. He referred to state guidance on estimating carbon for forest stewardship climate plans.



Figure P1. Fisk Hill Young Forest Focus Area clear-cut.



Figure P2. Thinned forest near Gate 31.

III. Presentations: Forestry Updates

a. FY26 forestry project process

- DCR staff explained that the annual forestry-project process normally includes release of proposed projects, advisory-committee and public review, responses to comments, and final approval before implementation.
- For FY26, DCR proposed 23 forestry projects and received more than 70 public comments. Staff explained that many comments addressed broader forestry policy rather than individual project design, which increased the time needed to organize and respond to the record.

- Coordination with the Executive Office on the volume and scope of comments delayed the FY26 response document and, in turn, affected the normal timing of the FY27 project cycle.
- DCR indicated that FY27 projects were substantially prepared, but presentations and the public-comment period would likely begin later than usual. Staff stated that the goal is to return to a predictable annual review schedule after the current transition.

b. Regeneration monitoring and adaptive forest management

- Ken Canfield described regeneration monitoring as a core component of adaptive management. DCR uses post-harvest surveys to determine whether young forest is establishing at sufficient density and whether the developing species composition supports long-term watershed resilience.
- DCR explained that much of the watershed forest falls within a relatively mature age range, creating a management interest in maintaining continuous forest cover while increasing age-class, structural, and species diversity over time.
- The historic 15-year “two tallest stems” survey evaluates the two tallest qualifying regeneration stems on sample plots. Results from the 1997-2010 harvest cohort showed a clear contrast between Ware River and Quabbin: Ware River supported a broader mix, including a larger oak component, while Quabbin regeneration was more strongly represented by white pine and black birch.

15 Years Post Harvest – 2 Tallest Stems

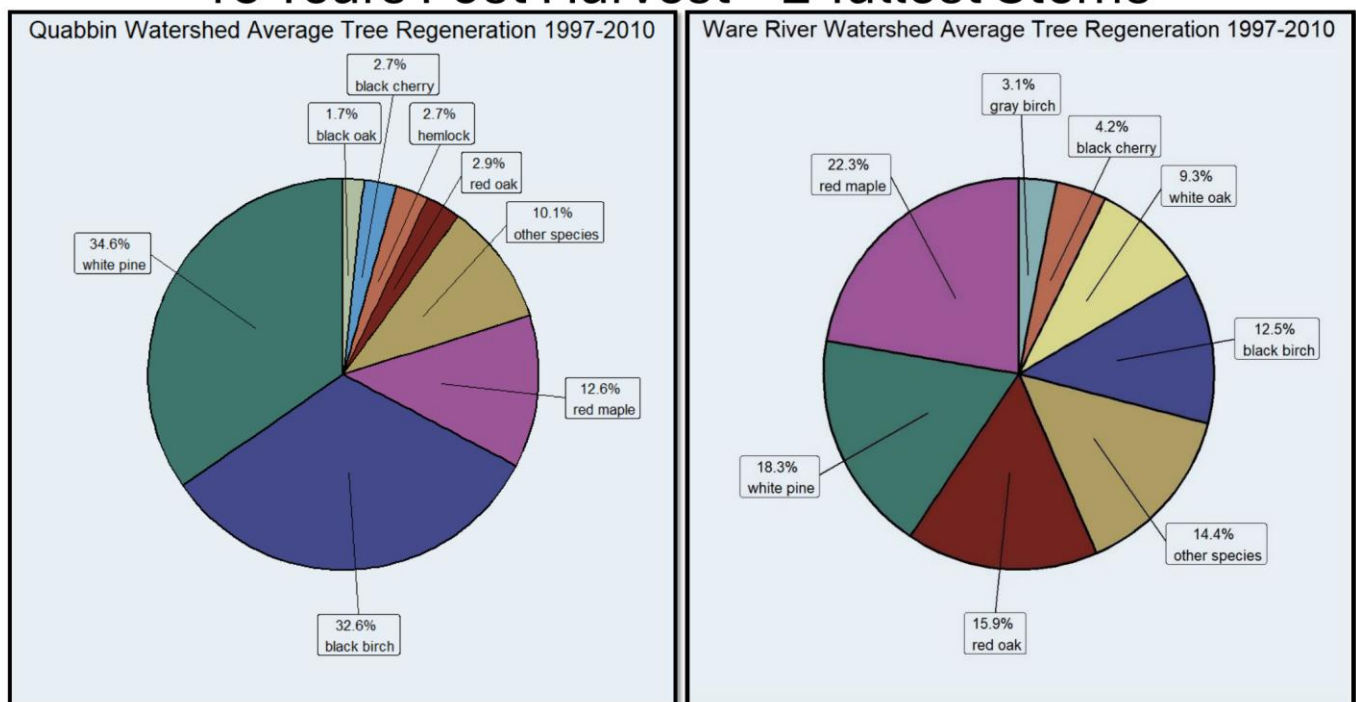


Figure D1. DCR 15-year post-harvest regeneration monitoring graphic showing the two-tallest-stem survey results. Source: DCR-DWSP Forestry Updates presentation, June 9, 2026.

- DCR has also piloted an earlier eight-year full-stem survey that counts all regeneration stems by species and height class. Staff referenced a management objective of approximately 2,000

regeneration stems per acre and reported that most sampled harvest areas were near or above that level.

- DCR emphasized that stem abundance alone does not determine success. Species composition, height distribution, browsing pressure, competing vegetation, and the ability of desirable stems to reach the canopy are also considered when deciding whether follow-up treatment is warranted.
- Differences between Ware River and Quabbin were attributed to several interacting factors, including the historical legacy of deer browsing, past silviculture treatments, opening size, and the amount of sunlight reaching regeneration.

Questions and Answers

Q: Why does the survey record the two tallest stems rather than every stem?

A: DCR explained that the method identifies the stems most likely to reach the future canopy and provides a practical, repeatable indicator of how the next forest is developing. Staff also acknowledged that it does not fully describe total stem abundance, which is why the agency has added earlier full-stem surveys.

Q: How can DCR interpret the survey when tree species grow at different rates?

A: DCR said the results are not evaluated by height alone. Staff considers species, height class, browse, competition, and whether desirable stems are positioned to become part of the overstory.

Q: Why do regeneration results differ between Ware River and Quabbin?

A: DCR attributed the difference to multiple factors, including historic deer pressure, different past treatments, opening size, sunlight, and site conditions. Staff emphasized that no single factor explains the contrast.

Q: Does DCR routinely plant oak or other desired trees after harvest?

A: Generally, no. DCR relies mainly on abundant natural regeneration. Planted seedlings remain vulnerable to deer and moose browsing, although planting may be considered in special situations where seedlings can be protected.

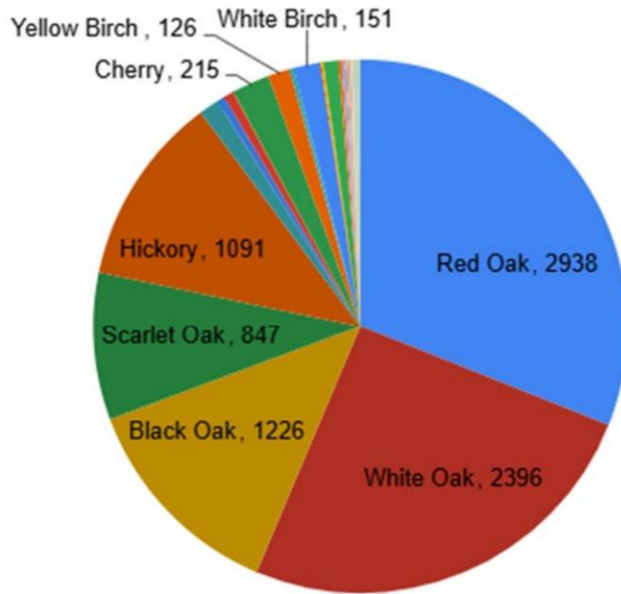
Q: How does climate change affect the expected species composition of future stands?

A: DCR said future forests may not reproduce the prior stand exactly. Monitoring and adaptive management are used to evaluate which species are succeeding under changing conditions and whether intervention is needed.

c. Forest Stand Improvement (FSI)

- Forest Stand Improvement is used where regeneration is abundant but desirable trees need assistance competing with less-desired vegetation. Rather than relying primarily on planting, DCR generally works with naturally established regeneration and selectively releases promising stems.
- Since December 2023, DCR reported that the FSI program had released 9,517 stems representing 33 species across 264.9 acres of openings, equivalent to approximately 35.9 released stems per acre.

FSI Program Since December 2023



- 9,517 stems released
- 33 different species
- 264.9 acres of openings
- 35.9 stems per acre

Figure D2. DCR Forest Stand Improvement program results since December 2023. Source: DCR-DWSP Forestry Updates presentation, June 9, 2026.

- DCR explained that oak and other desired species are not routinely planted because natural regeneration generally produces large numbers of stems and planted seedlings remain vulnerable to deer and moose browsing. Planting may still be useful in special protected situations.
- DCR stated that deer management remains closely connected to regeneration success. Population control depends particularly on harvesting female deer, while declining hunter participation presents a long-term management challenge.

Questions and Answers

Q: Does DCR protect desirable existing trees before a harvest?

A: Yes. DCR said harvests are marked in advance. Trees selected for removal are marked, and desirable trees that should be retained may receive a separate protective marking. Young-forest habitat cuts are an exception because the objective is to create a new, zero-year age class.

Q: Does DCR examine understory biodiversity before and after cutting?

A: DCR said it has begun more systematic pre-harvest understory measurement and already conducts post-harvest monitoring. Broader inventory work also compares managed and unmanaged areas.

Q: Is wildfire mitigation a management objective?

A: DCR said fuel reduction can be a benefit of barrens restoration and prescribed-fire work, but habitat restoration is generally the principal objective of those projects.

d. Forests as Climate Solutions/forest reserves

- Ken MacKenzie presented DCR's developing forest-reserve framework. Forest reserves were described as formally designated landscapes in which natural processes are expected to guide long-term forest structure, composition, function, and dynamics.
- DCR identified the principal benefits of reserves as allowing older forests to mature, protecting biodiversity and habitat, safeguarding water resources and ecological integrity, maintaining carbon storage and sequestration, supporting appropriate low-impact recreation, and creating reference areas for research and monitoring.
- DCR stressed that reserves complement active stewardship rather than replace it. Water-supply protection, wildlife habitat, forestry, public access, and public-safety responsibilities continue across the broader landscape.

FOREST RESERVE'S ROLE

What a Forest Reserve is meant to protect

Forest reserves are formally designated landscapes where natural processes drive long-term forest structure, composition, function, and dynamics.

CORE BENEFITS

- Allow older forests to mature and develop over time.
- Protect biodiversity, habitat, water resources, and ecological integrity.
- Contribute to carbon storage and sequestration by keeping forests as forests.
- Support low-impact recreation and serve as reference sites for research.




Reserves complement active stewardship elsewhere on the landscape; they do not replace agency missions for water supply, wildlife habitat, forestry, public access, or public safety.

Forests as Climate Solutions | DCR Division of Water Supply Protection

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Figure D3. DCR summary of the role and core benefits of forest reserves. Source: DCR-DWSP Forest Reserves presentation, June 9, 2026.

- Candidate reserve areas are screened using three principal criteria: representativeness, landscape context, and ecological condition. Representativeness considers the diversity of forest types, elevations, soils, landforms, structures, and ecological services; landscape context considers connections to larger protected and resilient landscapes; and ecological condition considers forest integrity, unique natural features, climate resilience, and manageable risks.
- The identification process begins with GIS-based screening, proceeds through agency review for compatibility with each agency's mission, and is followed by field verification of actual forest conditions, boundaries, infrastructure, invasive plants, pests, public-access conflicts, and other practical considerations.
- Connectivity was emphasized because a reserve can provide greater ecological value when it is embedded within a larger protected or working-forest landscape. DCR explained that a rigid minimum-size rule could unintentionally favor only very large parcels, while connected surrounding forests can buffer smaller reserve areas and support wildlife movement and climate resilience.

The criteria create a consistent screen

1

Representativeness

Diverse forest types, elevations, soils, landforms, structures, and ecological services.

2

Landscape context

Connection to larger protected and resilient landscapes, with low-conflict public access.

3

Ecological condition

High forest integrity, unique natural features, climate resilience, and manageable risks.



The criteria are designed to be repeatable across DCR State Parks, DCR Water Supply Protection, and MassWildlife lands while still allowing mission-specific objectives.

Figure D4. DCR forest-reserve identification criteria: representativeness, landscape context, and ecological condition. Source: DCR-DWSP Forest Reserves presentation, June 9, 2026.

- In response to questions, DCR stated that the specific percentage and locations of DWSP land to be designated as reserve had not yet been finalized. Candidate areas were still being screened and field-checked.
- DCR also clarified that limited intervention may occur inside reserves when necessary to protect the reserve purpose or address unacceptable risks, including invasive-species control, public-safety needs, and serious forest-health concerns.

Questions and Answers

Q: What percentage of land will be designated as forest reserve? WSCAC • June 9, 2026

A: DCR said the statewide Forests as Climate Solutions goal is for reserves to encompass 10 percent of Massachusetts forestland, or roughly 300,000 acres based on approximately 3 million forested acres. The exact percentage and locations on DWSP land had not been finalized.

Q: Will state agencies alone provide all land needed to meet the 10 percent goal?

A: No. DCR said the Commonwealth owns only part of the state's forestland, so private conservation organizations, land trusts, municipalities, and other partners will also be important. Existing State Parks reserves provide a starting point.

Q: When will reserve designations occur, and will there be public review?

A: DCR said the work was underway and anticipated designations during the coming fall or winter, with an Executive Office public-comment process expected later in the year.

Q: Will every agency be required to designate the same percentage of its forestland?

A: DCR said it was not applying a rigid agency-by-agency quota. Candidate areas are being evaluated for ecological function and compatibility with agency missions rather than selected only to meet a number.

Q: Can management occur inside a reserve?

A: DCR explained that limited intervention may be appropriate when needed to protect reserve purposes or address unacceptable risks, including invasive species, public safety, and serious forest-health concerns

e. Quabbin Park deer-density survey using thermal imagery

- DCR partnered with the MassDOT Aeronautics Division to test thermal-imagery drones as an independent method for estimating deer density and as a comparison with DCR's long-running pellet-group survey method.
- The drone approach uses winter thermal contrast to distinguish warm-bodied animals from the cooler landscape. Standard video can also be used to help verify species when necessary, reducing the likelihood that other wildlife will be counted as deer.
- The approximately 2,600-acre Quabbin Park study used 22 transects sampling about 430 acres. Flights were conducted before and after the December 2025 hunt to evaluate both the pre-hunt population and the immediate effect of harvest.

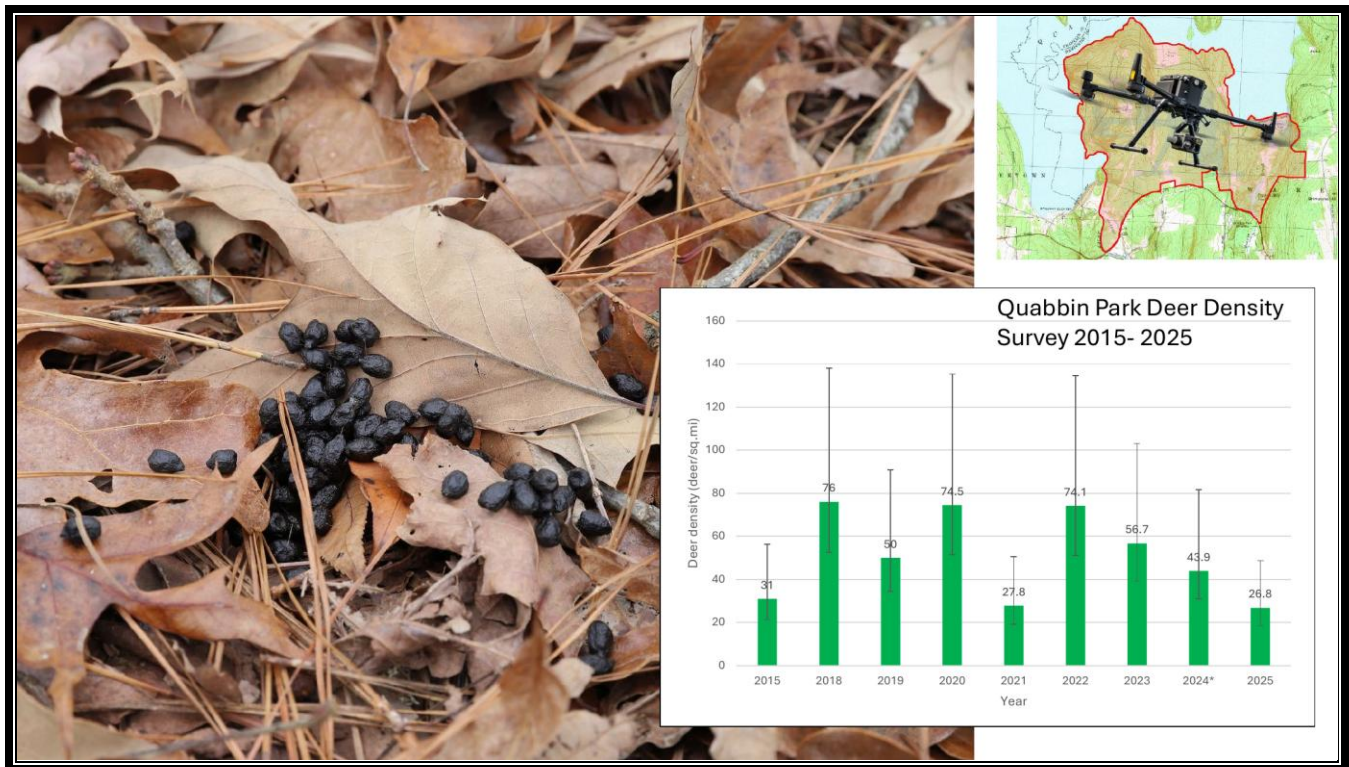


Figure D5. Quabbin Park deer-density estimates from DCR monitoring, 2015-2025. Source: DCR-DWSP Quabbin Park Deer Density presentation, June 9, 2026.

- The spring 2025 pellet survey estimated 26.8 deer per square mile, with a reported range of 19.9- 52.5 deer per square mile. The pre-hunt drone flights on November 24 and December 1, 2025 produced an estimate of 24.4-32.7 deer per square mile.

- The December 8-9, 2025 Quabbin Park hunt harvested 24 deer. DCR reported that this represented an estimated reduction of approximately six deer per square mile based on harvest alone.
- Post-hunt drone flights on December 17, 2025, and January 12, 2026, produced an estimate of 12.19- 16.26 deer per square mile. DCR characterized the comparison as a greater-than-60-percent post-harvest reduction in the sampled population, while cautioning that deer movement can change local density after the survey period.

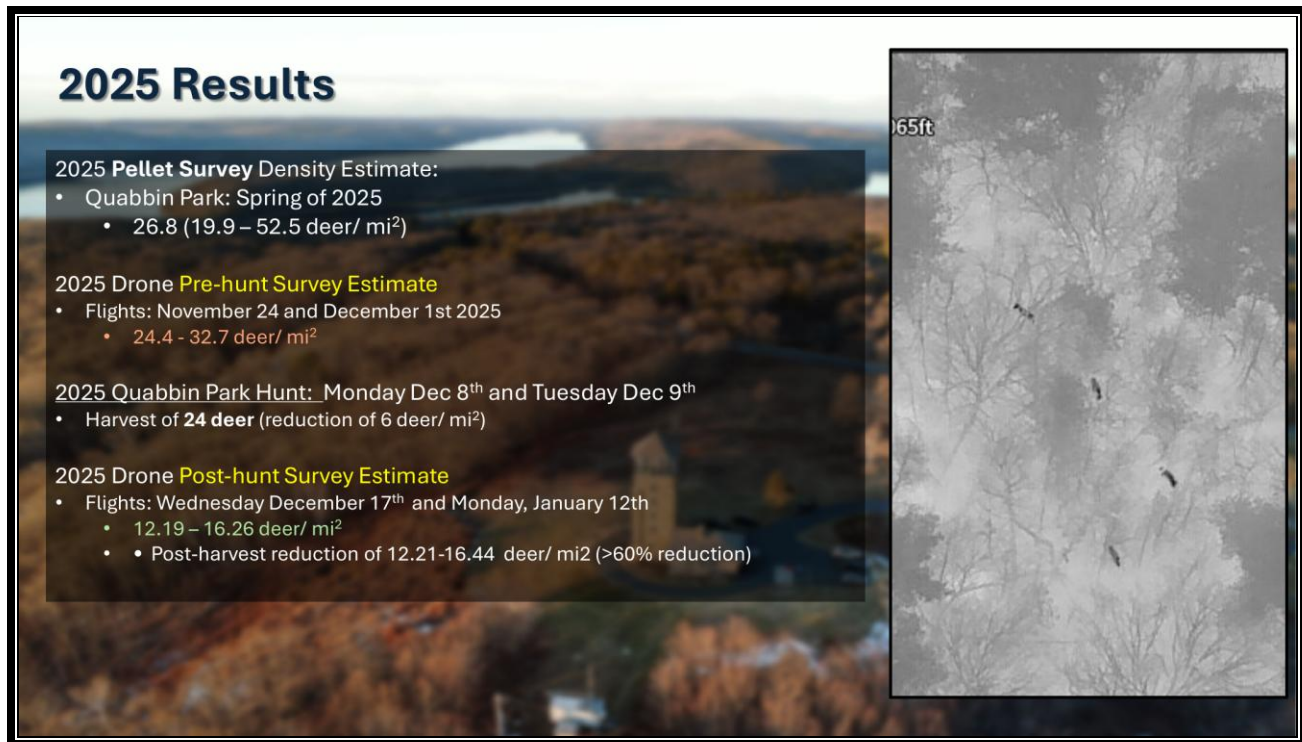


Figure D6. DCR comparison of the 2025 pellet survey, pre-hunt drone estimate, hunt harvest, and post-hunt drone estimate. Source: DCR-DWSP Quabbin Park Deer Density presentation, June 9, 2026.

- DCR considered the close agreement between the spring pellet estimate and the pre-hunt drone estimate important independent support for the pellet-group method. Staff emphasized that multiple methods and trend information are more informative than relying on a single point estimate.
- In response to a question about the 2025 harvest, DCR reported that the 24 harvested deer were evenly divided by sex: 12 females and 12 males.

Questions and Answers

Q: How were deer identified and counted during drone flights?

A: DCR staff watched live thermal imagery while the drone followed planned transects. When an animal appeared, staff paused or redirected the drone and used thermal and standard video views to verify the species before tallying it. The surveyed area and observed deer were then used to estimate density.

Q: Could other wildlife be mistaken for deer?

A: DCR reported observing bears, raccoons, squirrels, and a coyote, but said deer were comparatively easy to distinguish using body shape, heat patterns, and standard video. No moose were observed during these flights.

Q: What was the sex composition of the 24 deer harvested in 2025?

A: DCR reported an even split: 12 females and 12 males. Staff noted that harvesting females is especially important for population control.

Q: Will the drone method replace pellet surveys?

A: No. DCR plans to continue pellet-group monitoring and use drone surveys as an independent comparison, with possible expansion to other watershed areas if operational constraints such as maintaining line of sight can be addressed.

f. Draft invasive-species management plan

- DCR reported that it had spent approximately a year and a half preparing a substantially expanded invasive-species management plan. The new document was described as approximately 60 pages and was awaiting the Commissioner's approval at the time of the meeting.
- Until the new plan is approved, DCR continues to operate under the existing land-management framework. Staff explained that prevention is the priority, followed by preventing existing infestations from expanding and treating areas where invasive plants threaten forest regeneration or other watershed objectives.
- DCR stated that complete eradication of every invasive plant across the watershed is not realistic. The operational goal is to control invasive vegetation sufficiently to allow successful tree regeneration, protect ecological function, and maintain continuous forest cover.

Questions and Answers

Q: Does the draft plan seek to eliminate invasive plants everywhere?

A: No. DCR said complete eradication across the watershed is not realistic. The plan prioritizes prevention, containment, and focused treatment where invasive plants threaten regeneration or watershed objectives. WSCAC • June 9, 2026

Q: When will the updated plan be released?

A: DCR said the plan was with the Commissioner and additional questions were being addressed. Staff did not provide a firm release date

For more details and to access presentations, see this link: <https://www.mwra.com/about-mwra/advisory-groups/water-supply-citizens-advisory-committee-wscac/wscac-presentations-archive>

IV. Field Tour of a DCR Project (DCR, please help me with site names or lot numbers)

a. Departure for the tour (12:00 PM)

After the indoor presentations, participants traveled to a nearby DCR forestry site. Members were able to visit two sites. They were able to see actual stand conditions and ask questions, but only a few were recorded (see below)

Q: Was deer browsing severe at the site?

A: DCR staff pointed out some browsed red maple sprouts but said they did not see evidence of heavy browse pressure at that location.

Q: Can members of the public collect woody residue left after harvest?

A: No. DCR explained that woody material is intentionally retained in part to return nutrients and organic matter to the soil. Public collection also raises safety and liability concerns.

Q: If glyphosate or another herbicide is used, how will drinking-water protection be addressed?

A: DCR responded that water-quality protection is the agency's primary mission and that treatments would be selected conservatively, with particular caution in wet soils and near surface waters.

Q: Could residents of MWRA communities help physically remove invasive plants?

A: DCR said limited volunteer hand-pulling events could be useful for education and public engagement, but volunteers could not replace professional management at watershed scale.

b. End of the tour (1:00 PM)

Participants concluded the field visit after discussing how overstory removal can be timed to take advantage of regeneration already established beneath the canopy and how future WSCAC-DCR meetings could combine shorter indoor presentations with more field observation.

Next meeting: Joint meeting with the Advisory Board and WAC on September 24th, 2026.