

**MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION**  
**DIVISION OF WATER SUPPLY PROTECTION SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE MEETING**

**DRAFT MINUTES**

**AUGUST 17, 2010**

**11:00-4:00**

**QUABBIN VISITOR CENTER, 485 WARE ROAD, BELCHERTOWN**

Committee Members in attendance: Mark Ashton, Paul Barten (Chair), Jim Boyce, Bob Brooks, John Buonaccorsi, John Campbell, Steve DeStefano, Matt Kelty, David King, Tom Lautzenheiser, Chi Ho Sham, John Tobiason, Mary Tyrell. (Members absent: Jill Bubier, Martha Hoopes, Scott Jackson)

Agency Staff in attendance: Steve Anderson, Greg Buzzell, Dan Clark, Herm Eck, John Gregoire (MWRA), Thom Kyker-Snowman, Bill Pula, John Scannell, Randy Stone, Steve Ward.

Members of the public in attendance: Lexi Dewey (Water Supply Citizens Advisory Committee), Don Wakoluk, Shutesbury resident.

Meeting Supporting Documents: Agenda, Background\_info\_for\_17August\_DSWP\_STAC\_Meeting, Box C4.1 - Quabbin WFM - from Massachusetts Forest Assessment, STAC Principles Review – Initial Ranking Summary, Principles: Compilation of Comments, Watershed Forest Management/Philosophy Flow Chart, Worksheet #2, Worksheet #2 Note Form.

11:00- Chairman Paul Barten called the meeting to order, welcomed the committee members and others present, and invited everyone in the room to introduce themselves. Dr. Barten also described the ground rules for the meeting, saying that members of the public are welcome to attend and observe the committee's working meetings, but that additional meetings will be scheduled to receive public input and comment when the committee's draft report has been prepared and submitted for review and comment.

11:15 Dr. Barten began with a brief overview of the water supply system components and the vital importance of the DWSP forests as an integral part of the DWSP/MWRA system. He also reviewed the elements of water resource management: Scenario analysis and risk assessment, contingency planning, redundancy (multiple barrier approach/factor of safety), and adaptive management (strive for continuous improvement). Dr. Barten also briefly recapped the goals, approach, mechanics, and constraints of the current DWSP Land Management Plan as follows: The goal is to protect and maintain the excellent water quality of the system over the long term by promoting resistance and resilience of the forest (and its function as a filter) in relation to chronic and acute disturbances (insects, diseases, ice damage, wind damage, and combinations thereof). Active management of even-aged stands to create a three (or more) age structure that includes (1) mature canopy trees, especially "legacy" trees, (2) mid-story trees, and (3) young trees has been underway for decades in order to reach this goal. This is achieved through harvesting operations at 20 to 30 year intervals that alter not more than one-third of a forest stand at one time. At the landscape scale, the annual operating goal is to regenerate approximately 1% of the forest (not designated as reserve) with the additional constraint that no more than 25% of any given sub-watershed is treated in a 10-year period to avoid short-term increases in streamflow and nutrient export.

Dr. Barten then summarized the results of committee members' responses to Worksheet #1 (distributed via email after the meeting on June 29), indicating where the members had strong consensus on the validity of the principles guiding the Land Management Plan and their application on DWSP forests and where there was a need for more information, clarification, and further discussion.

In his final introductory comments, Dr. Barten presented a flow chart of key components by which any management approach or management philosophy should be compared and evaluated, especially with respect to system response to acute disturbances (e.g., hurricanes in southern New England, high severity wildfire in the Rockies and boreal forest, etc.) which included: desired/expected future condition and the

time required to achieve it, methods and responsibilities, baseline monitoring, regulatory compliance, and contingency planning/emergency response in the event that the management approach proved to be inadequate to protect water supplies. Questions, comments, and general discussion by the STAC followed the presentation of this introductory and background information.

11:30 – Thom Kyker-Snowman, DWSP Environmental Analyst, presented a set of slides illustrating recent and ongoing natural disturbances on the Quabbin Forest followed by images showing the range of silvicultural activity that has occurred recently and in previous decades under earlier Land Management Plans at the Quabbin, Ware River, and Wachusett watersheds.

On DWSP properties, recent or ongoing natural disturbance agents include: Asian long-horned beetle; gypsy moth; hemlock woolly adelgid; microburst storm events; ice and snow damage; and red pine scale. Regionally, these types of disturbances affect 0.5 to 2.0% of the forest annually.

Until the early 1990's (when limited hunting reduced white-tailed deer population density to the regional average) silvicultural activity was focused on improvement thinning. There was very limited tree regeneration and native herbaceous plant productivity before the size and consequent effect of the deer herd was actively managed (in the face of substantial public controversy by various interest groups and concerned citizens). In keeping with the current Land Management Plan for each watershed, harvesting in recent years has focused on making regeneration openings to add new age classes and to diversify species composition where needed. The current plan allows for a variety of opening sizes (within specified ranges) and shapes. The different ways the guidelines have been applied by different DWSP foresters were illustrated through ground level photos, aerial photos, and Google Earth images. It was noted that the size and shape of openings, and the presence or absence of live trees retained within these openings has affected public acceptance of these practices. The slides included examples of the harvests that have attracted public attention and generated controversy and debate.

12:30- Lunch break

1:30 – Dr. Barten introduced Worksheet #2 with another slide presentation that further illustrated the four types of silvicultural management that have been or are being practiced in DWSP forests. These include the Reserve areas of the watersheds (approximately 20,000 acres; 12,000 acres on the Quabbin Forest) where no commercial harvesting takes place; the single tree and very small group selection thinning that was carried out during the 60's to early 90's; the regeneration silviculture that includes irregularly shaped openings from a single tree up to 2 acres, but averaging an acre or less (recently being implemented under the current Land Management Plan); and regeneration silviculture characterized by more uniformly shaped and larger sized openings up to the two acre limit, (also recently being implemented under the current Land Management Plan.) The vegetation patterns of the different management regimes are easily discernable in Google Earth images from uniform elevation of 4,200 feet and an identical viewing angle. The presentation also illustrated schematically the path of water flow (shallow subsurface flow and/or overland flow) as one way to evaluate and compare the four management regimes.

2:15 – 2:40 Committee members worked individually on completing Worksheet #2.

2:40 – Short break

2:50 – Dr. Barten solicited comments from members based on their worksheets to enumerate and describe the key attributes and characteristics, desirable biophysical effects, and undesirable biophysical effects of each of the four management regimes described above. General discussion ensued with several suggestions for points to consider and issues to address as the findings and recommendations of the draft STAC report are developed.

4:10 – Dr. Barten brought the meeting to a close by again thanking the committee for their volunteer service. He projected producing a preliminary outline in a couple of weeks, a rough draft four weeks, followed by review at a possible third meeting or conference call.