Advisory Group of Stakeholders and Technical Steering Committee
Questions Posed at the June Joint Meeting

At the June meeting joint meeting of the Technical Steering Committee (TSC) and the Advisory Group of Stakeholders (ASG), DCR made a brief presentation and answered questions from the two groups. Due to the number of questions, many were noted on index cards and submitted to the Department. This document identifies questions as posed and provides responses. Staff from various divisions and bureaus within DCR contributed to these responses.

Legal:

1. To Gary Davis (admittedly oversimplified): Is there anything in the statutes that would prevent: 1) Even aged management on 100% of DCR lands, OR 2) Reserves on 100% of DCR lands?

Reply: While DCR's Office of General Counsel (OGC) has previously stated that there is nothing in DCR's statutory scheme that specifically prevents the agency from adopting either of these policies, it is equally true that DCR's statutory scheme is broad and flexible enough to support a clear and quantifiable policy determination that promotes various uses and values on state forests.

2. Would there be any way to ensure that revenue from harvests stays in the DCR budget, to fund all PILOT payments, improvements to DCR infrastructure, and staffing/time for all this extra site-specific research and planning that's going into each harvest?

Reply: DCR is considering whether to propose to the Legislature that it establish a retained revenue account that would allow the agency to retain up to a designated amount, and is also aware that guidance on this issue may also be included in the TSC's recommendations. Such an account was included in the FY09 and FY08 budgets for $600,000, but not included in the FY10 budget. With respect to PILOT payments, such payments are administered by and through the Department of Revenue.

3. C. 132A, Sec. 2B, speaks of no commercial activity - how does DCR square this with industrial-type logging on state forests and parks? - Dave Gafney

Reply: From the outset, DCR acknowledges the argument raised by some that Section 2B could be literally construed to apply to all commercial activities, regardless of whether or not the commercial enterprise inures to the benefit of DCR or a private entity. However, in the context of the role and purpose of the visioning process, DCR is not inclined to debate whether or not DCR engaged in "industrial-type logging on state forests and parks." Nevertheless, for the purpose of establishing permissible forest cutting practices as this agency moves forward, we note that G. L. c. 132A, § 2B states:

> It is hereby declared to be the policy of the commonwealth that all such sites acquired or developed by the commissioner shall in so far as practicable be preserved in their natural state; that they shall be in so far as possible collectively self-supporting; and that no

commercial activities except those essential to the quiet enjoyment of the facilities by the people shall be permitted.

Moreover, the Forest Cutting Practices Act; Declaration of Policy, G. L. c. 132, § 40, states:

> It is hereby declared that the public welfare requires the rehabilitation, maintenance, and protection of forest lands for the purpose of conserving water, preventing floods and soil erosion, improving the conditions for wildlife and recreation, protecting and improving air and water quality, and providing a continuing and increasing supply of forest products for public consumption, farm use, and for the woodusing industries of the commonwealth.
>
> Therefore, it is hereby declared to be the policy of the commonwealth that all lands devoted to forest growth shall be kept in such condition as shall not jeopardize the public interests, and that the policy of the commonwealth shall further be one of cooperation with the landowners and other agencies interested in forestry practices for the proper and profitable management of all forest lands in the interest of the owner, the public and the users of forest products.

The last sentence of G. L. c. 132A, § 3 states: "[the Commissioner], at any time, sell such wood, timber or other product of the lands controlled by the division as the economical management of said lands may require."

G. L. c. 132A, § 1F, the first sentence of which states:

> The bureau of forestry shall, under the supervision of the director, with the approval of the commissioner perform such duties as respects forest management practices, reforestation, development of forest or wooded areas under the control of the department, making them in perpetuity income producing and improving such wooded areas.

Finally, G. L. c. 132, §34A authorizes DCR to time sell wood, timber or other products of the state forests as the economical management of said forests may require.
In keeping with the foregoing, DCR has historically engaged in timber harvesting on DCR property for forest management and public safety purposes. DCR continues to implement this initiative as part of its essential governmental functions required by statute, and not as a commercial activity.

While DCR does not construe these provisions to support full-scale industrial type logging, DCR nevertheless believes that these provisions, taken together, clearly support DCR's deployment of governmental functions to effectuate forest management practices and to otherwise engage in commercial activities that are essential to the quiet enjoyment of DCR's facilities. DCR is hopeful that the TSC's recommendations will include this issue.

4. Under the revised Chapter 132A, what is definition of commercial activities or commercial timbering?

Reply: OGC is unaware of the "revised Chapter 132A" to which you refer. As for OGC's interpretation of "commercial activities" within the meaning of G. L. c. 132A, § 2B, please see OGC's response to Question No. 3 above.

5. Please explain Ch 132A as it prohibits commercial activities in state parks. How is putting timber out to bid to private companies not a commercial activity?

Reply: As noted in DCR's response to Question Nos. 3 and 4 above, DCR maintains that several provisions of c. 132A, taken together, support some level of commercial harvesting activity on DCR land; and we are looking to the Steering Committee to provide the agency with guidance on the parameters of appropriate commercial activities on DCR property.

6. When were "urban park" designations last evaluated? If off-limits to harvest, designations would be especially important, and with the urbanization of Massachusetts in recent years it would be interesting to understand the designation process and what criteria are used. Division of Urban Parks established in 2003 (??) at the time DCR was created.

Reply: When DCR was created from a merger of the former Metropolitan District Commission (MDC) and the former Department of Environmental Management (DEM), a Division of Urban Parks was created – it is comprised of former MDC properties, which are located within the metropolitan Boston area, roughly equating to the area within and around Route 128, and including 36 municipalities. Former DEM properties located within this geographical area were also assigned to the Urban Parks Division. These lands are not off limits to timber harvesting; however harvesting has not been conducted there in recent years. For example, DCR recalls that sometime in the past, a commercial thinning of a damaged red pine plantation took place at Houghton's Pond in the Blue Hills Reservation.

Resource Management Planning:

1. Stewardship of DCR lands: why is it all about forestry, we have only SOME forestry plans. Shouldn't they be a SUBSET of much more comprehensive resource management plans?

Reply: While DCR agrees that it is charged with the goal to develop comprehensive resource management plans, DCR has the requisite authority to develop management plans pertaining to forestry. Generally speaking, forest Resource Management Plans (FRMPs) and Resource Management Plans (RMPs) are complementary parts of the entire resource management planning process. Specifically, forestry planning is a subset of the more comprehensive RMPs, which have to integrate protection of natural and cultural resources, with sustainable recreation and forest management. Forest vegetation descriptions and forestry recommendations developed by the foresters for the division of State Parks and Recreation (DSPR) properties will be included in the more comprehensive RMPs that will be prepared for state forests, parks and reservations pursuant to G. L. c. 21, § 2F. That being said, DCR agrees that in an ideal world with unlimited resources, the FRMP and RMP processes would be coordinated and take place simultaneously.

2. Speak to MA law requiring site specific management plans. Isn't this a best practice goal?

Reply: References and information about this law can be found in two documents, "Statutory Overview of DCR's Forestry Program" and "Forestry Outline," both of which are available at http://www.mass.gov/dcr/news/publicmeetings/backgroundmaterial.htm.

Accountability:

1. O'Connor – Why have all DCR presentations to date only focused on the agency's exemplary forestry methodology and practice? Why doesn't the agency spend some time openly examining where poor forestry examples come from? If there is not a willingness to examine real issues, real problems, there is no way change can occur. DCR should cease being evasive and defensive.

Reply: DCR has received a fair amount of criticism concerning forest management practices within DCR's state forests, and DCR has actively participated in public site visits and presentations concerning less than exemplary cutting practices. DCR accordingly believes that the agency, together with adequate public input, has provided the Steering Committee with a fundamental grasp of the forest management challenges facing the agency. At the same time, it is equally important to identify and present those forestry methodologies employed by the agencies throughout the entire state forest and park system. DCR maintains that a presentation of the agency's general and standard approach to forest management practices is helpful to set the stage for a fair and balanced discussion that would guide the agency towards the development of a longstanding and sustainable forest management policy.

2. What is DCR's current enforcement policy and practice and has it been successful in ensuring compliance with forest management plans?

Reply: As the Forest Management Plans are a policy document, enforcement of the plans turns on enforcement of the underlying forestry contracts and the forest cutting plans, the enforcement of which is described in the Forestry Outline, Section VII, on the Visioning Process website (please see http://www.mass.gov/dcr/news/publicmeetings/forestry/Forestry%20Outline%20_final.pdf). In terms of timber harvesting, implementation of the forest management plans has been very limited to date.

3. How will you develop accountability? Has anyone been punished or fired over Windsor State Forest vernal pool destruction?

Reply: DCR respectfully declines to comment on disciplinary or human resource management issues as we believe that such matters are outside the purview of the Forest Visioning Process. Nevertheless, DCR believes that agency accountability will be a

significant ingredient to long term management of DCR's state forest system. Some of the avenues for enhancing accountability under consideration include the following features:

a. Incorporate additional performance criteria within staff duties, such as: "timber sales meet multiple objectives in an environmentally and socially sensitive manner; forestry BMPs, MA Slash Law, and aesthetics are met in a professional manner; Heritage and Natural Resources are protected and managed accordingly." Ensure these criteria are included in staff performance goals and follow the agency's protocols for evaluating performance and disciplinary actions.
b. Develop new contract standards that will allow the agency to exercise more specific direction over contractors on the ground and to hold them strictly accountable.

The following is DCR's response to Question 6 from the TSC, which also addresses this issue:

The Management Forestry Program of DCR Bureau of Forestry has taken the following actions as new policy to address recent timber harvest planning and/or implementation problems:

a. The Massachusetts Natural Heritage and Endangered Species Program (NHESP) has been asked to survey each proposed timber sale site for priority habitat and rare species prior to the development of site specific silvicultural prescriptions.

b. A detailed site specific silvicultural prescription will be prepared for each proposal. The prescription will be reviewed and approved by the Program Supervisor. The prescription will discuss, among other things, the current state of forest vegetation, how manipulating it fits with the direction of the forest plan, the predicted result/condition of future forest, and how the stand will be harvested (e.g. logging system). See the model prescription developed with Program Supervisor and District Management Foresters being used as direction for the program at: http://www.mass.gov/dcr/news/publicmeetings/forestry/fsnm.pdf

c. A site visit to each proposed harvest area will be offered to the public.

d. Language within the timber sale contract is being modified to strengthen the implementation of the prescription and enforceability of the contract. Examples:
    i. Requirements on machinery to be used
    ii. Operation plans required of purchaser
    iii. Maps (part of contract) fully document stream crossings, wetlands, protected areas, and other important issues

e. Policy on forester oversight is strengthened through regular inspections and filing of inspection reports with the timber sale purchaser (documentation of good and bad) and the Program Supervisor.

f. The filling of the Program Supervisor position is imperative and has been completed. The standardization of forestry across the districts (prescriptions, contracts, harvesting standards, monitoring) is also imperative and in progress to fruition.

4. Considering the errors that have been made – how will the DCR clean up and correct the vast areas that have been destroyed?

Reply: DCR maintains that a significant majority of DCR forestry practiced on state lands has been done with minimal errors. Obviously, the most noted instance of errors concerns Savoy Mountain State Forest where DCR recently cleaned up the landing areas to remove most of the woody debris left behind and correct that situation. Although the openings there are much larger than desired, after 1.5 growing seasons, DCR is of the view that the cut area is full of regeneration and abundant wildlife. Finally, DCR is committed to open and transparent dialogue concerning past and future activities and we are dedicated to make sure that any errors in forest practice are the extreme exception.

5. Is there any way to take into account past competency of operator, width of tires, presence of bump trees along skid roads, other factors besides just equipment when making the decision to award a harvesting contract?

Reply: DCR plans to take into consideration the poor performance of individual contractors when making decisions to award harvesting contracts. To that end, DCR has initiated a protocol that requires clear documentation of contractor performance (good and bad); and future timber sales may not be awarded to the highest bidder if it can be shown that they have been negligent in there operations on state land.

6. To what extent should skid paths and logging roads be dismantled after cuttings?

Reply: Skid "paths" come in two varieties: (i) Temporary skid roads/trails that are only used during the current harvest. The temporary skid roads are "dismantled", rehabilitated or otherwise left in a condition so that they will quickly re-vegetate; and (ii) Permanent skid roads are often existing forest roads that are used for forest products. While these roads can be treated, they can also re-vegetate but provide permanent forest access 20 - 60 years into the future for forestry and fire protection activities. Often they can be used for walking, and other activities such as snowmobiling.

The logging roads are those permanent roads utilized before a timber harvest and are expected to be used after the timber harvest (for multiple uses). These roads are used to truck products and will not be dismantled after a timber harvest as they are an integral part of the state forest road infrastructure (most of these forest roads are in better condition after the harvest due to in-kind work done by the operator including road grading and the installation of culverts and gates to restrict access to illegal off-highway vehicle use).

7. What is an adequate "buffer zone" to protect existing trails in areas to be cut?

Reply: An adequate buffer zone probably varies widely due to site specific conditions but we have set a buffer distance that we think represents the largest distance necessary for protection of these resources. Our current policy (as stated in all four of the currently approved Forest Resource Management Plans) is to leave a primary corridor of 200 feet and a secondary corridor of an additional 300 feet (500 feet total) along national scenic trails (Appalachian and MMM Trails), a 100 foot corridor along interstate and intrastate roads and trails, and a 50 foot corridor along local roads and trails. See any of these FRMPs (see http://www.mass.gov/dcr/stewardship/forestry/manage/planning.htm) for the forest management standards associated with these buffers.

8. Would the so called "clear cuts" of the past be part of the "new" DCR vision?

Reply: DCR maintains that the types of "clear cuts" that have triggered significant public concern and criticism will not be part of the "new" DCR vision.

Science:

1. Question to consider: The pictures of DCR clearcuts especially when compared to DF&W clearcuts in Norway Spruce shows large amounts of CWD of dead trees. Wouldn't this suggest these plants and trees were in serious decline and their cutting to promote natural starts good management?

Reply: The large amounts of debris shown in the pictures of DCR Norway Spruce clearcuts are too small of a sample to draw conclusions about the tree condition at the time of harvest. The pictures (particularly of the log landing area on the "New State Adams Road Timber Sale") are more indicative of the logging method and to some extent, the markets for pulp at the time of harvest. Often, the Norway spruce stands that have been cut in the last 10 years have been in serious decline. The decision to harvest many of the Norway spruce stands was predicated on:

i. The mostly native forest species that would replace the spruce plantations would be more diverse (on the scale of the plantation) and more resistant than the monoculture plantation to large scale natural disturbance; and
ii. The forest that would replace the plantation would, for a period of time provide early successional habitat and younger forest that is lacking on the landscape.

2. Will there be REAL biological surveys for a broad spectrum of animals and plants?

Reply: Biological surveys of our proposed timber harvest areas are conducted by the professional staff from the Natural Heritage and Endangered Species Program. DCR notifies this program of any proposed timber harvests and we always integrate their comments and concerns into the site specific prescription and final cutting plan. Currently, the agency does not have resources available to conduct full biological surveys on all of our properties therefore we have chosen to use our limited resources to focus on the specific areas where harvesting may potentially take place.

3. Role of harvesting vs. natural disturbances: On what basis does DCR claim that harvesting makes forests more resilient and increases carbon sequestration? All the scientific references we've seen so far and that I am familiar with do not support this, rather allowing natural disturbances will achieve it best.

Reply. As noted in the MA Wildlife Action Plan (page 308 – the plan is available at http://www.mass.gov/dfwele/dfw/habitat/cwcs/cwcs_home.htm): While it is instructive to examine the historical range of variability associated with natural disturbance regimes (see Thompson and DeGraaf 2001), managers should not seek to re-establish conditions from a previous time (e.g.; prior to European settlement), but rather should seek to secure a range of conditions in today's landscape that will support viable populations of native wildlife species (DeGraaf and Yamasaki 2003). This statement considers the fact that today's landscape condition in MA has never existed before, primarily due to the profound impacts of human land use history. The homogeneous, even aged forest that covers much of our landscape will slowly become more diverse due to natural disturbance. Forest management can help move the forest to a more diverse condition that will better support native wildlife. If disturbances occur on forests where management is planned to help increase species and age diversity, it will help us reach these goals and will lessen the need for management in those areas. For example, the slow decline of blocks of hemlock forest that are affected by the hemlock adelgid allows for the development of regeneration as openings occur. Disturbance that occurs in a well-planned and implemented manner will build resilience into our homogeneous forest making it more adaptable. The disturbance that occurs via well-planned forest management will also ensure that conditions for a wide diversity of species will occur. Building in this diversity and resilience is increasingly important as climate change may increase the severity of future disturbances.

This approach focuses on increasing a forest ecosystem's "resistance and resilience" across a watershed or other forested landscape. This does not prevent the large natural disturbances from occurring, but in theory it should limit their impact, their intensity (by increasing resistance) and bring the forest back more quickly after the event has passed (by increasing resilience), simply by diversifying age and species composition.

The rotations called for in the Forest Resource Management Plans are longer than traditional New England/Massachusetts rotations. In both even age and uneven systems, rotations are 105 years and 150 years redistributing growth and carbon storage on larger individuals. Conversely, the management for younger forests allows for the more rapid sequestration of CO2 from the atmosphere. Leaving the forest untouched will keep the volume already sequestered on the site while the forest continues to add more volume. Some uneven aged techniques will sequester nearly as much as an unmanaged forest (see William Keeton writings at the University of Vermont). However, the key when evaluating forestry and carbon is what use the wood that was removed is put to and if it "substitutes" for non-wood products that have production carbon footprints many times larger than wood (for example steel, concrete and plastics). For example, if wood harvested from DCR land were used to replace non-wood materials, in buildings and other structures, the equation is changed.

4. Don't natural disturbances create uneven aged forests? If so, why does DCR insist we have 80 year old forests, can excuse be used to justify continued logging?

Reply: There is no dispute that relatively frequent, small natural disturbances create an uneven aged forest. Examples of such small natural disturbances include ice storms, wind, insects, and fire. Large scale natural disturbances, such as hurricanes and wind shear, are generally infrequent and create larger openings and more of an even aged condition. However, given that most DCR forests were regenerated in even aged blocks in the early 1900's, disturbances (which occur over hundreds of years) have not effected much diversity yet (for example, the recent aerial photo interpretation of 100% of DCR forests by Sewell found only 4% was uneven aged and 73% was pole or small saw timber size). DCR understands that the immediate public debate centers on the concept of the scale at which age classes are represented on the landscape and how natural events and how humans have shaped the forests that we have today. According to DCR's inventory statistics, DCR's data indicates that the most abundant age class of forest is centered on 80 years.

In all the four approved Forest Resource Management Plans, we present a maximum size expected for seven different disturbances and their return interval (i.e., frequency). To rely solely upon natural disturbances to create uneven aged forests is certainly a possibility. However, we should nevertheless consider the fact that the Commonwealth is an urbanized state; and must therefore recognize the Commonwealth's interest in minimizing the effect of some types of disturbances on public health, safety and property values.

5. How do you resolve 24% of DCR land being priority habitat and thus protected by MESA requirements to decide mgmt on the side of threatened species with only 20% set aside for reserves?

Reply: Forest management can take place on land protected by MESA requirements as long as it is conducted using NHESP staff guidelines. In the four approved Forest Resource Management Plans, we have set aside 26.6% (more than 20%) in reserves. According to our analysis, in the four western districts, 34.5% of all priority habitat and 9.6% of all estimated habitat on DCR land is currently in reserves.

6. For Bob O'Connor/Bill Hill: If forest is converting to Central Hardwoods from Northern Hardwoods, won't cutting accelerate this process? Why do we want to accelerate this process?

Reply: Currently, openings in northern hardwoods forests do regenerate to northern hardwoods species. As climate change progresses, openings in northern hardwood forests will begin to regenerate with a different set of species adapted to the warmer environment - probably some mix of central and northern hardwoods. As a result, future openings, whether created by natural disturbance or forest management, will regenerate to a different mix of forest species. Furthermore, forest management openings done in the near future will help perpetuate the native mix of northern hardwoods that the current and past environments supported. These openings will also add diversity to the forest and serve as "historical

legacies" for future generations (assuming this mix survives to its current biological age range).

7. How does David Foster's comment that managing for "forest health" is hubris affect thinking – also he said "natural disturbance is not the same as management? Please comment.

Reply: From the outset, DCR regards "forest health" as a values-laden term. In this regard, DCR strives to manage for biological diversity, watershed protection, recreation, forest products and, more recently, carbon mitigation and adaptation. DCR views these concepts as more definable values to consider when developing management approaches. DCR also believes that natural disturbances are different than disturbances caused by management in that the concept of forest management strives to meet the above values and cause the openings to leave complex legacies such as down and woody debris, retention trees, legacy trees. Consequently, while these openings are similar to those made by some types of natural disturbances, they are not the same.

DCR is of the view that there is broad consensus that forests don't need to be managed in order to remain as forests and be "healthy." DCR also understands David Foster's point that we probably erroneously assume that we can manage a forest in order to make it "healthier." Forest ecosystems will function fine with or without our existence or our intervention. Forest health is a term ripe with many different interpretations and definitions. Generally, when the social decision is made to manage a forest, private or public, trees that have expressed their "superiority" are retained for the future. This principal tends to hold true as these trees tend are often healthier than their cohorts. Again, when the social decision is made to manage a forest especially on a large scale basis, it is common to try and create and or maintain diversity of tree species, sizes and age classes. Across a large landscape, already impacted by humans, diversity can be considered "healthier" because it provides for a variety of wildlife species can be resilient against natural disturbance.

Finally, it is DCR's impression that David Foster is not in any way against responsible forest management. Our goal at DCR is to manage some lands and not manage others. The unmanaged lands would let natural disturbances occur without intervention (except in situations where there is a threat to public safety).

8. Question for Bob O'Connor: What does it mean to manage to replicate historic disturbance rates, if disturbance rates are increasing? Why the need to replicate disturbance?

Reply: For a discussion about natural disturbances, young forests and human influence changes in natural disturbances, please see the Wildlife Action Plan, pages 308-319 (the plan is available at http://www.mass.gov/dfwele/dfw/habitat/cwcs/cwcs_home.htm). Many experts predict that natural disturbances will accelerate with climate change (more severe windstorms, floods, ice storms, etc.). Forest management can provide the habitat needed by native wildlife in a measured manner. According to the Wildlife Action Plan, early successional habitat has declined, as have many of the species that utilize this habitat. DCR

further notes that the middle-aged, even aged forest in Massachusetts is less susceptible to many natural disturbances (wind, disease, insects) than the forest that existed prior to European settlement.

9. Question for Bob O'Connor or Bill Hill: Gunn presentation last meeting showed unambiguously that uncut forests sequester the most carbon – so how can DCR claim to be managing for carbon sequestration? What analysis is this based on?

Reply: There is a myriad of research existing and evolving in the carbon sequestration and storage discussion. As discussed in question 10 below, it is widely accepted at this time that forests with large (sometimes old) trees store the most carbon on site. With DCR's 105 and 150 rotations, DCR is managing significant areas for larger, older trees and carbon storage. In some harvesting regimes that provide for the establishment of young forests rapid carbon sequestration is possible. As noted above, a key consideration is the use of the harvested wood and whether it replaced building materials with much larger "carbon footprints." The goals of the current approved Forest Resource Management Plans are to (over the life of the plans) shift the age class distribution to older larger trees (>90 years), more uneven-aged stands, and a small component of young forest (e.g.: 42%, 27% and 5% respectively in the Northern Berkshires District including Reserve Areas).

10. If "adolescent" forests in MA are now sequestering carbon, how will planned management improve this sequestration in the next 20 years?

Reply: The carbon sequestration debate has two basic assumptions. First, bigger older trees sequester more carbon than younger, smaller trees. Second, younger, smaller trees sequester carbon at a higher rate, pound for pound or as a ratio expressed comparing the amount of carbon sequestered to the volume of the tree. By having a mix of tree sizes and ages, our thinking is that you get the best of both worlds, good carbon sequestration and good carbon uptake.

Reserves:

For a detailed discussion of Reserves, please visit the following website: http://www.mass.gov/?pageID=eoeeasubtopic&L=4&L0=Home&L1=Agriculture%2C+Forestry%2C+Fishing+%26+Hunting&L2=Sustainable+Forest+Management&L3=Forest+Reserves&sid=Eoeea

1. Why did DCR not adopt their science advisory committee recommendations for minimum reserve size of 15,000 acres? Is this open to being revisited?

Reply: With respect to whether DCR is open to revisiting the science advisory committee recommendations for minimum reserve size of 15,000 acres, DCR maintains that this issue falls within the purview of the Forest Futures process. Knowing that the Technical Steering Committee is considering the issue of reserves, DCR looks forward to its recommendations at the conclusion of this process.

As for the reasons why did EEA not adopt minimum reserve size of 15,000 acres, please note that there are only 4 state properties that are greater than 15,000 acres (Quabbin watershed, Ware River Watershed, Wachusett Watershed and October Mountain State Forest). The Wachusett land is very fragmented and would rate low as a potential reserve. The Division of Watershed Protection believes that forest management is an important part of its watershed management program, although it designated a several thousand-acre reserve in the Ware River. As part of this designation, the Ware River Advisory Committee required presentations at two meetings before it would support the smaller reserve. Initially state lands and surrounding non-state lands were mapped as candidate reserves. However, this approach triggered an angry response from private landowners as they did not want their private land publicly mapped as a "future or potential" reserve. The landowners felt that such a designation would negatively affect the value of their land. Accordingly, EEA mapped only state land as potential reserves. Please also note that the Department of Fish and Game felt strongly that a 5,000-acre minimum met the requirements for a reserve, especially if surrounding land were managed on longer rotations, etc.

Forestry/Management:

1. How do project plans for a specific site relate to the overall plans for a region? E.g. why harvest a particular species on a site? The cuts are described but rationale not.

Reply: DCR anticipates that future site specific silvicultural prescriptions will provide the rationale for harvesting a particular species to the district Forest Resource Management Plan (FRMP). For instance, a prescription for management will describe how that particular silvicultural activity should contribute towards the goals of age/size class distributions, wildlife habitat goals, promotion of native species, etc as stated in the district FRMP.

2. Bill Hill – you have three origins of DCR forest: 1) first forest after agriculture abandonment including plantations. 2) second forest after agricultural abandonment. 3) forest always in forest growth. The latter two, when composed of trees suited to the site, often are stands of exceptional growth and quality when compared to the first. Would you consider prioritizing uneven age management to the second and third stands and reduce the opening size to ½ acre for uneven age management?

Reply: Yes, uneven-aged management is more desirable to even-aged management, particularly where there is either agriculture abandonment, including plantations, or forest after agricultural abandonment. As inferred by the statement "when composed of trees suited to the site," the decision to use uneven age management (and its ultimate success) should be prioritized by the species and the site on which they are growing. Stands composed primarily of northern hard wood species and associates such as white ash will regenerate more readily in small openings that are proposed in the Forest Resource Management Plans (FRMPs). The opening size for uneven age management regeneration cuts is limited to ½ acre per the approved FRMPs.

3. Bob O. stated – It can be "assumed that we will be doing some kind of management" other than emerging/invasives/pests – why?

Reply: If DCR engages in no active forestry, there nevertheless remains the real possibility that future invasive species, especially widespread insect/disease species such as the Asian Longhorned Beetle, will require active intervention.

Biomass:

1. Why no mention of biomass in any DCR presentations?

DCR's presentations for this process have focused on providing baseline information and context about the current state, uses and management of DCR forest lands. Given that the ultimate use of wood products harvested from DCR lands does not drive the agency's forest management decisions, the issue of harvesting for biomass has not been discussed.

2. Will forest regulations be developed that specifically address harvesting for biomass?

Reply: DCR does not know whether the revised Chapter 132 forest cutting regulations will ultimately address harvesting for biomass. One way which they could address this issue would be in setting standards related to whole tree harvesting. DCR notes that it has historically construed the Forest Cutting Practices Act, G. L. c. 132, § 40, along with the Forest Cutting Practices Regulations set forth at 304 CMR 11.00, such that the decision to approve forest cutting plans turns on harvest management and silvicultural practices, and not on the ultimate use of the wood products. However, DCR acknowledges the concern of some about overall and cumulative harvesting levels in a particular region or throughout the state.

It has been noted that the Department of Energy Resources is commissioning a Biomass Sustainability and Carbon Policy Study. This "white paper" is intended to "provide a summary of the research and peer reviewed science-based information on biomass sustainability. The issues to be reviewed in the white paper include the following.

- Sustainable Forest Management and Ecological Implications of Biomass Harvesting
- Carbon Sequestration of Forests with and without Forest Management
- Net effect of Biomass Energy on Atmospheric Carbon Balance
- U.S. and International Policies with Regard to Biomass and Carbon Neutrality.

DCR anticipates that the findings of this white paper will inform sustainable forestry practices in general, and may also be relevant to the agency's role in promoting sustainable forestry on private lands.

3. What is the envisioned role for DCR with respect to Biomass/electricity production?

Reply: This issue is addressed in DCR's reply to Question 7 from the Technical Steering Committee, which said the following:

a. The Kelty, D'Amato, Barten report on the Sustainable Biomass Initiative web site at DOER done in Jan 08 recommends that 465,203 acres of public land (DCR and DFG) is

available for biomass harvesting and that 279,866 dry tons/year could be harvested sustainably.

b. Since this report came out, DFG and DCR have completed management plans on several of their properties covering the Berkshires. If the cutting levels in those plans are extrapolated for the entire ownership it comes to a level of cutting on about 4,900 acres per year. In reality, cutting intensities are likely to be lower in central and eastern MA and both DFG and DCR don't currently have the forestry staff to cut at these levels (especially DFG). So this is a true upper limit of what we might expect. The Kelty report gives two volumes for partial cuts for biomass material – one of 9 tons/acre for a thinning of the about ½ of the larger trees and one of about 25 tons/ acre for a thinning of ½ of the larger trees and all of the smaller trees. If you multiply the 4,900 acres by 15 tons per acre (assuming some material needs to be left on site for wildlife and site productivity and the average cut probably won't be that heavy to begin with) = 73,500 tons per year. This is 1/4 of the value published on the web site.

c. It is important to understand that market demand for biomass will never drive the management decisions made on DCR, Bureau of Forestry lands. Based on existing forest resource management plans, management decisions are needs based, as directed by the specific plans. If a timber sale is prescribed and sold under the auspices of an existing plan the purchaser may choose to market those trees cut to the biomass market. This is unlikely in some prescriptions such as small group selections and thinnings that will limit harvesting equipment. The economics of such prescriptions will preclude the opportunity for biomass harvesting.

4. Will the state conduct a long term study, possibly in conjunction with UMass, to study the impact of harvesting on nutrient levels in soils?

Reply: DCR believes that such a study is appropriate and a good idea. Furthermore, DCR also believes that studies conducted at experimental forests such as the Forest Service's Hubbard Brook in NH and many other locations can help answer this question adequately.

Wood Industry:

1. When Bob O'Connor put up a slide with a bullet point that said that products from DCR harvests are largely processed locally – does that mean cut by Massachusetts loggers? Sawn into lumber at Massachusetts Mills?

Reply: The slide didn't say DCR harvests are largely processed locally. The slide depicted a possible vision to have this occur. Today, most of the trees harvested on DCR land are processed into forest products outside of Massachusetts.

2. DCR vision calls for harvesting wood products to go to local industries. How to implement that?

Reply: The concept of “buy local” has worked to strengthen the farming sector in the Commonwealth and could work for the forestry sector as well.

3. How can DCR “lead by example” on getting forest products processed locally? Local processing capacity is declining or non-existent, is it not?

Reply: The Commonwealth still has several dozen mills that can process wood locally. DCR hopes that the Technical Steering Committee will consider in developing its recommendations strategies that could help re-vitalize local mills, help the climate (by reducing transportation carbon inputs) and replace plastic, concrete, steel, etc in buildings, bridges etc., thereby reducing the Commonwealth’s collective carbon emissions.

4. How important is DCR management (harvests) for local wood products industry?

Reply: The Smartwoods study of Quabbin forest management done in 1998 "Quality Not Quantity: Community and Economic Benefits from MDC Forestry at the Massachusetts Quabbin Reservoir Watershed" interviewed harvesters working at Quabbin and broke their results into categories by how much of their annual business is derived from Quabbin. They found 10 contractors who were "highly linked" (ave. 75% of their business linked to Quabbin work); ten contractors were "moderately linked" (60% of their business linked to Quabbin work) and 30 contractors were "weakly linked" (45% of their business linked to Quabbin work). The consultant estimated that 290 jobs and $33.7 million per year of economic activity were associated with Quabbin forestry projects in 1998.

Quabbin has consistently harvested at approximately the level proposed in the forest resource management plans for four western MA districts recently approved by the DCR Stewardship Council. Given that Quabbin has 58,000 acres and DCR DSPR has 280,000 acres of forest (both including reserves) - so at this comparative rate, DCR DSPR forestry (at the rate of harvest equivalent to Quabbin) would support 1,400 jobs and $162 million in economic activity. However, this study is more than 10 years old and the local MA wood industry is smaller, with fewer mills than in 1998.

Recreation:

1. The user groups work to prepare recreational areas and trails. How will DCR bring us into the planning process to manage forests while preserving the recreation areas in the future?

   Reply: From the outset, DCR notes that Resource Management Plans and Forestry Resource Management Plans are complementary parts of DCR's management planning process. Forest Cutting Plans are each reviewed by DCR Facility Supervisors prior to implementation. Facility Supervisors should be aware of potential conflicts with other user groups and should ensure that forest management plans are communicated to these stakeholders. A common scenario recently has been concern raised by user groups who have established trails on DCR lands without permission and then learned that the agency plans to harvest in the area. DCR’s 2008 Trail Guidelines and Best Practices Manual introduce standards and procedures for trail development and management including a

process for user groups to propose new trails. This process ensures that important trail assets can be considered in forest management planning. Also, the RMP Planning process, which includes information and recommendations for vegetation management from the foresters, actively solicits input from user groups for recreation related concerns and issues.

2. Why is recreation given such a small place in management plans?

   Reply: Recreation is a primary element of DCR's mission and a key consideration in forest management planning. Typically, active forest management avoids areas of intensive recreational use such as beaches, campgrounds and other developed recreation facilities and management plans usually identify such areas. As the Foresters prepare Forestry RMPs, they are gathering a lot of detailed data on existing DSPR recreation facilities. Less intensive recreation facilities such as trails and forest roads are not inherently incompatible with forest management and can serve as important opportunities for the agency to communicate the principles and benefits of forest management and even enhance the visitor experience. Nonetheless, management plans establish guidelines for protecting significant trail corridors to ensure their protection. It is important to note that recreation has always been a very important component of GOALS Plans / RMPs. The current initiative with UMass to conduct visitor surveys will allow DCR to expand on the recreation component of management plans.

Miscellaneous:

1. Will DCR write the final "vision" report? If so, what further input can this group make, since DCR is already "balancing" and "diversifying?"

   Reply: The TSC will write the final report, with input from the ASG and the public. Furthermore, it should be noted that the "vision" included in the power point presentation by Bob O'Connor contemplates what the DCR forests would look like in the future if the current management plans were implemented, as a means of explaining the goals of the management plans.