



photo by Scott Jackson

The Wood turtle is one rare species whose habitat coincides with some timber harvesting activity.

Logging & the Protection of Rare Wetland Species Habitat

by David B. Kittredge, Jr.

Wetlands and rare species. Those words ring alarm bells for loggers and foresters alike. We've all heard how owls in the Northwest and woodpeckers in the Southeast put loggers out of work and shut down sawmills. And so far (knock on wood...) that hasn't happened in the Northeast. But will it? Can regulatory protection of wetlands (common sights in forests of the Northeast) and rare species conflict with logging in our part of the world?

One good way to find out is to see what has happened in Massachusetts—arguably one of the most heavily-regulated states for loggers in the Northeast, if not the country. All loggers in the Bay State need to be licensed in order to work.

The Massachusetts Forest Cutting Practices Act requires that anyone cutting more than 25 Mbf or 50 cords on a particular job needs to file a Forest Cutting Plan with the

state's Department of Environmental Management (DEM). The Plan has to show where the job will be done, who will do it, how much will be cut and what kind of silviculture will be used. A map has to accompany the Plan indicating any wetlands, streams, steep slopes, and the location of landings and skid trails.

The Plan also requires an indication of

what Best Management Practices (BMPs) will be used to prevent erosion and sedimentation. For example, an operator can only cross a stream using an approved method (e.g., bridge, poled ford) in a permitted location. A 50-foot wide filter strip must be left along all streams, and only 50 percent of the basal area in it may be harvested. To prevent erosion on skid

Massachusetts logger John Conkey crosses a stream spanned by a wooden bridge.



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trails on steep slopes, water bars and other divergence methods must be incorporated into the maps and Plan. Wetlands are to be avoided.

You might wonder how anyone can log in Massachusetts. Still, more than 500 loggers hold a license, and in excess of 56,700 Mbf of timber were harvested in 1994 on over 750 jobs covering more than 29,300 acres.

A DEM Service Forester (there's generally one in every county) reviews each submitted Cutting Plan and determines whether or not the Forest Cutting Practices Act regulations are being met. DEM foresters visit each proposed job that involves wetlands before the cutting starts. As part of the review process, they also consult with the Atlas of Estimated Habitats of State-listed and Rare Wetlands Wildlife.

This Atlas contains the locations of rare wetland wildlife species habitat outlined on topographic quad base maps, for public as well as private land (only rare species that require wetland habitat receive this level of attention). If logging is proposed to take place within a rare wetland wildlife habitat, the Service Forester sends the Cutting Plan to the Natural Heritage and Endangered Species Program (NHESP) office in Boston, for review by habitat specialists.

More alarm bells and red flags—trouble, right?

NHESP determines which rare species is involved, and looks at the Cutting Plan to see what kind of operation is being proposed. Then, the habitat specialists make recommendations to the DEM Service Forester about how to modify the Cutting Plan in order to protect the habitat. The DEM Service Forester makes the final call on what to do, based on the recommendations of NHESP, the proposed Cutting Plan, knowledge of harvesting, and an on site visit to the proposed job.

How does this level of review and concern for rare wetland species habitat affect logging? Are logging and protection of rare wetland species habitat compatible? The Massachusetts record gives us a chance to find out what has happened when harvesting and rare wetland species habitat protection collide.

Between 1990 and 1994, there were 3,329 Forest Cutting Plans approved in Massachusetts. Over the five-year period, this amounted to harvesting of 133,516 acres, 243,210 Mbf, and 242,365 cords. During this period, harvesting was proposed to take place in rare wetland species habitat 175 times, or on 5.3 percent of all harvesting operations in five years.

When the NHESP specialists review the Cutting Plans, they rate each proposed



View from the landing: John Conkey says he's adapted to the new regulations.

John Conkey: The Real World Connection

"I look forward to doing one of these jobs—every time you do you learn new things about plants and animals," says John Conkey of Belchertown, Massachusetts. He and his son, John, have logged for more than 11 years and produce roughly a million and a half board feet of logs annually. "When you log all day, you don't have the time or energy to read a lot at night—you're dead tired and don't have energy to learn." But by working with foresters and the rare species experts, Conkey says he learns a lot.

John Conkey is no newcomer to logging and the protection of rare species habitat. He has plenty of experience cutting before and after Massachusetts' system of environmental protection was established. He says he's never had a job delayed by the process. "I've never been held up," he notes, explaining that if an issue or a question on a site ever came up, he could still work somewhere else on the job, or on another woodlot.

Would knowledge of a rare species on a job affect his bid for stumpage? Conkey explains that his perception of any prospective job has more to do with how it has been planned and offered. If it already has an approved Massachusetts Forest Cutting Plan, he'll bid more to get it, since he knows that he can start the next day, and all possible regulatory hurdles have been cleared.

As to "no-cut" buffers around a habitat area, "If they tell me I can't work there, that's fine with me." The logger says he generally doesn't like to work in sensitive areas, because then he has to worry about ruts, slash, and stream quality. If such a restriction removes volume from his sale, he says, the forester or landowner usually just throws more volume in from somewhere else on the woodlot.

Conkey says a forwarder—in his case a Valmet 546V Woodstar—makes it a lot easier to comply with wetland habitat protection. The machine's tandem rear-end results in low ground pressure, which means less compaction and rutting. He makes less impact on a site, which has impressed foresters and landowners alike. With a conventional skidder, Conkey says, a logger would need to be more careful and plan ahead.

The veteran Massachusetts logger says he's learned a lot in the five years since rare species habitat protection has been in place in the Commonwealth. Conkey says he is more aware now of what important habitat looks like, and can steer clear of it.

What advice does John Conkey have for the rare species specialists? "The biggest problem is no connection with the real world—they need to go out and visit a few sites that have endangered species and see some logging jobs. Don't forget to talk to landowners, too."

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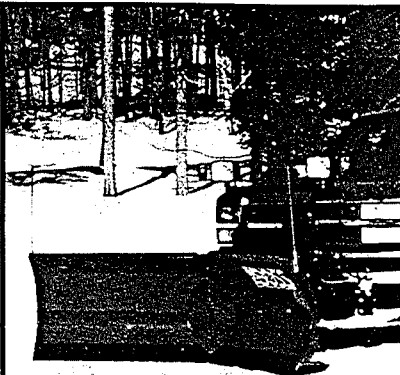
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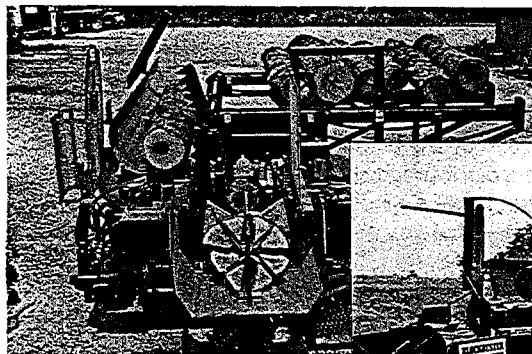
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operation as having either no impact, possible impact, or definite impact on the habitat. Out of the total of 175 times that harvesting and rare wetland species habitat coincided, the specialists rated it as "no impact" in 103 cases (58.9 percent of the time). In 70 cases (40 percent) they rated the proposed harvesting as having "possible impact," and twice (1.1 percent of the time) they rated the harvesting as having a definite impact on rare species habitat.

What were the rare wetland species whose habitat collided with proposed harvesting? There were 32 different species in all. Most often, the species whose habitat was involved were the Wood turtle, Spotted turtle, Spring salamander, Jefferson salamander, or four-toed salamander. On a few occasions, the habitat was home to unique insects like the Ebony bog-haunter, Persius duskywing, or Frosted elfin.

Once the NHESP habitat specialists assessed the impact, what kind of habitat protection recommendations did they make to the DEM Service Foresters? Over half the time (95 out of the 175 total occurrences) they didn't make any recommendations at all. Harvesting was considered to have either no impact or only a possibility of an impact, and as far as they were concerned, it could proceed as described in the Cutting Plan.

Over the five-year period, NHESP specialists made 27 different kinds of recommendations on 80 Cutting Plans. The most frequently-made recommendation was to prevent siltation while operating in or around the habitat. Preventing erosion is required for all harvesting in Massachusetts under the Forest Cutting Practices Act, and Cutting Plans need to specify which BMPs (Best Management Practices), such as water bars, will be used.

Another frequently made recommendation was that the filter strips required by the Cutting Practices regulations should be adequate. This was really more of an observation than a recommendation, since the filter strips (no more than 50 percent of the basal area to be cut within 50 feet of a stream or water body) apply on all jobs—not just those involving rare wetland species habitat.

On eleven occasions, NHESP recommended that the Cutting Plan incorporate vernal pool protection guidelines, developed jointly by a committee of loggers, forester, and habitat specialists several years ago. Vernal pools are small depressions temporarily filled with water during the spring and are the only places where some rare species of salamanders will breed. The guidelines recommend that no machinery operate in the pools, no tops or

slash be left in pools, no exposed mineral soil and a shaded condition be maintained within 50 feet of a pool, and no ruts deeper than six inches be left within 200 feet of a pool.

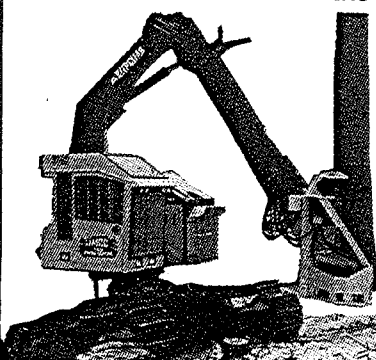
Other NHESP recommendations had to do with timing of the operation. For ex-

ample, on four occasions, the NHESP specialists recommended that the operation be conducted when the ground was frozen. In three instances they recommended that an intermittent stream be crossed when it was dry. Twice they suggested that the work be done either in the

fall or winter, or at least not in the summer.

Recommendations involved methods of stream crossing in 11 different cases. Seven times NHESP recommended use of a portable or temporary skidder bridge to protect the stream and bank. Twice they suggested re-routing the skid trail to avoid

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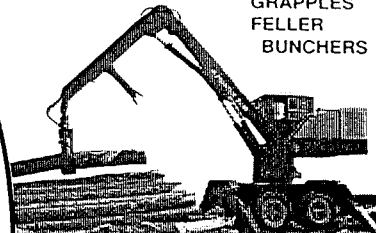
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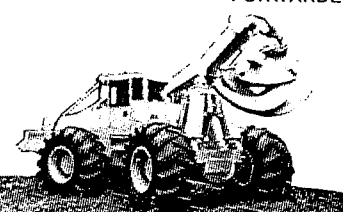
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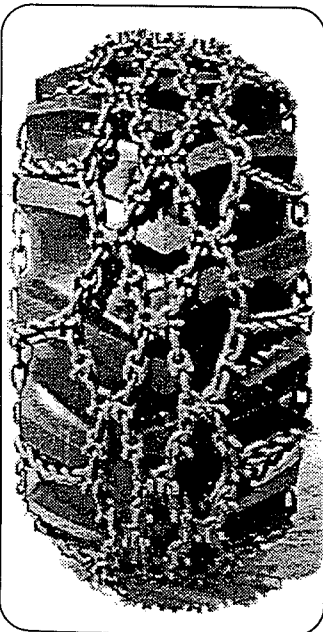
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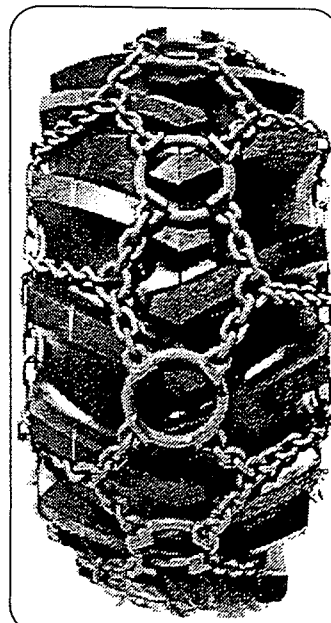
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a stream crossing, and twice they simply suggested no stream crossings.

On some occasions, NHESP recommended additional filter strip protection beyond that which is normally required by the Cutting Practices regulations. For 17 proposed harvest operations, they recommended little or no cutting within 50 feet of a stream. Three times they suggested no harvesting within 100 feet of the stream, and once they recommended no harvesting within 150 feet of the stream.

So, what did these recommendations mean to the logger, forester, and landowner? The DEM Service Forester made the call on what to do with these recommendations. They got out on the ground, with the recommendations and proposed Cutting Plan in hand, and decided whether or not the suggested changes should be included as a requirement of an approved Plan. In 46 cases, the Service Forester required the NHESP recommendations as part of the Cutting Plan (57.7 percent of the 80 cases). In 31 cases (38.7 percent of the 80 cases), the Service Forester decided that the recommendations weren't applicable, due to protections afforded by the normal Cutting Practices regulations or based on their on-the-ground inspection of the site and knowledge of harvesting. In three cases, the Service Forester



Forwarders, like this six-wheel Valmet, help keep ground pressure down.

simply decided not to include them.

What is the upshot of rare wetland species habitat protection and logging in Massachusetts? 95 percent of the time, there is no conflict at all. Even when identified rare wetland species habitat and harvesting were proposed for the same place, there was very little conflict on more than half the occasions. Harvesting was considered to have no impact and no recommendations or changes were made to the Cutting Plan. Even when NHESP did

make recommendations, they are generally in line with the erosion prevention requirements of the Cutting Practices regulations. The NHESP recommendations were more restrictive than the normal Forest Cutting Practices Act requirements in only a few occasions (32 times out of 175 times that rare wetland habitat and logging coincided).

For the five-year period studied, the overall impact of rare wetland species habitat protection on the Massachusetts

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logging industry was very small. Salamanders, turtles, and loggers can live and work successfully together. This is just another example of what loggers and foresters have known for a long time—that carefully planned harvesting doesn't destroy the environment, clean water, or wildlife habitat. In fact, results like these can be used to demonstrate that harvesting and rare species protection are compatible goals. A message of compatibility like that is good for the public image of logging.

These results also point out however, that in a few isolated instances, landowners and loggers are being asked to make some sacrifices in order to protect habitat (e.g., the recommendation of a 100-foot no-cut filter strip was made three times in five years). Loggers, foresters, landowners, regulators, and the public need to keep the issue in perspective, however, and not focus on just one side or a few horror stories.

All parties clearly have more to gain by working together to dispel myths and create solutions that will assist or compensate loggers or landowners, in those rare instances when habitat protection requires additional mitigating measures or individual sacrifices through restrictions on private property.

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