A Job for the Birds

Not Your Typical Job

"Every job is a different balancing act, but this one stands everything we usually do on its head," according to Jeremy Stultz, Senior Procurement Forester for Sappi.

Jeremy is working with Tom LaPointe, Forest Ecologist, and Connor Breton, Forester, with the U.S. Fish & Wildlife Service (USFWS), to manage 1,100 acres of forested uplands in the Umbagog National Wildlife Refuge.

"The refuge is a really important place for migratory birds," Tom LaPointe explains. "Our most important objective is to make sure the migratory birds that come here in the spring to breed have high-quality habitat for successful reproduction, especially species in greatest conservation need. Typical management goals, including revenue generation and aesthetics, are secondary."

According to Plan

The USFWS's strategic approach to maintaining and enhancing wildlife habitat includes a comprehensive conservation plan for landscape scale planning, a habitat management plan to identify biological strategies, and a forest management plan. "We use forest management to emulate natural processes and promote biodiversity," Tom explains.

Tom says the management plan for Umbagog is science based. "We rely on biological sciences to inform our planning and management and on the expertise of our biological staff including myself, Connor, and Wildlife Biologist Sean Flint. Collectively we stay current in our field of practice and bring new information to the table to make sure we are doing the best we can."



Connor Breton
U.S. Fish & Wildlife
Service (USEWS)



Tom LaPointe
U.S. Fish & Wildlife
Service (USFWS)

Connor, Tom, and Sean mark and inventory every tree to be cut. It is labor intensive, but the habitat they are managing requires careful thought and professional judgement, and their goal is *not* to maximize profit. They have many eyes watching their work. They want to make sure it is done well and demonstrates excellent forestry.

Sappi's Role

Tom relies on Jeremy Stultz and the Sappi team to manage operations and communicate the unusual requirements of the harvest to the operators. He also relies on Sappi to understand the markets.

"The management needs to be commercially viable and marketing the wood is not something we have the capacity to manage at the refuge" Tom says. "Most of the stumpage revenue goes to the Refuge Revenue Sharing program, which gets redistributed to towns for payments in lieu of taxes. In New Hampshire, an additional 10% timber tax is paid to the town.

"We have great professional relations with Sappi. Together we make this important work happen."



Rethinking the Harvest

Connor Breton and Tom LaPointe explain some of the techniques that make a harvesting operation at the refuge different than most.

Let the Snags Stand

Many trees that are typically removed in a harvest are intentionally left standing at Umbagog. This includes not only hollow trees with cavities and dead (snag) trees, but also trees with broken tops, large dead branches, or other health issues that indicate the tree is in decline. Economically these trees are high-risk and would be harvested to capture the value before they break or rot, but at the refuge they are left standing to become snag and cavity trees in the future. These "candidate snag" trees are the economic cost to managing for biological diversity.

"Forests are dynamic, and we need to make sure these important features will be replaced," says Tom LaPointe. Also important are trees with unique characteristics such as shaggy bark and cradle type branching that provide important habitat opportunities, and trees with specific lichens and fungi that contribute to ecosystem function.

Encourage Tip Ups

"Tip ups" are trees that have partially blown over, along with their root system and surrounding soil. The cavities created underneath the root mass provide critical new habitat. The depressions left in the ground from uprooted trees provide small catchment areas for spring runoff, creating seasonal wetlands that provide breeding grounds for amphibians. A diverse assortment of new trees will grow on the newly exposed soil. At Umbagog, trees that are likely to tip in a future windstorm are intentionally left standing.

Leave the Mess

"If you can't sell it, leave it in the woods to generate coarse woody debris. Leave the tops in a pile for wildlife habitat. We don't necessarily want a clean looking job—many species prefer messiness," Connor Breton says. "It is not your typical cutting, but operators get it."

Save the Christmas Trees

"Spruce-fir makes excellent habitat for many birds and deer," Tom LaPointe explains. "Fir is short-lived and particularly susceptible to pests and pathogens that cause quick decline. This makes them excellent snag and cavity tree candidates.

"Off refuge, fir is often a species targeted for removal but at the refuge we typically retain them for that purpose. Red spruce is a much longer-lived species that we aim to promote. Red spruce is difficult to regenerate so we make a concerted effort to release existing natural regeneration.

"Communicating the many aspects of the prescription to operators can be a challenge. I am sure it seems contradictory at times because it is a delicate balance," Tom says. "Running the equipment is second nature to most operators, who are eager to do great work. Sometimes communication evolves in creative ways," Tom, a great storyteller, says. "When I explained to an operator on a previous job that I wanted the small spruce and fir left undamaged, he said incredulously, 'So you want me to save the Christmas trees?' Once we were on the same page the harvest went without a hitch.









Creating Ideal Habitat

The USFWS uses habitat requirements of representative species to evaluate and manage habitat for a variety of associated wildlife and plant species. Representative bird species in upland forested areas include Blackburnian and Black-throated green warblers, Canada warbler, and American woodcock.

Connor Breton is creating ½ acre patches like the photo to the right as a habitat for the Canada warbler, and a host of bird and other wildlife species that prefer similar forest conditions. According to Connor, "The Canada warbler likes messiness. At this site, hazelnut brush provides a shrubby ground layer as well as a food for a variety of wildlife. Nearby streams provide water. Mid-story trees provide cover, but there is a gap in the canopy. The open patch is near a softwood stand and will provide excellent browse for wintering deer.

Adaptive Management for Climate Change

The USFWS uses various climate change models to predict species range expansions and potential future suitability on refuge lands. Their forest management plan includes management that fosters climate adaptation. They strive to retain and encourage plants to grow on the northern edge.

Connor Breton points to white pine as an example. Abundant in more southern parts of Maine and New Hampshire, white pine is relatively rare in the part of the refuge that is now being harvested. Connor believes that as the climate warms white pine will be more resilient to stress here. He is not trying to convert the forest to pine but would like to see the pine increase to 10-15% of the stand.

White ash in the reserve is also at the northern edge of its current range. As the climate warms, it too is a good climate adapted species, although this may be offset by devastation from the emerald ash borer. Tom LaPointe's prescription for the area being harvested is to keep white ash in the stand, hoping that age diversity and a low-density dispersal of trees within a diversity of other species will limit the impacts of emerald ash borer. "A recent scientific study gives us hope, but climate adaptation is complicated," says Tom.



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Sappi Maine Forester:

Jeremy Stultz

Jeremy Stultz, Senior Procurement Forester, has over 20-years of experience working as a forester in the woods of northern New England. Jeremy, a licensed forester in both Maine and New Hampshire, has been with Sappi for two years, after working most recently as an owner and manager of a private consulting firm.

Jeremy covers a wide area from mid-coast Maine to northern and eastern New Hampshire, working with private and public landowners, municipalities, land trusts and on many public lands. "I like to help landowners understand their resource and put a plan together to meet their financial and ecological goals," Jeremy says.

In his spare time Jeremy enjoys camping, canoeing, travel, fishing, hunting, gardening, and home improvement projects.

Jeremy is a 2000 graduate of the University of Maine

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