Keeping the Pines in the Pinelands – Fire is Necessary to its Survival

Burn, baby, burn – the Pitch Pines love that tune, but Smokey Bear doesn’t. The New Jersey Forest Fire Service (NJFFS) has traditionally focused on Smokey Bear’s attitude towards fire, and the Service is very effective at putting out wildfires in order to protect lives and property. But the Pines Barrens needs fire in order to survive. Luckily, it is possible to have it both ways by suppressing wildfires and using carefully designed prescribed fires to sustain the ecosystem.

The New Jersey Forest Fire Service mission is to “protect lives, property, and natural resources”. Many developments throughout the Pinelands are located within or adjacent to large stands of forest that are either privately or publicly owned. The state conducts prescribed burning on its land to reduce fuel load in order to prevent wildfires, but these are very low-temperature fires that do not bring the needed ecological effects. This kind of cool fire usually occurs on anywhere from 10,000 to 15,000 acres per year. The total number of fires and the type of prescribed burning that is conducted on a yearly basis is not suffi-
cient to protect the ecology of the Pinelands.

The legislature is considering a bill that would provide greater opportunities for prescribed burning for ecological purposes. S2169/A3935 would create a burn manager certification, provide some liability protection for private property owners who prescribe burn according to approved plans, and allow for the state to do mechanical thinning or prescribed burns on private in-holding lands that present a wildfire hazard. The bill’s provisions benefit natural ecosystems that require fire for regeneration, home-owners, by reducing fuel load on adjacent lands; and the state, by reducing their time in conducting prescribed burns that will now be done by private land owners.

New Jersey lags far behind many other states that have passed prescribed burn bills over the past 10 years. These states include Florida, Georgia, Mississippi, Louisiana, South Carolina, Alabama, Virginia, North Carolina, Texas, and Pennsylvania. These state programs for prescribed burning have proven to be beneficial and have ultimately reduced the risk of wildfires.

Prescribed fires in New Jersey are conducted in a very narrow window of time in the winter (New Jersey’s prescribed burning season is limited to the period between October 1 and March 31) and are kept at very low intensity. Because these fires are designed to burn brush, leaves and needles, but not to reach the canopy of the forest as a wildfire would do, they do not create forest canopy openings or the open, sandy or brushy successional habitats needed by many Pinelands species. The traditional restrictive approach to prescribed fires in New Jersey does not serve the ecological functions needed to reproduce the effects of wildfires.

The Albany Pine Bush Preserve in Albany, New York utilizes a fire management plan in which the goal is to control wildfires and to assure a balance between ecological management and public health and safety. They use fire to restore and maintain “viable pitch pine-scrub oak barrens, improve wildlife habitat, and manage fuel loads”. The fire plan for the 2000-acre preserve includes prescribed burns during the dormant and growing season in and around developed areas, so outside the window of burning that is currently used in New Jersey. The fire management plan and objectives in the Albany Pine Bush Preserve should be considered, and similar techniques from their program should be utilized in New Jersey to better promote the ecological function of the Pinelands and other forests dependent upon a fire disturbance regime.

The Prescribed Burn Bill - S2169/A3935 – is sponsored by Senators Beach and Singer and Assemblymen Dancer and Conaway. Their bill will help move New Jersey in the right direction, and it is a necessary first step to reduce wildfires, promote the ecological function of New Jersey forests, and enhance habitat for wildlife. Please contact your legislator and ask for their support of this bill.

You can find the contact information for your legislator at http://www.njleg.state.nj.us/members/legsearch.asp

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Pinelands Commission Has Public Development Web Page

The Pinelands Commission recently developed a new web page to assist the public in learning which applications for Public Development or Waivers of Strict Compliance were being reviewed. This new page can assist the public in learning which applications have been submitted even before the applicant’s public notice is published in the newspaper.

Just log onto http://www.state.nj.us/pinelands/, navigate to “Permitting & Applicant Services” then “Application Status Reports.”

This new web page also allows you to submit your email address to the Pinelands Commission to be notified when public development applications are complete for public review.
Gypsy moths made headlines around New Jersey in 2008 and 2009. Now, the headlines are focused on the southern pine beetle. Insect pests are a common occurrence anywhere in the world. Some of these insects are invasive, like the gypsy moth, while others, like the southern pine beetle, are native to the country and have expanded their reach over time. The southern pine beetle is native to the southern US and has historically been part of natural forest dynamics there. It is believed that the range of the southern pine beetle has advanced north into New Jersey due to climatic changes and a recent series of warmer winters. These insects are harmful when their populations escalate, but under the right conditions nature will take its course and the population will crash.

When gypsy moth populations escalated in 2008, the New Jersey Department of Agriculture recommended aerial spraying of an insecticide, Dimilin, which is a chemically manufactured product that interferes with the outer-shell formation of all insects. If Dimilin found its way into a waterway, it could be highly toxic to juvenile life stages of aquatic crustaceans and many aquatic insects. The environmental community opposed spraying Dimilin due to these potential adverse impacts and was successful in stopping the spraying. The gypsy moth population crashed the following year.

New Jersey Department of Environmental Protection (DEP) is now proposing a better plan of attack on today’s pest, the southern pine beetle. The Department’s arsenal of techniques includes cutting infested trees and leaving them in place to disorient the pine beetle larvae, and cutting a small number of healthy trees around the infested areas to prevent further movement of the beetle. This is the “cut and leave” approach.

The DEP’s proposal is much more reasonable than the Dimilin proposal in 2008, but the DEP has not given full consideration to the use of prescribed burning as an additional technique to reduce the population. Scientists have suggested that in southern US pine forests, the interaction between the southern pine beetle and wildfires naturally maintains the structure and function of these forests. Suppression of wildfires has disrupted this natural dynamic and could be contributing to southern pine beetle outbreaks. While the cut and leave approach could help reduce the spread of the southern pine beetle, it will not help remove the hardwoods and reset the successional stage to a pine-dominated community – as fire would do.

A 2003 study in a pine forest in southwestern Virginia looked at pine regeneration under disturbance by southern pine beetles and ice storms. Ice storms physically damage trees and create large canopy openings much like mechanically cutting trees, and also do not mimic the beneficial effects of fire. This study found evidence that pines cannot regenerate in unburned areas affected by southern pine beetles and ice storms. In fact, without fire, these stressors severely reduced the abundance of pines relative to hardwoods. Fires of moderate severity, combined with ice storms and southern pine beetle infestation, created conditions favorable to pine reestablishment. This study concluded that whether ice storms and southern pine beetles harm or benefit pine forests is determined chiefly by whether fire is also included, and recommended prescribed burning of areas affected by southern pine beetle infestation.

The DEP recently received a $600,000 U.S. Forest Service grant to support pine beetle suppression efforts. The Department may use prescribed burns in areas impacted by beetle infestations in order to reduce the spread of beetles and, at the same time, reduce wildfire risks. According to the DEP’s website, “Often crowded, dense stands of trees become susceptible to southern pine beetle and other insects and diseases.” Considering that the Department has begun its cut and leave approach and recognizes that opening the forest canopy can support reducing the population, this money should be focused on prescribed burns.

The public can learn more about the southern pine beetle and the DEP’s plans to control the infestations at a meeting being held at the Pinelands Commission office on August 18, 2011. More information can be found at the Pinelands Commission website, www.state.nj.us/pinelands/. PPA will attend the August 18 meeting and will continue to push for holistic, ecological strategies that benefit the entire Pinelands ecosystem.

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