

# Massasoit

## National Wildlife Refuge

### *Burning to Protect Wildlife and People*

#### **Plymouth, a Legacy of Fire**

When you think about Plymouth do you think about fire? Since even before Chief Massasoit and other Wampanoag Indians sat down with colonists at the first Thanksgiving, fires started by lightning and people have shaped the 20,000-acre forest known as the Plymouth Pinelands – sometimes with deadly consequences.

- 1937: Wildfire in the Pine Hills area traps and kills 2 firefighters
- 1957: 15,000-acre fire jumps Route 3 in South Plymouth, destroying 6 cottages and causing 150 residents to evacuate
- 1964: Wildfire blazes from Myles Standish State Forest into Plymouth, burning 5,500 acres and 20 cottages
- 1971: 165-acre fire with 50-foot tall flames damages two fire engines and injures 7 firefighters
- 1991: Fire along Route 3 burns 1,200 acres destroying 2 cottages and a trailer
- 1995: 95-acre fire threatens more than 100 homes in the Bourne Road area causing residents to flee

#### **What's at Risk?**

Possibly your home. Trees in the Plymouth Pinelands include pitch pine, scrub oak, and huckleberry, which have needles and leaves with flammable oil. In fact, pitch pine has the nickname “gasoline pine tree”. In dry conditions, accumulations of needles, leaves, and fallen twigs can fuel ground fires. Ground fires can climb bushes and low branches, ignite volatile oils, and explosively spread fire to the tops of trees. These “crown fires” are especially dangerous because they throw sparks which can blow in the wind for long distances. For example, embers in the 1991 Plymouth wildfire blew up to 2,000 feet and quickly spread the fire. Many homes lost in wildfires are destroyed by burning embers landing on them.



©Tammy Serata Design

#### **Controlled Burns Help Reduce Risk of Wildfire**

Controlled burning is one way of removing forest brush so it will not fuel wildfires. These burns are done under carefully selected conditions and target fast burning leaves, pine needles, and underbrush. Tall pines are relatively untouched. Controlled burns significantly reduce the risk of unwanted wildfire and clear pathways for fire equipment, making surrounding communities safer. Other ways of reducing fire risk include mowing, grinding brush, and pruning trees.

#### **What about Wildlife?**

Controlled burns not only protect human communities, they also help wildlife. For thousands of years many plants and animals in the Plymouth Pinelands have lived with fire and other disturbances. The 1957 wildfire burned through what is now Massasoit National Wildlife Refuge. Trees and shrubs there are well-suited to live in fire prone areas. Pitch pines have thick bark that is resistant to fire and cones of this tree need heat to open. Pitch pine needles, scrub oaks, and huckleberries all sprout back after fire. Because we put out wildfires to protect

people and homes, we must now mimic benefits of wildfire. Controlled burning is the best way of doing that.

#### **Will the Endangered Turtle be Safe?**

Massasoit National Wildlife Refuge is home to Northern red-bellied cooters, an endangered turtle. These turtles live in refuge ponds and nest along pond edges. We expect controlled burns to benefit the turtles because fire helps maintain Plymouth Pineland habitat. Although most animals in the area have ways to survive fires, we take extra precautions to avoid harming the turtles. We schedule burns when they are in ponds and avoid burning during the June-July nesting season. We also burn a safe distance from ponds.



USFWS

*Northern red-bellied cooter*

## We're Doing our Part to Protect You

The U.S. Fish and Wildlife Service works with The Nature Conservancy, the State of Massachusetts, and the Town of Plymouth to reduce the risk of fire to communities in Plymouth. In 2000 Miles Standish State Forest began a controlled burn program and in 2007 we began ours. By burning vegetation that acts as fuel, we both reduce the chance of a fire taking hold and help maintain this unique natural area.

We take several precautions to make sure controlled burns do not escape and smoke keeps away from homes. These include mowing and clearing firebreaks and positioning fire engines near homes when we burn. We light fires only when winds blow smoke away from communities. We also make sure roads are safe by posting signs to warn you about potential smoke or firefighter activity. During a burn we monitor the weather, smoke, and traffic to keep conditions safe.

## What are You Doing to Protect Yourself?

Improving firefighter access helps firefighters get a jump on any wildfires that start, but if a wildfire starts in the wrong conditions, it can burn hot and fast before it is controlled. You can actually increase the chances of your home surviving a wildfire by taking simple steps. Visit [www.firewise.org](http://www.firewise.org) or talk to your local fire department for more information.

- **Create a defensible space**—remove dry grass, brush, dead leaves, and pine needles. Remove highly flammable plants and replace them with high moisture ones that don't burn easily. Keep woodpiles away from buildings. Keep trees pruned.
- **Make your roof, walls and windows fire-resistant**—if you have wood shingles, treat them with fire retardant or replace them with non-combustible materials such as asphalt shingles, tile, slate, metal, brick or stone. Replace plate glass with tempered glass.
- **Install screens on chimneys, vents, eaves and gutters**—flying sparks can enter through any opening. Keep gutters free of leaves, pine needles and debris.
- **Check all additional structures**—wooden decks, fences, and trellises can act as fuses, leading fire to your house. Clean leaves and debris from under patios. Don't attach wooden fences to your house.
- **Be accessible**—make sure your driveway is well marked and wide enough for fire trucks to enter.



©Tammy Serata Design

## Plymouth, a Community at Risk

In 2000, many wildfires burned due to a volatile combination of drought and accumulations of plant material built up from years of putting out wildfires. In response, in 2001 the federal government made a list of communities that are at high risk from wildfire on federal lands. The Town of Plymouth was on that list.

**Eastern Massachusetts  
National Wildlife Refuge Complex**  
73 Weir Hill Road  
Sudbury, Massachusetts 01776  
978/443 4661  
978/443 2898 Fax  
r5rw\_emnwr@fws.gov  
[www.fws.gov/northeast/  
easternmanwrcomplex](http://www.fws.gov/northeast/easternmanwrcomplex)

[www.fws.gov/northeast/refuges/fire](http://www.fws.gov/northeast/refuges/fire)

**Federal Relay Service  
for the deaf and hard-of-hearing**  
1 800/877 8339

**U.S. Fish & Wildlife Service**  
1 800/344 WILD  
<http://www.fws.gov>

March 2010



## Massasoit National Wildlife Refuge

Massasoit National Wildlife Refuge is one of more than 550 refuges of the U.S. Fish and Wildlife Service. It is 209 acres and was established in 1983 to protect the Northern red-bellied cooter.



©Tammy Serata Design