



# Pine Grove Preserve Management Plan

Revised 11-05-20 by the Land Management and Acquisitions Committee

Location and Size. The Preserve contains 29 acres and is located between Route 1 to the west and Route 88 (Foreside Road) to the east. It is bordered by Colonial Village Condominiums to the south and commercial/residential development to the north. The Pine Grove Preserve borders the Pine Grove School property on two sides.

History. The Pine Grove Preserve was gifted to the town in 1924 by George and Gertrude Houston Woodward to honor two Falmouth summer residents who died in World War I. Henry Howard Houston Woodward enlisted in the French Army's Lafayette Flying Corps, and Henry Howard Houston in the 53rd Field Artillery, 28<sup>th</sup> Division. Both men died in combat shortly thereafter. Pine Grove Preserve is conserved as a memorial to their service.

Deed and Easement Restrictions. The Preserve was deeded to the town with a restriction of keeping the park as a white pine forest for as long as practical. It is also restricted from any mining activity. The actual language follows. The reference to preserving the "Pine Woods...as long as practical" adds a challenge to the management of the forest.

This conveyance is made on the express conditions that said Grantee shall preserve forever as a Park the Lot hereby conveyed; and shall maintain and preserve the Pine Woods on said Lot as long as practical; and shall allow removal of no gravel from said Lot, and on default of any or all said conditions by said Grantee, its

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Ecology. The property is entirely wooded, with an overstory of white pine and an understory of mostly red oak and young white pine. The mature white pines are aging and subject to wind throw in severe storms, which may pose a safety hazard to trail users. There are numerous trees lying on the Preserve floor as a result of past storms and tree mortality.

The most common understory plants are red oak, red maple, and Norway maple, the latter of which is invasive. Other invasive plants are also found there, including smooth buckthorn, Asian bittersweet and Japanese knotweed.

The town has contracted with an arborist and logger in the past to de-limb and/or fell trees that pose the greatest safety hazard or block official trails. No attempt has been made to remove the many downed trees.

The preserve is home to common small mammals such as red and gray squirrels, and Eastern chipmunk. The Preserve is too small to support much wildlife, although the usual suburban species likely make a home there.

## Infrastructure

Memorials. A monument to the two WW1 soldiers can be found in the southeast end of the property on Foreside Road. A monument in memory of World War II soldiers is located near the Pine Grove School.

Trails. A number of marked trails of approximately 1.5 miles are located on the property and blazed for identification. Additionally, a number of unofficial trails have been added over the years by users, including a connector trail to Colonial Village and a link to Foreside Road directly across from Waite's Landing Road. The trails on the property are mostly used by area residents, often walking their dogs.

Parking. Vehicular access is via a natural surface undefined parking in the middle of the property frontage off Route 88. An ADA accessible parking space at the Pine Grove School has recently been added in 2020 in cooperation with the PGS property owners.

Educational markers. An interpretive nature trail once existed on the property with some of the numbered markers still in place. A copy of the accompanying narrative has been uncovered and should be updated and republished.

#### Conservation and Recreation Values /Visitor Experience

1. Natural aesthetics located only a few miles from downtown Portland and within one of Falmouth's more dense neighborhoods.
2. Provides children at the Pine Grove School and the public an experience to learn about native plant species and ecology in a mature forest.
3. Offers the visitor an opportunity to get outdoors close to home, to exercise, to walk their dog, bird watch, or to otherwise take time out of their day to experience nature.

Relationship to the 2018 Open Space Plan Goals and Strategies – The following statements are intended to address applicable goals and strategies from the plan.

1. Status of inventory of infrastructure, key features and trails – The trail system has been located using GPS but needs to be updated to locate all trails currently existing. This will assist in the evaluation and management of the trails and related infrastructure. Currently there is one bench.
2. User description - This property primarily serves the immediate neighborhood for walking and dog walking.
3. Identify what resources and user impacts should be monitored. – Invasives should continue to be monitored and eradicated. The addition of non-sanctioned trails and specifically trails and structures for biking should be closely monitored and discouraged. Some litter accumulates in the parking area.
4. Regional implications for connectivity, both trails and wildlife habitat corridors, regional open space network - Neighborhood links include a connection to the Route 1 crosswalk which provides a link to Tidewater Farm via an unmaintained social trail just south of Clearwater Drive. This link also provides opportunity to connect to Tidewater Farm via Route 1 and Clearwater Drive.
5. Feasibility for enhanced accessibility. – Currently being pursued through the establishment of an ADA parking space at the Pine Grove School parking lot. In addition, trails should be evaluated for enhanced accessibility.
6. Meets accessibility goals for growth or rural areas – the Preserve meets the ¼ mile or 5-minute walk standard in the growth area.
7. Connection to 2016 Bike/Ped Plan goals – Goal 39 of the Bike/Ped Plan describes a proposed sidewalk the length of Foreside Road. This would provide increased safe pedestrian access to the Preserve.
8. Need for any special management resources or funding – Invasive plant management and managing blowdowns will require extra funding in the coming years.
9. Opportunity for partnerships with other organizations. – Ideally, a partnership would be formed with a neighborhood organization such as the Pine Grove School, Colonial

Village Homeowners Association or St. Mary's church to become stewards of the property

10. Outreach methods and special communication strategies, including neighborhoods. See above
11. Opportunity for education – management goals call for the reinvention of the interpretive trail that was developed years ago. The site currently provides educational resources for the Pine Grove School.

### Management Goals & Activities

**Goal 1: Enhance the recreational value of the property and public access to it.** Clearly define the parking area and harden its surface to prevent soil disturbance. The area should include space for 3-4 cars.

1. Erect a small information kiosk with a trail map near the parking area.
2. Place a property identification sign, similar in design to signs used at other conservation properties, at the parking area on Route 88, at the ADA parking space on Route 88 and the pedestrian entrance off Route 1.
3. Establish trail names for all official trails and install the trail name signs. Add appropriate warning signs where trails meet road crossings.
4. Upgrade the yellow blazed interior loop trail to provide enhanced access for individuals with limited mobility. Provide ADA parking in the school parking lot in cooperation with the Pine Grove School.

**Goal 2: Manage the property to promote understanding of the natural processes at work in the Preserve and protect public safety.**

1. Conduct a botanical inventory of the property to identify the various species of plants growing there and include in the interpretive trail design as appropriate.
2. Utilize town forester to evaluate the current forest and make recommendations for improving health for preservation of the pine grove and wildlife habitat.
3. Continue to contract for hazardous tree removal as needed.
4. Survey the easterly boundary and mark all the property's boundaries.
5. Place signs along trail or in trail head area to educate on local Wabanaki history.
6. Recreate the former nature trail on the property in cooperation with the school. Update and republish the interpretive trail brochure.
7. Include monitoring and removal of invasive plant species in the town's Invasive Terrestrial Plant Management and Control Plan.
8. Update the memorial areas with new native species landscaping that is low maintenance and cultivate volunteer support for ongoing maintenance.

**Goal 3 – Enhance the relationship between the Preserve and the neighborhood.**

Communicate with local organizations such as the Pine Grove School, St. Mary's, Portland Country Club to build appreciation and stewardship of the Preserve.

Pine Grove Preserve  
Nature Walk

1. As you stand on the slope facing the pine grove, notice the sun on your face and the ground beneath you feet. Snoop down and pick up a handful of earth. Is it more like clay, garden soil or sand? Sun and sandy soil are the two basic ingredients that enable a pine seedling to thrive. In the pine grove are three species of pine common to Maine, The Pine Tree State. White pine's tall, straight trunk was prized by English colonists as masts for the King's Royal Navy, and is still valued as lumber for construction and cabinetry. Pitch pine was used for turpentine and tar, and fueled the wood-burning locomotives and steamboats of the 1800s. As you walk through the pine grove, use the following clues to identify the 3 species of pine present here.



White pine: 5  
needles per cluster  
(W-H-I-T-E), long  
cones



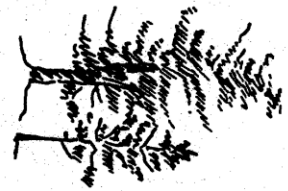
Red pine: 2 needles  
per cluster,  
rounded cones,  
reddish bark



Pitch pine: 3  
needles per  
cluster (3 strikes-  
you're out!),  
round cones with  
spikes

2. This pine is a snag or standing dead tree, used as a nesting, feeding and perching site by many birds. It also serves as a den tree for raccoons and squirrels. Notice the beautiful designs etched into the trunk where the bark has fallen off. These are made by engraver bark beetles, which in turn are eaten by woodpeckers. As you step from the open slope into the pine grove, notice how the air changes. In summer, the grove should feel moister and cooler. One tree can transpire 200 gallons of water into the atmosphere a day! In winter, you may feel warmer, as the dense stand of trees protects you from the windy air of the exposed slope.

3. How many dead or dying trees can you count in this area? A pine can live to be 200 years old, though eventually weakened by infestations of insects and fungi. As erosion exposes its root system, a tree falls prey to high winds or other falling trees. Once a tree falls, sunlight filters in, and saplings thrive in the understory. The fallen tree will eventually rot, but not before providing shelter for woodland animals such as skunks, chipmunks, salamanders and snakes. Turn over a decaying log to explore what lives underneath.



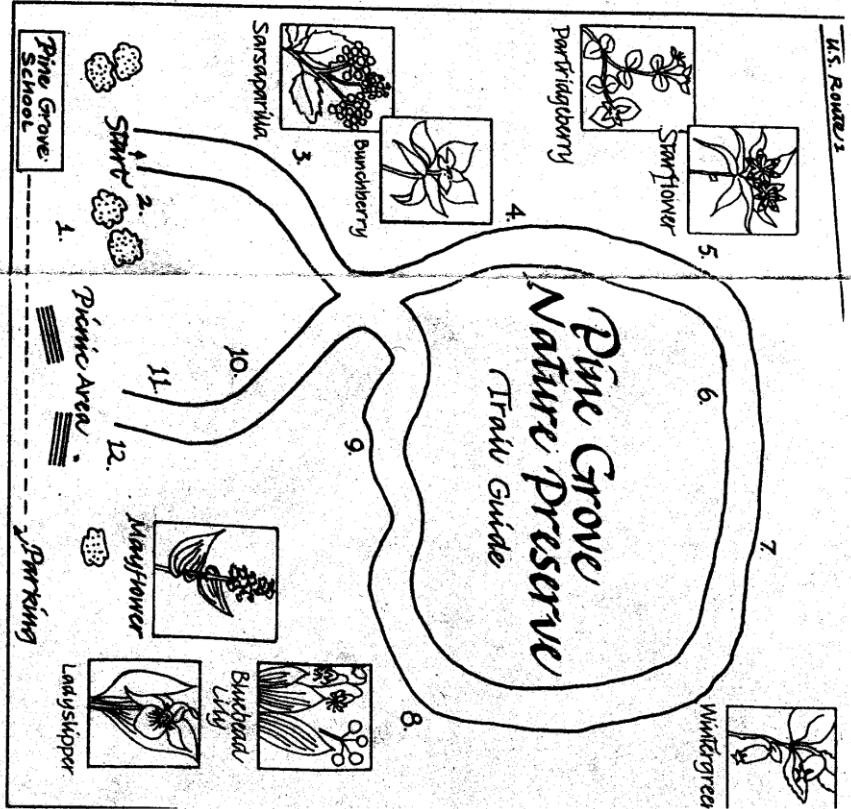
4. A pine tree adds a new circle or whorl of branches each year of its life. How old is this tree? Large spaces between the whorls indicate a healthy year. Small spaces are evidence of a poor year, possibly due to overcrowding or severe weather. Can you read this tree's history?

5. In the hollow ravine you may see a dark, low shadow soaring between the trees. This is a favorite haunt of the great horned owl that lives in the pine grove.



The owl feeds on birds and rodents, and though it is nocturnal (active at night), it may answer if you softly imitate its call (hoo, hoo-oo, hoo, hoo). Crows cawing and flying in a frenzy are another clue to the owl's location. They love to harass it during the day, chasing it off its perch.

6. This large tree, known as a wolf tree, provides another glimpse into the history of the land. Its short trunk and spreading limbs are evidence that it matured in open pasture or along a stone wall. Trees that mature within a forest are typically tall and straight. Can you imagine how the land might have looked 200 years ago?



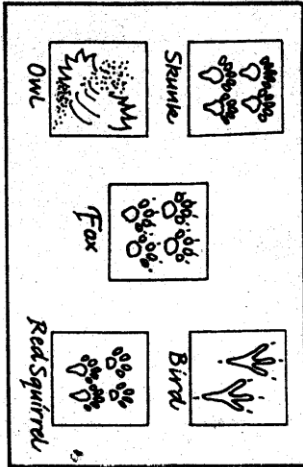
7. As you walk along the trail you may find small areas where the surface of the soil has been disturbed by a skunk digging for grubs and beetles or a grey squirrel looking for last year's acorns. Can you find a stump or log that was a dining table for a squirrel? Cone cobs or scales are a sure sign that a red squirrel was feeding recently.

8. These low-lying shrubs of juniper are evidence that this land may have been pasture at one time. Abandoned fields and other disturbed sites are perfect nurseries for sun-loving pines. Several years from now, the landscape may change once again. Look for oak saplings invading the understory. More shade tolerant than the pine, these hardwoods eventually prevail over it on sandy soils.

9. Pines are conifers (cone-bearing) or evergreens, keeping their foliage throughout the year. Needles are shed and replaced every few years. Search the ground for some of this year's needles. Last year's? As you dig deeper, you will find that the needles have gradually decayed, releasing their nutrients back into the earth. Worms, bacteria, sowbugs, and other decomposers help leaf litter break down into soil.

10. In the undergrowth are small evergreen plants called club mosses. Club mosses were among the first vascular plants, evolving over 300 million years ago. During the Paleozoic era, they grew to be 100 feet tall! Like ferns, they reproduce by spores rather than seeds. Ground cedar, strung together by runners under the soil have traditionally been used for Christmas decorations. It takes each small plant 17 years to develop from spore to maturity, and 7 years to reproduce by runner.

11. Now that you are back on the open slope, you may see small animal tracks. The edge between any two communities is always active with wildlife. In this case, the cover and food sources provided by the pine grove mix with the sun and visibility of the open slope, providing a travel corridor for animals moving between the different communities. The following key will help you identify tracks you may encounter:



12. In the understory are many plants typical of sterile, acid soil. These barren conditions have much in common with Maine's mountains and bogs, and plants such as lowbush blueberry can be found in all 3 communities. The key inside should help you to identify some common woodland plants.

## Pine Grove Child Development Center is proud to offer this NATURE TRAIL GUIDE for the enjoyment of all.

The Pine Grove Preserve was given to the town of Falmouth by George Woodward in 1924 with the understanding that its 29 acres would be preserved forever as a park, and maintained as a pine forest. These requests were handed down by deed from the previous owner, Willis Moulton, at the turn of the century. The Moulton family acquired many parcels in Portland and Falmouth, including the Maine Audubon Society's Gislard Farm. At this time, Falmouth was a bustling farm community with around 1000 residents who lived to usher in the era of the automobile and electricity.

*In honor of the memory and wishes of Willis Moulton and George Woodward we ask that you remain on the trails, keep dogs leashed, remove any trash, and leave plants and animals in their natural environment for others to enjoy.*



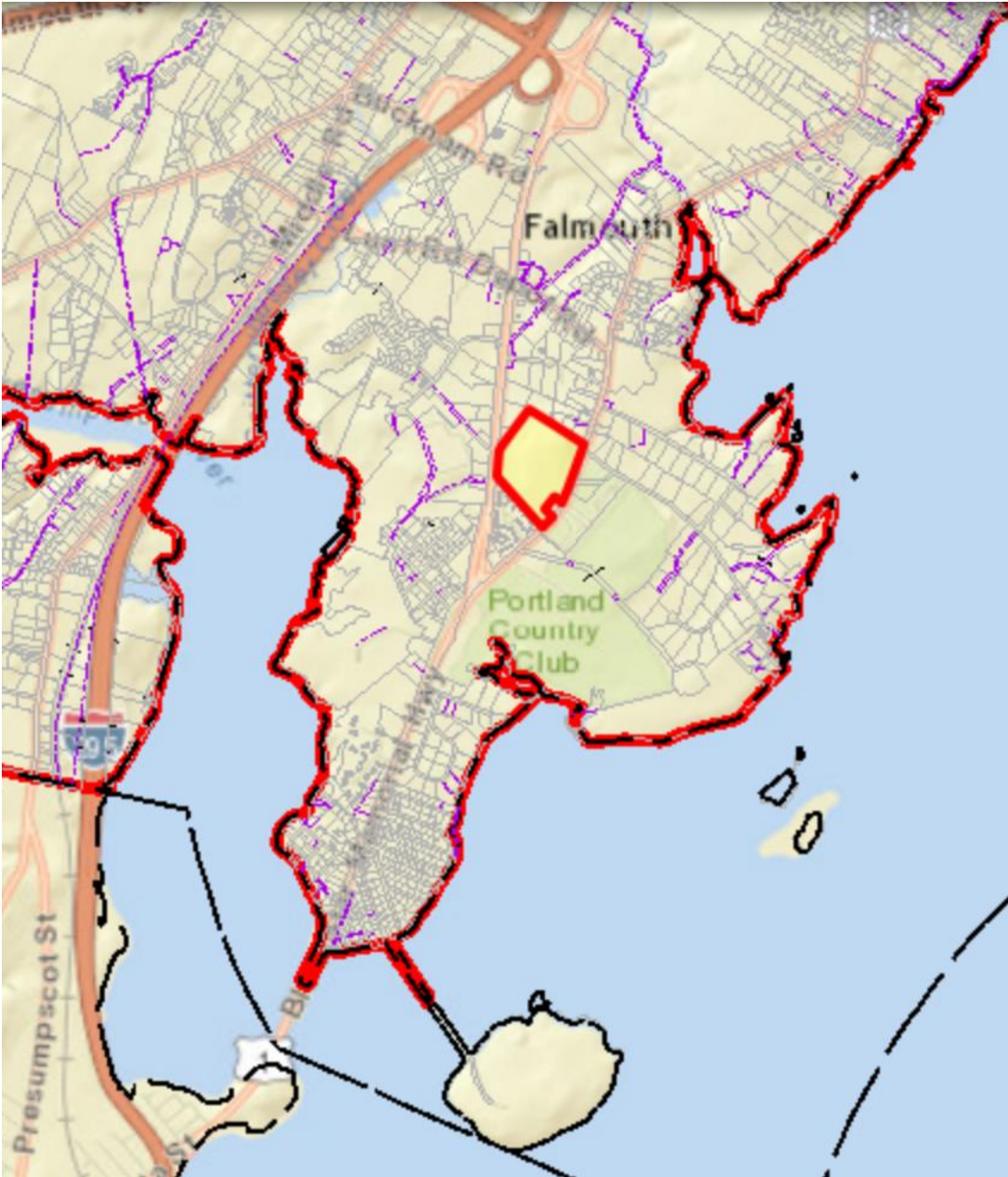
Pine Grove Center is a private preschool, nursery school and kindergarten. Our Montessori philosophy centers on cultivating the child's own natural desire to learn. Environmental education is an integral part of our program throughout the year. Our summer program, "A Sense of Wonder," also reflects our continued respect for all living things.



Welcome  
to the  
Pine Grove  
Nature  
Preserve



Map 1: Pine Grove Preserve Location



Map II: Pine Grove Preserve Trails (Revised)

