

Case Study 1

The Lees

Property description and why we bought the land

We (my husband, Philip, age 55, and me, Gloria, age 57) bought our 1.5-acre lot 25 years ago as the site for our new home. We wanted to build a passive solar house, so the site had to have good sun exposure. We wanted to buy a lot large enough to have a canning garden, a small orchard, and a Christmas tree plantation yielding about 20 trees a year, and to be separate from our neighbors.

The lot we bought was just about perfect. It's long and relatively narrow, about 480 feet long and 130 feet deep. A wooded fencerow runs behind the house. Behind that on the north side, along the edge of our property, there's a narrow right-of-way that the local electric company keeps open. This provides a path through the thicket that has developed behind the house. We often see deer, turkeys, and rabbits along this pathway. On the west side there's a patch of mixed deciduous trees with some conifers in the back corner and lawn in the front corner. In the back corner on the eastern side we planted Christmas trees soon after we moved in. A stream, Trout Run, lies over the hill about 250 yards to the north on our neighbors' property. It isn't very wide, but it has some small pools—somewhere for animals to drink even in the driest years.

Changes over time

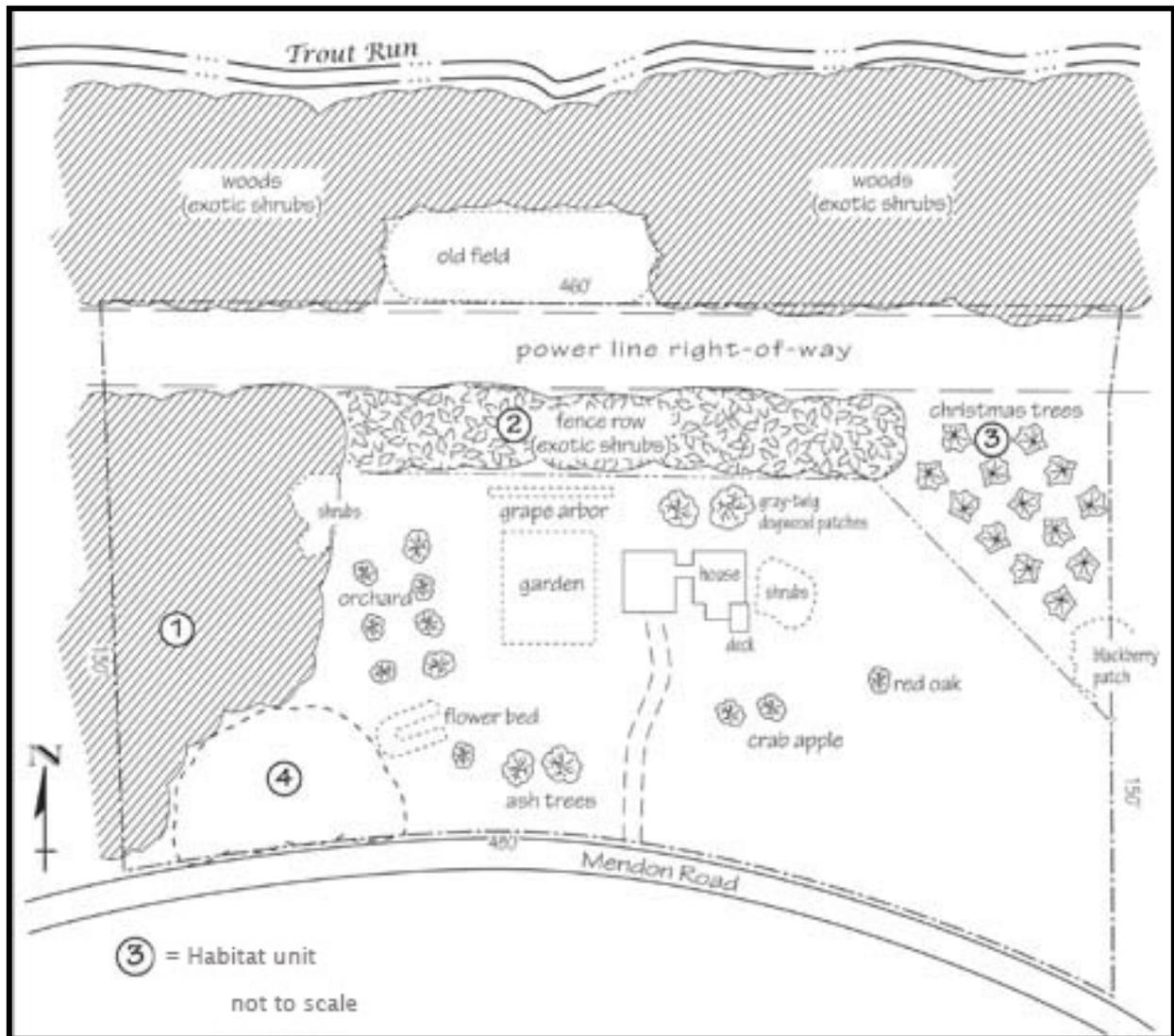
Now, nearly 25 years after buying the lot, things have changed. We didn't really manage it, so the Christmas tree plantation (Douglas firs) no longer provides any trees. Some of these trees are now pushing 30 feet in height. The wooded patch on the west side of the property has a mix of European alder, Scotch pine, eastern white pine, American elm, basswood, black walnut, and a couple of red oak trees. The tallest trees are probably 40 feet tall. The fencerow behind the house is widening. It now extends about 25 feet in places into our property. The fencerow has some trees, mostly ash, black cherry, black walnut, elm, and basswood, but much of the greenery is bush honeysuckle and autumn olive—exotic, invasive plants.

Where to go from here

We'd like to convert the lawn area on the west side to trees for more privacy. We'd also like to keep all the native trees throughout the woods on the west side and encourage even more trees. We don't like the fact that the fencerow is full of exotic plants, because they are really pushy. Every year, they take over more of the lot and make it hard to see into the edges. We never planted these species; they just showed up on their own. We'd like to open a patch in the Christmas trees, creating a natural haven or quiet place to sit. Deer and birds use this small patch of trees—it is a special place on the property.

The Lees' statement of interests

1. Remove exotic plants as much as possible; keep native wildlife food plants (walnuts, oaks, some grapes).
2. Plant lawn on west side in trees for more privacy.
3. Develop a natural haven in the Douglas fir area.



Land Characteristics and Potential

(a combination of Tables A, B, and C)

Habitat unit	Vegetation type	Three most common tree species	Three most common shrub species	Succession stage	Thinning recommended? (yes or no)	Young trees present? (yes or no)
1	west woods—mixed hardwoods and a few conifers	European alder, Scotch pine, American elm	sumac	3	no	yes
2	north fencerow	ash, black cherry, walnut	bush honeysuckle, autumn olive, mile-a-minute vine	2–3	no	yes, mostly invasive and exotic species
3	Christmas tree planting	Douglas fir	grapevine black-berry, sumac	3	no	no
4	west lawn	n/a	n/a	1	n/a	no

Land Characteristics and Potential

(continued)

Broken or dead? (yes or no)	Exotics/ invasives (list names)	Water resource	Wildlife and habitat elements	Recreation	Aesthetics
yes	garlic mustard, English ivy	n/a	Soft mast; winter cover	Deer trails present, but no maintained trails for wildlife viewing or access.	Green foliage of pines all winter provides color in winter landscape.
no	bush honey- suckle, autumn olive, multi- flora rose	n/a; Trout Run downhill on neighbor's land; close enough to expect occasional wildlife moving to and from the stream.	Soft mast from brambles and shrubs, dense thicket for shelter, soft edge.	Good wildlife viewing opportunities but no maintained trail access.	Invasive species and other vegetation smothering trees and making it hard for tree crowns to develop for fall foliage color.
Yes, some fir trees are dying or dead.	grapevine	n/a	Dense winter cover, soft mast, a few dense thickets.	Some existing deer trails could be developed as walking trails.	Secluded location provides for solitude.
4	lawn grass	n/a	none	Lawn games	Plant in trees for privacy.

Identify and Rank Your Objectives

	Potential objective	Rank selected objectives
<i>Natural area improvement</i>		
I have a grassy field or lawn I want to plant in trees.	X	2
I want to manage exotic and/or invasive species.	X	1
I want to improve the health of my natural area.	X	4
I want to improve forest regeneration (tree reproduction).		
I want my trees to grow faster.		
I want to cut dangerous dead or damaged trees.		
I want to cut vines that are strangling and/or weighing down my trees.		
Other:		
<i>Forest products</i>	X	
I want to cut firewood for myself or others.		
I want to start a forest products enterprise for fun and a little extra money.		
Specific enterprise of interest:		
Other:		
<i>Wildlife habitat elements</i>		
I want to create some snags for woodpeckers and other cavity-nesting animals.		
I want to create a soft edge between my lawn and forest to improve wildlife habitat diversity.		
I want to provide more shelter and/or food for wildlife.	X	5
I want to have more reptiles and amphibians.		
I want to discourage deer.		
I want to attract more wildlife to my property.	X	
Other: I want to attract more hummingbirds and butterflies.	X	
<i>Water resources</i>		
I want to create or enhance a riparian forest buffer.		
I want to protect the water quality in my waterway or spring/seeep.		
Other:		
<i>Recreation</i>		
I want to build a recreational trail.		
I want to build a road to provide or improve vehicle access.		
I want to create a special place in the woods for reflection, campfires, etc.	X	3

Identify and Rank Your Objectives (Continued)

	Potential objective	Rank selected objectives
I want to create a place for nature study.		
I want to build a tree stand for deer hunting and/or wildlife viewing.		
Other:		
<i>Aesthetics</i>		
I want to make my forest more colorful throughout the year.		
I want to block an unpleasant view or have more privacy.	X	
I want to create a scenic view.		
I want to protect some special trees.		
Other:		

Project Schedule and Details

Habitat unit	Goal(s)	Project description (Provide details and step-by-step activities)	Priority	Project start date	Projected completion date	Who will do it?	Cost estimate
4-west lawn	plant to trees	Use Roundup herbicide on the grass in the fall before planting in the spring. Use some conifers for winter privacy. Use mainly shade-intolerant trees, including eastern white pine, yellow poplar, black locust, red oak, black cherry, gray dogwood, and loblolly pine. Order bare root seedlings from state nursery in late fall. Plant on a 10' x 10' spacing in this $\frac{1}{4}$ -acre area (~75 trees). Install a tree shelter and a wooden stake around each hardwood seedling to protect it from deer browsing. Conifers typically do not need shelters because deer tend not to eat them. If necessary, use wire mesh to protect them. Respray the grass between the hardwood rows with herbicide in the summer after planting if needed. Mow around conifers instead of using herbicide. If desired for a neater appearance, mow between rows until canopy closes.	1	This fall	End of next spring	Phillip and Gloria with help from their child Robin.	\$100 for plants at ~\$1.35 per plant; \$30 for Roundup herbicide and backpack sprayer. \$250 for tree shelters and stakes at \$4-5 each (50 shelters; ~25 conifers)
through- out the property	manage exotic species	The various exotic plants are competing with native species. Herbicide invasive species on ground using Roundup in a backpack sprayer in early spring, late summer, and fall. Cut most grapevines. Start in the north fencerow, then west woods, then Christmas tree grove. Clear trail as necessary to access invasives and to provide access to property.	2	This spring	Continuous in growing season	Phillip, Gloria, and Robin	Estimated \$35 per year for herbicides and \$50 for saw maintenance
3-Christmas tree grove	create a natural haven	Create an opening by removing dead or dying trees. Install a bench and plant some flowering trees and shrubs. If time allows, create openings for a campfire circle or camping area.	3	Next spring	End of next spring	Phillip and Robin will create the opening and Gloria will do the planting.	\$100 for bench materials; \$100 for trees and shrubs
1-west woods	white pine planting	As exotics are cut, replace them with white pine.	4	This spring	Continuous	Gloria	\$50 for seedlings