

Rauscher Farm Management Recommendations

By Jeffrey Collins

Director of Mass Audubon Ecological Extension Service

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I visited Rauscher Farm on August 5th, 2010 with Gloria Parkinson and Deb Grant of the Rauscher Farm Management Subcommittee, a subcommittee of the Clinton Conservation Commission. We met at the parking lot, then walked generally clockwise around the farm, visiting all of the major cover types. The purpose of this report is to summarize my observations from our visit and to provide general thoughts on management of the property to maximize wildlife habitat value while accommodating and encouraging public use and enjoyment of the farm.

Gloria, Deb, and I met at the public parking lot near the small silo and walked in a generally clockwise direction around the farm, visiting the edge of Clamshell Pond, the forested areas in the southwest corner of the farm, the meadows in the northwest, and the large fields on the east side of the farm. Following our exploration, we were joined by David Notaro and discussed the general outlines of the management recommendations detailed below.

Rauscher Farm is a 58-acre town-owned conservation property in southern Clinton, Massachusetts. Until its acquisition by the town in 2008, the land was actively farmed and had been farmed since at least the early 1700s. The property today exhibits a diverse mosaic of cover types with a rich topography offering casual visitors and dedicated naturalists alike the opportunity to explore a variety of habitat types. The recommendations below focus on management of uncommon habitat types and maintenance of a trail network. All work should be done in consultation with the Clinton Conservation Commission to ensure that wetlands are protected.

Management Areas

Based on our visit and analysis of 2009 aerial photographs, I divided the property into management areas.

Southwest Forest – This 20-acre mixed hardwood forest is the largest forested area on the farm and is adjacent to extensive mature forest on DCR land to the southwest. The canopy is dominated by mature white pines on the east side with oaks more common to the west. Black birch is very common in the understory and the shrub layer is relatively free of invasive species. The shrub layer is sparse under a

closed canopy, giving the mature areas of this forested stand a feeling of openness as the visitor explores the interesting topography.

Roughly 3 acres in the west half of this forested area are characterized by younger trees and other vegetation that suggest restoration from formerly open fields. A small (0.5 acre), dense stand of younger white pines is found in the western-most corner. White pines are among our pioneer species, those that tend to establish in open conditions; and they can be roughly aged by the number of branch whorls found along the main stem. The pines in this small stand appear to cluster around 25-30 years in age, suggesting that there was a small meadow here that was abandoned in the mid-1980s. Another, slightly larger (2.3 acre), section of this forest is characterized by thicket-like shrub layer growing under a mix of pioneer species (birches, cherries, and aspens) along with oaks and white pines. The shrub layer here does include invasives such as oriental bittersweet, multiflora rose, and Japanese barberry.

Management in this area should focus on invasive species management and enhancement of the visitor experience.

- 1) Volunteers should get to know the most common invasive species and make an effort to map their presence and develop a control plan. At their very least, the extent of the old field areas mentioned above should be determined and mapped and invasives should be kept from spreading beyond these bounds into the otherwise intact forest.
- 2) As discussed in this report's section on trails, at least one additional trail should be established in this area to bring visitors to the most attractive locations.

Northwest Meadows – This mosaic of open meadows and early successional old fields, interspersed with and bordered by larger trees, is a fine example of an early-successional mosaic. Succession is the ecological process through which disturbed sites progress to a 'climax' natural community. In New England, this is usually forest. Meadows, once the disturbance of grazing or mowing is removed, will succeed through stages characterized by shrubby growth and the proliferation of small trees before beginning to resemble a young forest. These early successional stages, also known as old field or scrub-shrub habitat, are important breeding and post-breeding habitat for birds as well as habitat for plants and invertebrates that require the combination of sun and shade, openness and cover provided by the patchy mix.

A grassland or meadow left alone will succeed to the old field stage, but an old field left alone will progress to a young forest and this important habitat type will be lost. For this reason, old fields need to be managed so that they are maintained. The primary management steps in this area will be defining and maintaining a series of trails and managing vegetation so that the old fields do not grow up completely into a young forest. Specifically:

- 1) Establish trails as detailed further in the trails section. Old farm roads provide the beginnings of a set of trails for exploring this area, and the combination of open views and turns into stands of dense vegetation provide an appealing balance of openness and mystery.
- 2) Periodically mow fields and push back shrubby edges so that the meadows are not taken over by shrubs and trees. The fields could be mowed as infrequently as every two or three years, ideally well into the Fall, allowing pollinators to make use of flowering plants. These meadows are not

large enough to provide nesting habitat for the most uncommon grassland birds, so they should be managed as rough meadows instead of pure grasslands.

- 3) Monitor and manage invasives, especially at the edges of the open meadows and the woody 'islands' amongst the meadows. If these shrubs are not kept at bay, the meadows will grow in completely and become much less welcoming places to walk.

Eastern Forest – This 4.8-acre patch of forest is mostly on wet soils. Water draining from the grasslands and from the hillside directly to the south gather in series of springs and shallow depressions, eventually organizing into a narrow intermittent stream that drains to the east. The wet ground limits access to this area from the grasslands, so there is little likelihood of developing trails in this area. Specific management recommendations include:

- 1) Become familiar with and periodically monitor boundaries.
- 2) Perform Spring surveys for vernal pools, listening for frog calls.
- 3) Monitor eastern boundary where an old trail crosses the boundary for unwanted ATV access.

Northeast Forest – This 4.1-acre area is a combination of forest and wetland tucked between the large hayfield and the abandoned railroad bed. Water is channelized into intermittent streams that become seasonal sloughs, possibly providing vernal pool habitat. A ~1 acre wet meadow directly abutting the grassland is a nice addition to the overall diversity of the farm. There are no immediate management needs in this area, although potential vernal pools should be investigated and certified if possible.

Eastern Grassland – This 7.8 acre grassland clearly has the potential to provide habitat for grassland nesting birds. We observed a small flock of bobolinks on our visit that I suspect had fledged in this meadow. Bobolinks, together with Savannah sparrows, are the grassland-nesting birds that tend to make use of the smallest grasslands for nesting. Other species such as Eastern meadowlark are found in larger grasslands and would not be expected to breed here; although the grasslands are likely used during migration by American kestrels and perhaps an occasional Northern harrier.

Bobolinks tend to prefer a pure hayfield-like grassland rather than a rough meadow. In order to maintain this condition, this field will need to be mown annually; however, to allow the birds time to complete their breeding, the grassland should not be mown until mid-July at the earliest, preferably August 1st. Alternatively, volunteers could perform annual bird surveys to monitor for bobolink breeding behavior and the appearance of fledglings, which would trigger a go-ahead for mowing.

Hillside Pasture – This 2-acre old field is quickly succeeding from meadow to shrub habitat. Several invasive species are present. As in the Northwest Meadows, this cover type provides habitat for a wide range of plant and animal species; however, in this case, the better choice may be to restore this area to grassland, together with the Southeast Meadow, so that together with the Grasslands, they add up to

nearly 13 acres of contiguous grassland habitat. To pursue this approach the entire meadow should be mown with Brush Hog-type heavy mower and all woody vegetation should be removed from the stone walls found between these three fields. If the pasture is not wholly converted to meadow, at the very least invasive species should be controlled so they do not spread to the grassland.

Southeast Meadow – A 2.4-acre meadow that is generally open and grassy. This meadow is too small to provide breeding habitat for grassland specialist birds, but it does provide habitat for invertebrates and mammals. It should be managed as the large Grassland, and ideally connected to the large Grassland by clearing intervening woody vegetation as discussed above in the section on the Hillside Pasture. At the very least, the meadow requires on-going mowing, as late in the year as possible, to maintain it as open habitat.

Low Pasture – The 3.2 acres of former pasture directly below the old house provide habitat for nesting, migrating, and over-wintering birds as well as mammals and invertebrates. At least two dead or declining white ashes provide perching and cavity habitat, but they may be a hazard to visitors, and they act as incubators for invasive species. This area should be kept as open habitat. In the past, this was accomplished with grazing. Mowing this area will be difficult due to its rockiness and varying slopes. If at all possible, animals should be used again to keep this pasture in a relatively open condition.

Specific management recommendations include:

- 1) Research and pursue practices that will keep this pasture in an open condition. Horse, cattle, sheep, or goat grazing would be sufficient. If grazing is not a possibility, mowing should be considered.
- 2) Identify and remove invasive species. Multiflora rose and others have become common due to their low palatability to browsers. Left unattended, these invasives will expand into the pasture and seriously degrade habitat quality. Autumn olive is a common invasive in old pastures that can establish nearly pure stands if left unmanaged.
- 3) Consider felling and removing dead white ash trees at low point in pasture. If invasives at the base of these trees can be managed without removing the trees, the ashes could stay as habitat features.
- 4) If the other adjacent fields are managed together for grassland habitat, all woody vegetation on the walls between this pasture and the grassland should be removed to increase the area of contiguous grassy/meadow habitat.

Paddock – A 0.7-acre fenced paddock. Vegetation is currently short grasses. This area has only marginal habitat value and could continue to be used as a paddock.

Wet Meadow – This 1/7-acre meadow lies just west of the public parking area. Predominant vegetation is reed canary grass, a non-native forage grass commonly used in moist soils. The meadow does provide invertebrate habitat and is likely used by migrating and over-wintering birds for feeding. It should be managed as it has been in the past. Invasive plants should be monitored and controlled throughout, but especially on the border with the Southwest Forest.

Trails

There is an excellent existing set of farm roads, woods roads and footpaths that, with a little creativity and work, can be connected into a coherent trail network offering walks of various lengths for a wide range of visitors. Our general approach to design of a trail system is to offer visitors opportunities to visit a variety of community types on a clearly marked set of trails that range from short walks to longer rambles, all connecting directly to a central access point. Figure 3 illustrates the existing and proposed trails discussed below.

Public Access to Clamshell Pond – THE RFMSC wishes to develop a trail between the parking area and the pond edge that will be accessible to users of all abilities. Present access to Clamshell Pond from the parking area is along a mown path through the Wet Meadow. Two conditions limit the function of this trail for all users: 1) the center of the meadow becomes very wet in the Spring and Fall, and 2) the extreme southwest corner of the meadow climbs in a short but steep slope to a small rock outcrop before the ground drops again to the pond edge. The specifics of creating this trail will need further study, but the idea discussed on our visit, of re-rerouting the trail so that it hugs Clamshell Road for approximately 200 feet before turning southeast, is a good start. A boardwalk or low bridge will be necessary at this point to cross the lowest point of the swale that drains the meadow. Finally, we discussed two possible points of meeting the pond: a point closer to the Wet Meadow and a point a bit further from the meadow edge. The nearer point would seem to be easier to reach with a level trail, however the pond edge at this point appears to become a small mud flat in low water which is less attractive than the open water; and this location is quite close to a neighboring house, which reduces the feeling of having found a secluded hideaway. The pond edge only 50 feet to the west offers better views of the pond and more screening, yet would require more thought in navigating past the rock outcrop.

Path along Clamshell Pond – A narrow footpath currently winds through the forest along the northern edge of Clamshell Pond. The path affords several attractive views of the pond including a close view of the active beaver dam. The hillside which slopes toward the pond edge provides a visitor with a comfortable sense of enclosure when facing the pond.

The leading management concern along this trail will be directing foot traffic so that visitors stay on the trail and are discouraged from establishing informal paths to the pond shore. Undirected foot traffic will lead to trampled vegetation, exposed soil, erosion, and siltation into the pond. Recommended management steps include:

- 1) Review the current route of the path to make sure that increased use does not lead to erosion; consider re-routing the trail, installing steps or water-bars, or natural surfacing (e.g. woodchips) where appropriate and necessary. There does not currently appear to be any need for immediate changes, but stewards will need to monitor the path as visitation increases.
- 2) Review the path as it passes over the base of the rocky outcrop, where stones require careful stepping. There are no options for re-rerouting the trail here, so the solutions may lie in carefully arranging the stones currently found so that visitors are less likely to stumble on the rocks.
- 3) Establish viewing points where the trail widens a bit so that visitors can stand and take in the best views of the pond. These viewing points should be planned at points where visitors are less likely to continue on to the pond's edge – for example where low shrubs or a steep bank limits access between the trail and the pond shore – to discourage informal access to the shore. One of these viewing points should be at a good location for viewing the existing beaver lodge – close enough to glimpse their activities but not so close that visitors will disturb the beavers.

Trails in Northwest Forest – On our visit, we bush-whacked north from Clamshell Pond to the Northwest Meadows without finding an existing trail, however we subsequently found trails heading southwest from the meadows into the forest which most likely connect back to the pond along the farm's southwestern boundary. The existing trails lead from the Northwest Meadows all the way to the western farm boundary and then beyond: one trail leads onto DCR land and to the courthouse on Route 70; another trail leads uphill past the town water tower to Mulberry Drive. There is very likely a trail connecting to Clamshell Pond, but we did not map this area.

These trails are in very good condition and require little if any maintenance. They should be monitored for erosion and unwanted uses. The trail leading uphill to Mulberry Drive passes through a very attractive stand of mature hardwoods. As it leaves the Rauscher Farm property, it becomes quite steep. Working with the town water department or other land manager, this trail should be monitored for erosion. If a clear trail leading back to Clamshell Pond does not exist, it should be created. This would allow for a ~1/2 mile loop walk leading through all of the major habitat types on the farm.

We explored a very attractive section of this forest that is not accessible by any trails. This area could be accessed by a new trail leading from the edge of Clamshell Pond to the southernmost of the Northwest Meadows. The trail would lead along the north-south ridge running through the forest, past large trees and a sizeable erratic found at nearly the land's highest point. New trail building through forest is intensive work requiring careful planning, labor, and specialized skills. This would probably not be a near-term project, but may be considered for the next phase of public use planning.

Trails in the Northwest Meadows – There is a simple trail network in these meadows which connects the Southwest Forest trails to Clamshell Road and the parking area. These trails will need to be mown periodically to maintain them in usable condition. Since trails can easily be re-routed in a meadow, they should be mown to hug the meadow edge as much as possible, to keep the meadow habitat itself as

intact as possible. There is currently a very narrow shrubby passages between several of these fields. These constrictions should be lopped back to roughly ten feet wide.

Trails in the Pastures and Grasslands – The farm road leading to the large Grassland is in good condition and needs very little work, if any. The Grassland itself will require mowing to create and maintain trails. As with the Northwest Meadows, the trails should be located on the edge of the grassland, as much as possible, to avoid disturbing grassland bird breeding activity. Trails will also need to avoid the very wettest part of the Grasslands. One way to do this would be to avoid trail mowing in the eastern-most section of the Grassland, going only as far as the stand of trees at the low point. Trails mown to the east of these trees will need to be closed seasonally or will require boardwalks or bridges to cross the drainage swale. I would recommend avoiding trails in the eastern area as they will inevitably become muddy and any structures (e.g. a boardwalk) will require on-going maintenance.

Wildlife Encountered

We encountered a wide variety of birds on our visit. In order that they were recorded, species include: Red winged blackbird, American robin, Gray catbird, Common grackle, Northern mockingbird, Northern flicker, Northern cardinal, House wren, Cedar waxwing, Black-capped chickadee, Tufted titmouse, Blue jay, Warbling vireo, Ruby-throated hummingbird, Pileated woodpecker, Scarlet tanager, Eastern towhee, Barn swallow, Brown-headed cowbird, American goldfinch, Mourning dove, Common yellowthroat, Bobolink, Red tailed hawk, and Wood pewee. We found a small, dead Northern water snake near the parking area.

Conclusions

Given the current diversity of habitats and the existing trails, Rauscher Farm has excellent potential to be managed for both wildlife and passive recreation. The highest priorities for management should be:

- 1) Establishing an agreement so that the Grassland is mown annually, after July 15th at the earliest and preferably after August 1st.
- 2) Establishing a method for keeping the Pasture open, either through occasional grazing or mowing.
- 3) Establishing an agreement to have the Northwest Meadows mown and the shrubby edges knocked back so they do not take over the meadows.
- 4) Developing an invasive species management plan that focuses on limiting spread of invasives from known locations into otherwise un-invaded areas.

Secondary priorities include:

- 1) Finding or creating a trail that links Clamshell Pond to the Northwest Forest trails.
- 2) Mowing trails in the Northwest Meadows and the Grasslands.

- 3) Creating a brochure or map showing the trail network, and/or installing signage on the trails to direct visitors.

I very much enjoyed the opportunity to explore the property and I look forward to returning in the future.

Figure 1: Rauscher Farm & Adjacent Parcels

1 inch = 100 yards



Property lines sketched from 2009 Connorstone survey. 2009 aerial photo from MassGIS.

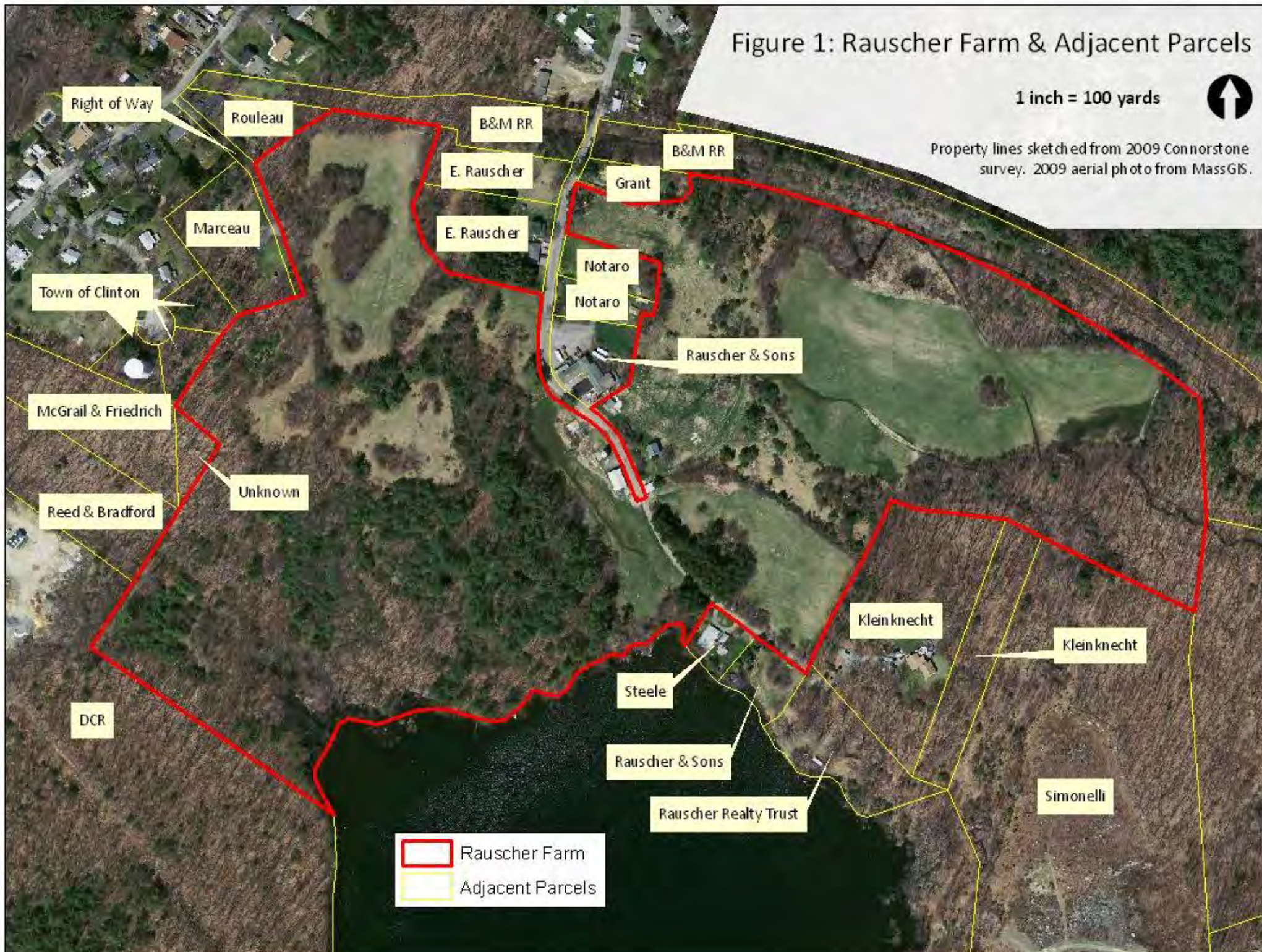


Figure 2: Rauscher Farm Management Units

1 inch = 100 yards



Property lines sketched from 2009 Connorstone survey. 2009 aerial photo from MassGIS.

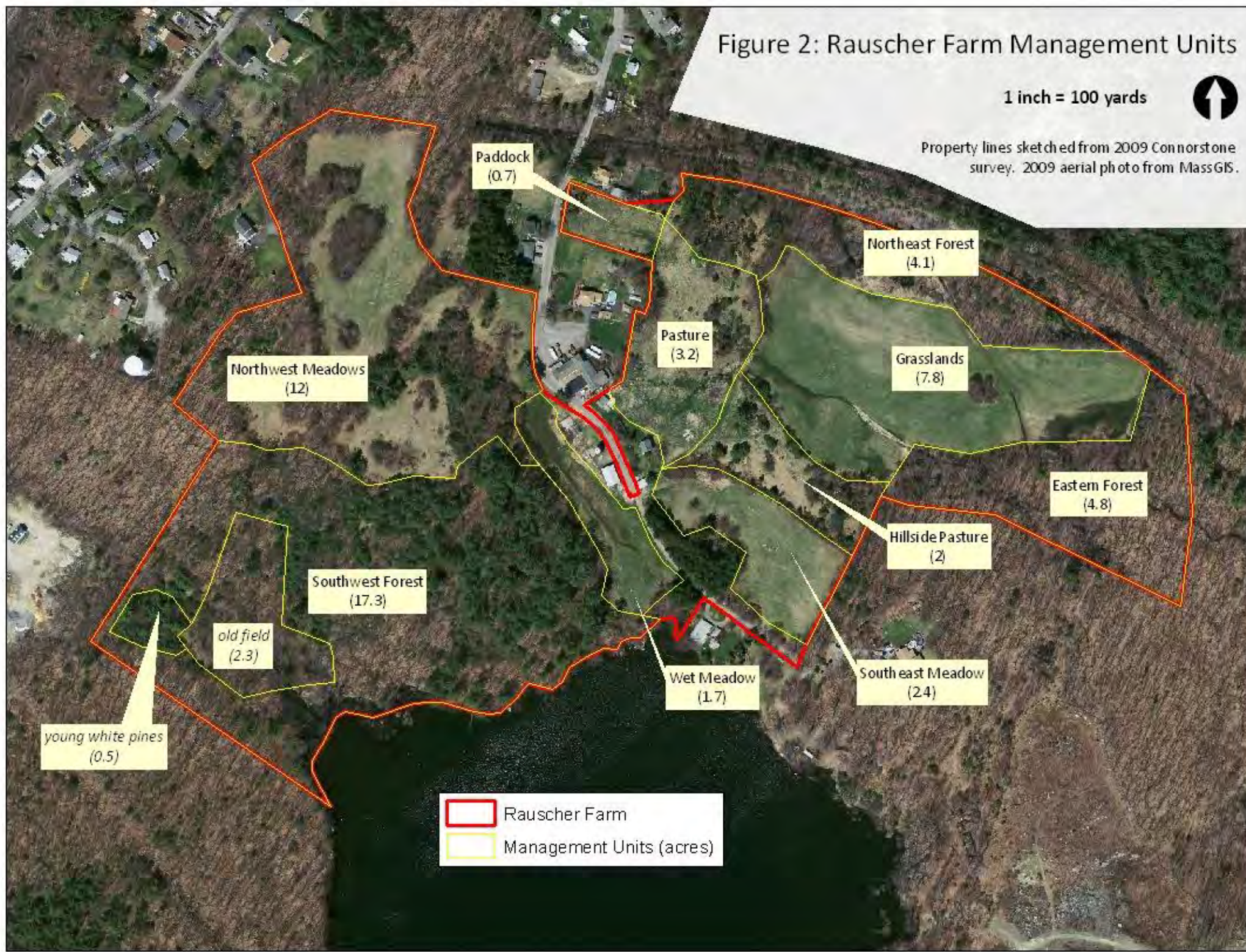
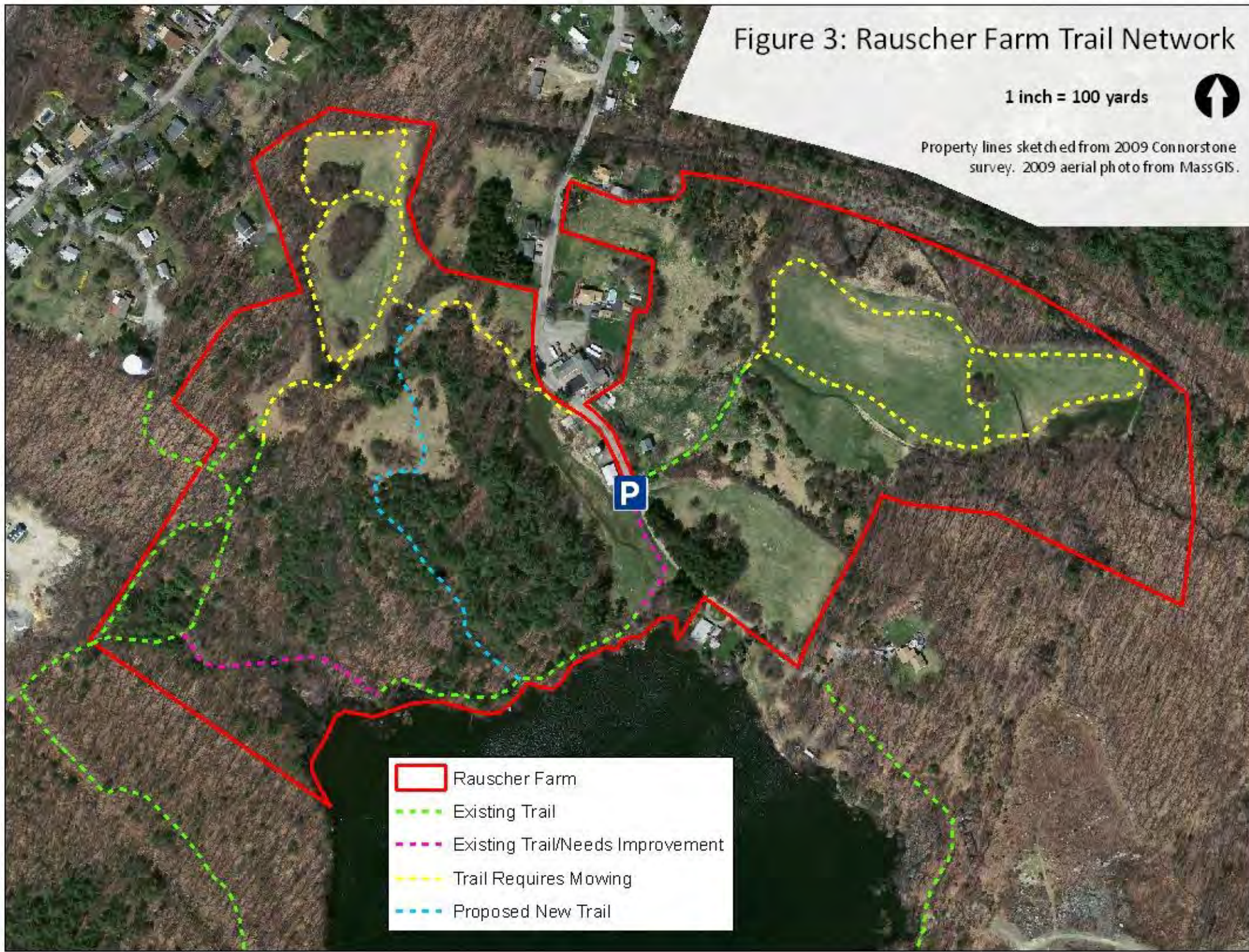


Figure 3: Rauscher Farm Trail Network

1 inch = 100 yards



Property lines sketched from 2009 Connorstone survey. 2009 aerial photo from MassGIS.



- Rauscher Farm
- Existing Trail
- Existing Trail/Needs Improvement
- Trail Requires Mowing
- Proposed New Trail

