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# Hiring the Right Excavator Mounted Mower
# New Hampshire Job Sheet

## Purpose

**Several different Excavator Mounted Mowers are available for hire, and the purpose of this document is to outline the pros and cons of each unit so that you can maximize the efficiency of price vs. acres treated.**

*Right: ideal shrubland habitat with native plants, which should be avoided during wildlife management.*

*Left: overgrown hedge rows along a hayfield.*

*Before hay is bailed, field edges need to be walked and pieces of wood picked up from the field as they will create major problems on hay bailers.*

## Cost

Excavator mounted mowers typically cost about ***$1000-1500 per day***. NRCS payment rates are made on the per acre basis which creates a need to understand the speed at which the mower can operate.

## Machine Speed Variables

- ⇒ How well flagged the area is so the operator knows where to cut.
- ⇒ Diameter of the brush and trees being cut
- ⇒ Roughness of the ground- boulders, ledges, steep slopes
- ⇒ Distance from the fueling site to the work area.
- ⇒ How "clean" the site needs to be, as extra time is needed to mulch the brush more finely and grind stumps closer to the ground.
- ⇒ Old wire fences, imbedded in the trees these either need to be avoided or removed prior to the work being done.
- ⇒ Tall trees, especially hardwoods (>6") slow the project down.

## Smaller Machine Benefits

- ⇒ Rubber tracks allow the machine to cross pavement without damage.
- ⇒ Small and maneuverable, good for mowing under a forest canopy.
- ⇒ Towed by a Full Size Pickup Truck and mobilization is typically not charged.

*Above: a skid steer with rubber tracks, a 7 foot mower powered with a 110 horsepower mower.*

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## Smaller Machine Problems

⇒ Limited on height reach, struggles with taller vegetation.

⇒ Rate of Speed: 1 acre per day in heavy brush with few small trees.

*Above: an over grown pasture where brush mowing with a tractor is no longer possible. Brush is in the 2-4 inch range. Smaller machines can typically do 1 acre per day, larger machines can do 2-4 acres per day.*

*Above: a small machine maneuvers in the understory. Photo Credit Society for the Protection of NH Forests.*

## Larger Machine Benefits

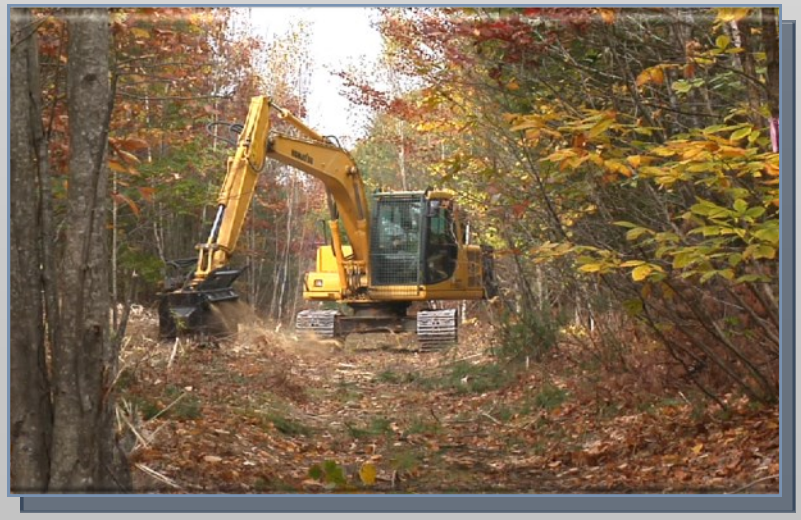
⇒ 28 foot horizontal or vertical reach is better for managing young forest, and small trees.

⇒ Grinds brush at a very fast rate 2-4 acres per day.

⇒ Grinds young forest at 1-2 acres per day.

⇒ Greater reach allow machine to reach over desired vegetation with little to no damage from tracks.

*Above: a large excavator (15 ton size) mounted mower with a supplemental 110 horse power motor to run the cutting head.*



*Above: a large 12 ton size machine managing young forest. Photo Credit Monadnock Conservancy*

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## Larger Machine Problems

- ⇒ Most expensive at $1400-1600 per day
- ⇒ Heavy machine, needs solid ground/frozen conditions.
- ⇒ Metal tracks need wood planks, or old tires to cross pavement (2 person job).
- ⇒ Requires a tractor trailer for a "low-bed" move, which often costs mobilization fees of $200-500 per move
- ⇒ Difficult to get a tractor trailer into some sites

## Access

Prior to the machine arriving at the site, permit and develop temporary crossings across drainages.

*Right: A temporary crossing which is appropriate for crossing small intermittent streams <8 feet wide or wetlands <50 feet in length with a tracked machine on frozen ground.*

## Considerations

- ⇒ Avoid the nesting season May1st –August 15th.
- ⇒ Don t grind, valuable forest regeneration of desired crop trees for wildlife habitat.
- ⇒ For pasture pines/young forest, cold winter conditions make the trees more brittle and they shatter easier, making the work go faster.
- ⇒ For wildlife habitat avoid mowing thickets of native shrubs like dogwood as they will provide additional seed for the site and reduce competition from invasive plants ,as well as provide refuge for resident wildlife.
- ⇒ Grind invasive plants 1-2 year prior to herbicide application.
- ⇒ "Hard" Trees (Oak, Maple, Hickory) trees grind slowly.
- ⇒ Deep snow makes grinding vegetation to the ground impossible and this will reduce the chance the area can be maintained by a tractor mounted brush mower in the future (edge of farm fields). Early December can be a good time for wet sites if early cold weather without snow happens, or March during snow melt.
- ⇒ Save the wettest sites for cold mornings when frost is deepest in the ground.

*Left: a buckthorn/ red maple swamp- wetlands make for great habitat projects but wait for deep freeze then deep snow, to keep the machine from making ruts and damaging key features. Do the site showing in November when areas of surface water are apparent, these typically don't freeze enough for larger machines to cross more than once or twice.*

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*Above: gray birch infested with invasive plants. These trees are small diameter,* but not worth saving. Aspen and Birch are common young forest trees and are relatively easy to grind A larger machine will handle the site at 2 acres average per day. Mowing areas like these makes herbicide application more cost effective and less herbicide is required which is a plus.

*Above: a mix of lager trees and shrubs, sites like this requires a larger machine and you should expect one acre per day in productivity.*

*Below: to later be able to maintain field edges with a tractor mounted brush mower, do the work with little or no snow to get the stumps low to the ground.*

*Below: overgrown hedge rows along a hayfield.*

*Before hay is bailed, field edges need to be walked and pieces of wood picked up from the field as they will create major problems on hay bailers.*

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