WIN Fast Forest - late July 2025 (R Stimpfle)

"How to" Miyawaki: (Our) Steps to Create the WIN FF Fast Forest

(Grow Local for the Planet of the WFMCHub)[1]

Prassede Calabi, PhD, Founder and Project Director

Healing the Earth

Site Location

On Wright-Locke Farm Nature Conservancy Land
Via 78 Ridge Street 01890 OR off 63 Edwards Drive 01890

[1] https://wfmchub.org/growlocal/

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Project Description

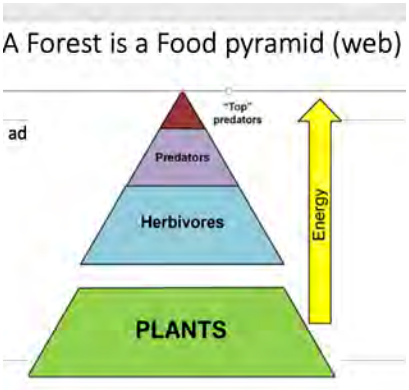
Rationale and background

Mature forests regulate temperature & moisture, absorb pollution including carbon, and are crucial habitat and vegetation for wildlife and pollinators. But globally, we are destroying forests at a staggering rate, some 40% in the past decades. With that loss, we also lose all those critical forest functions and critters. We need to heal the earth and reverse those losses.

What can we do?

We need to replant mature forests as fast as possible, to restore local food webs. Remember the food web, from fourth grade? Remember that plants are the base of the web, because they turn sun light (sun energy) into chemical energy into carbohydrates?[2] Most critters get their energy – their calories – from eating plant carbs. Going "up" the pyramid are the critters feeding on critters eating the plants, and critters eating those critters and – well, you get the idea.
Clearly, if there is no base to the pyramid – no plants - the whole ecosystem collapses. And the world as we know it will cease to exist.

A mature forest (re)creates food ("trophic") pyramids, by providing the base-calories and habitat for the critters making up the rest of that pyramid.



We now know there is a base-beneath-the-plant-base - the soil microbiome. Those fungi and microorganisms "digest" organic stuff like leaf litter its component molecules which plants can absorb. But the principles are unchanged: sun energy is converted to carbs, and each layer of the pyramid feeds the one above it. We can also restore the microbiome, if need be.

For more on forests as food webs, at this URL https://wfmchub.org/growlocal/win-fast-forest/ please scroll down to the chickadee for a video laying it out.[3]

"Making" forests - the Miyawaki method [4]

In the 1970a, Akira Miyawaki, a brilliant Japanese botanist-environmentalist developed a speedy method for restoring forests. The method has been successful at over 4000 sites worldwide. It involves

[2] That process is called photosynthesis
[3] Also here on YouTube https://www.youtube.com/watch?v=jzREE_GdoL8
[4] Terrific DIY videos of the method from Afforest
https://www.youtube.com/playlist?list=PLDw6OmGaV5rnOCATIho19IcvpF2eqsG_6

three basic steps: super-charging the soil with loam, compost and microorganisms; mulching heavily to keep the microbiome from dying by freezing or dehydrating; and densely planting native, mature forest species. The super-charged conditions speed plant growth.

Miyawaki's special genius was to think not of competition among species, but of bottlenecks. How to remove the bottlenecks? What would allow many species to thrive in high densities? Basically, how to *let there be enough*. Hence supercharging the soil. So simple and yet profound.

His other brilliance was to use mature forest species, thereby sidestepping natural succession: skipping the grass, weeds, shrubs, sumac and other intermediate stages and species and go straight to mature forest. The method thus also skips all that intermediate growing time as well as species. In New England, that produces (young) mature forest in 20 years instead of the typical 150 years.

A Miyawaki forest is also highly visible, gratifying and long-lived. Plant growth is obvious from month to month, and during spring & summer, obvious even week to week (SEE pix at the end of this document). And the trees will be here for hundreds of years.

Our WIN Fast Forest: Overview

Grow Local (https://wfmchub.org/growlocal/) is restoring some 6,000 square feet of agricultural wetlands to high-value mature red maple swamp forest, at Wright-Locke Farm Conservancy, 78 Ridge St. Winchester 01890. On September 21, 2024, over 200 people planted nearly 1100 plants of 40 native woody species. The lead-up year included filing permits, fund-raising, and engaging scouts, faith communities, middle and high school students, and the public.

We weeded and hand-tilled the area, adjusted soil pH with lime, super-charged the soil with compost, and mulched with wood chips. Fencing successfully excluded rabbits and deer.

The plants are now radiantly healthy; most of the trees are over 5 ft tall; at least four species bloomed in this, their first year; and mortality is well under 5%.

Here please find our protocol, including information, references, sources and even gear specifics. While other gear might work equally well, this is what we used.

Feel free to share, distribute and copy this document. But please - give credit.

Of course, be in touch with questions or comments, or for updates to this manual.
And let us know how your forest is going!

Good luck!
/Prassede

“How To “

1. Pick a Site

As you’ll see, the first few steps are overlapping rather than the neat sequence laid out here. E.g. picking a site and getting permission are iterative. I found five possible sites around town, and got interest for each from appropriate folk – a WHS science teacher, the Executive Director of the Wright-Locke Farm, Conservation Commission staff. I wrote and presented a white paper to Conservation Commission (CC) on the Miyawaki concept – ecology, rationale, costs, likelihood of success.
The CC visited all five sites and expressed strong preference for the nature conservancy site. So that was that.

- A site under ~900 square feet might dry out due to the high ratio of edge (perimeter) to center.
- The larger the site, of course the more time, effort and resource it takes.
- Does the site have access to water, to establish the plants in year 1? Is there (enough) hose to reach the site?
  - Public land possibilities
    - Conservancy land
    - Parks
    - School grounds
    - Church grounds
    - Orphan lands about town
  - Private property has a different set of logistical and legal issues not discussed here.

2. Create a Timeline and Budget

Make a timeline as best you can using this information and other projects. That timeline is your guide and cred. Be as specific as possible, get buy-in from relevant parties as soon as possible, and stick to the timeline as well as possible.
We treated this as a contract between us and other parties. Their participation was specified and noted in this document, as well as in permit applications when appropriate. Clarity of commitment helps everyone keep track of their role and contributions.

TIMELINE

- Best planting times in New England are early spring and mid to late fall, to avoid summer’s greatest heat and possible drought.
- Order plants well in advance. Ideally in January for spring planting, and May for autumn planting. But check with your preferred nursery(s).
- Count backwards from best planting times and leave enough time to do PR, outreach, fundraising, and to get those permits if needed
- Give ample time for soil prep (see below) and to be flexible about weather. Our first planting was scheduled for March 2024, which became the third wettest March on record. We rescheduled to September, and asked the nursery to hold our plants over the summer. Fortunately, they said *yes*.
- the Table of Contents ABOVE is itself essentially a timeline

Our FF had two types of EXPENSES: the plants, and ‘gear’ bought, borrowed, rented.
Plants cost roughly $14,000 and Gear about $5,500.

GEAR, BOUGHT

- Fence materials, including a solar array to power electric fencing if you go that way

- Rabbit repellant (Bobbex[5]) and applicator [6] (deep snow made the fence "too short" and we used Bobbex until we could remedy that)
- signs
- hoses
- permits; newspaper announcement of public hearing; registering permits
- (material for) plant labels, flagging
- donation cards and envelopes (Christmas and Valentines), stamps
- wildlife Camera
- silt sox to protect a pond below the site against runoff for the months between removing the invasives and growth of the forest plants. Fortunately, it is highly unlikely that you will need to do this, as it cost ~$1K.,
- Soil amendments as needed, lime, compost (though ours was free)

GEAR RENTED

- tillers, gasoline cans

GEAR BORROWED and BYO

- shovels, spades, broad forks, rakes, trowels, gloves
- hoses
- tripod aerial sprinkler
- aerial images, to help track survivorship, to show growth over time, for fun (mid-June 2025)

Mid-June 2025

August 2025. Note much greater density

[5] https://bobbex.com

[6] Petratools 1 Gallon Pump Sprayer – HD101 Garden Sprayer for Weeds, Lawn Care & Pesticides – 52" Long Hose, 2 Nozzles & Easy Carry Handle – Durable & Lightweight

[7] All pix by Calabi unless noted otherwise.

3. Get Permission(s)

Our town has a lot of water, and more strict water protections than the Commonwealth. So, in addition to permission to use land, we had to obtain wetlands protection permits for our FF.[8]

1. Contact the appropriate Body(s) for permission to use the land
   - Parks and public land – Select Board, Parks Department, Mayor - whoever
   - School grounds: School Committee
   - Conservation Land: Conservation Commission
2. Get State and local permits as needed, especially vis a vis wetland and water.
   - Applications can take months, and involve formal filing, legal designations, local Conservation Commissions, public hearings, newspaper notices of intent etc.
   - Be sure to register the permit with your county Registry of Deeds
3. Create a legal waiver of liability - or use the town's waiver - for people working on the project, especially if you use power equipment e.g. tillers, chain saws, tractors.

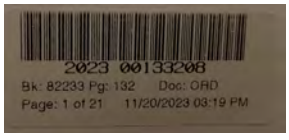
4. Characterize the Site Ecologically

The more you know about your specific site, the better you can match your plants, and the better they will thrive. Soil physical properties, pH and nutrient contents, water table, sunlight – they all matter greatly.

1. Soil type & quality
   - Soil test UMass Extension soiltest@umass.edu
     https://www.umass.edu/agriculture-food-environment/services/soil-plant-nutrient-testing-laboratory
   - Acidic soils (low pH) bind nutrients, esp. phosphorus, potassium, calcium, magnesium. so your levels will change if you add lime
   - Fine scale map of soil types. At this URL, Click *Download NEHRP DATA*, open the zip, pick the pertinent map
     https://www.mass.gov/info-details/massgis-data-nehrp-soil-classifications
2. Water
   - What's the site drainage, water table, and proximity to open water?
   - What's the availability of hose water to help plantings establish in the first year?
     (We carried, wheeled and drove by car huge containers of water till finally getting permission to run hoses from an adjacent farm. SEE also watering below.)

Our FF soil & site was described this way by Mass GIS (i.e. state level soil service):
"Charlton fine sandy loam; Well drained; 3 – 8% slope; extremely stony."
The site also has a very high water table & is wet "all the time, which was not mentioned"

3. Sun
   - Shade and orientation
   - Hours per day
   - Insolation is also important for siting a solar array if you electrify your fence

[8] 

Permit registered with Middlesex County Registry of Deeds

5. Prepare the Site

We did all soil prep, mechanical and nutritional, in fall for planting the following year. We dug, picked roots and rocks, limed, tilled & composted.[9]
Based on the quality of the soil and of our compost, we did not further supplement microbiome.
The area was agricultural wetland covered with goldenrod and jewelweed. Roots, while dense, were not woody.
After planting, we mulched with wood chips.

1. Remove all existing plants especially invasives, including their roots.
2. In advance, identify a location for the plant material and rocks that are removed. We composted or burned the former and moved the latter onto a rock pile for other uses
3. Remove invasives from the immediate surroundings[10]
4. Dig or till the soil. We dug by hand first and removed stones over ~ 1 inch diameter.

Then we rented 3 hydraulic tillers[11] for an afternoon.[12] Root removal is easiest after tilling. Remember to till enough area for your double fence too.

4. Adjust pH if needed
   Pelletized lime is less dusty. Don't breathe the lime. Based on the UMass

[9] If appropriate, an alternative is to place cardboard over the ground cover for two months, and then till.
[10] e.g. Root-dig bittersweet. For persistent woody plants consider "buckthorn baggies" cut to 6" stumps, smother with plastic baggies https://www.buckthornbaggie.com/baggie

[11]
Hydraulic Tiller Category #08 Group #806 "the heavy design of the Barreto E1320HX means your tiller works for you"
[12] You'll need PU truck to move the tillers, and gas can(s).

Extension calculator, we put down 1300 pounds for 6,000 square feet
    - https://ag.umass.edu/soil-plant-nutrient-testing-laboratory/fact-sheets/step-by-step-fertilizer-guide-for-home-grounds
    - soiltest@umass.edu
5. Emend soil nutrients if needed, based on analyses.
   - After lime, we added just compost. (Remember that acidic soils (low pH) bind nutrients, esp. phosphorus, potassium, calcium, magnesium.)
6. Compost
   - Top-dress site with about 3 inches of compost. We did not mix it in.
   - We used about 33 Cubic Yards on the 6,000 sq ft
   - Our Transfer Station offers, and the DPW delivered, free compost.

7. AFTER PLANTING, mulch with woodchips (straw or grass), a few inches deep. Free woodchips are available in Massachusetts e.g. https://getchipdrop.com/

Mulch, fall 2024 after planting

8. Our mulch was much degraded after the first winter, suggesting a strong microbiome with excellent ability to digest organic material. Since we initially added just compost and no microbiome per se, we were pleased to see that.

It did mean we needed to supplement the mulch during the first summer. We weeded twice weekly from May to September and left the weeds, roots up, to act as mulch. During August we did some additional mulching with woodchips.

6. Choose Plants

This step is crucial: a mismatch between your site conditions and plants - especially wetness levels, amount of sunlight (shade) and soil type - will cause a lot of plant death and grief for you.

- Since New England and many US forests have been well studied, you can use existing descriptions and don't need to do your own inventory.
- There are two main plant grades for sale: *conservation grade* & *fancy*. The former are cheaper and served us very well. We bought wholesale, from New England Wetland Nurseries (footnote 16) Fedco in Maine is another good source and sells inexpensive bundles of bare-root plants. Some state nurseries (e.g. NH & VA) also sell bare-roots bundles[13]
- As possible, use locally grown plants. Because they are already surviving in local conditions, they are a good match and will likely continue to thrive.
    1. Use your zip code and site characteristics to find best-match native plants and these sites
        https://nativeplantfinder.nwf.org/
        https://www.mass.gov/info-details/classification-of-natural-communities
    2. Get input from relevant experienced folks and check out
        https://mtcubacenter.org/research/trial-garden/
        https://www.wildflower.org/plants-main
    3.. We used a ratio of about 1 tree per 3 shrubs of various heights.
    4. To get ~ three plants per square yard, we planted 23 inches from every adjacent plant.
    5. To maximize habitat value, do an FQI Floristic Quality Index[14] of your proposed planting, and adjust if need be. Our FQI is 30, vs. 13 for the adjacent immature, scrubby forests.
    6. Leave room around the planting perimeter for exclosure fencing.
    7. To remind you to match plants to your site and not just use existing lists, our species list is not included here. But it is available at website https://wfmchub.org/growlocal/win-fast-forest/

7. PR, Fundraising, Partnerships

I like to say that a Fast Forest is 51% plants, 49% community.

If the forest is on public land, it is truly everyone's forest. It provides many "teachable moments." It will be there for hundreds of years. The more folks participate, the lighter the lift. And action is the best antidote to anxiety; especially eco-anxiety, which can be intense among young people and children.[15]

1. Having a host organization like a 501c3 is a huge benefit. It gives cred for donors and granting entities, as well as a legal basis for donor tax deductions. It provides financial accountability which can include bookkeeping, tax documents, and – worst case – even financial back-up. (Our bookkeeping was via Givebutter - footnote 16)
2. Create a logo, a snappy name - an identity – to help raise & keep awareness.
3. Put sign(s) at the site with a QR code for more information. Keep online info up to date as possible. It's a boon when readers can rely on it for info such as work or event updates.
4. Keep the Town and larger interest group apprised of progress, with the project and with fundraising. Get articles in the local newspaper(s), post on town FB page and calendar, and websites of other green groups - Farmers market, CSAs, 350 etc. And word of mouth.
5. We have a self-identified mailing list of ~300 folks, of whom 20 are a dedicated core.
6. We also send a monthly newsletter and have a monthly potluck
7. Talk to classes, scouts, Church groups, Rotary, Chamber of Commerce, Seniors, Local newspapers, radio, FB, anyone and everyone.

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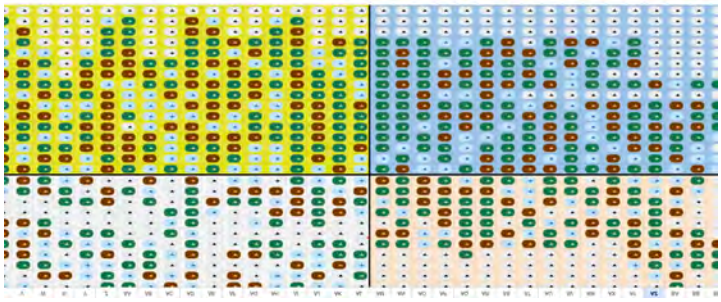
[13] NH State Forest Nursery - https://www.nhdfl.dncr.nh.gov/forest-management/state-forest-nursery

[14] FQI https://neiwpcc.org/our-programs/wetlands-aquatic-species/nebawwg/fqa/

[15] https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Climate_Change_Climate_Distress_Youth-137.aspx

8. Our HS Environmental science classes put a 10-year survivorship study into their Curriculum. They mapped[16] & measured the plants and will re-measure them yearly. Here is part of their spreadsheet. Each live cell represents a tree (brown) or shrub (green) with all its data (names, height, diameter, condition).



8. Eagle and Girl scouts contributed an Eagle Scout and two Silver Award Scout projects.
9. We received donations from 2 faith communities, Eagle Scouts & many private donors; logistical support from other faith communities; & grants from Rotary Club, ARPA, Susatinable WInchester & Keep Mass Beautiful.
10. Fundraising included pretty cards (designed by our team) as Holiday gifts, in *memorium* and Valentines. Both Donor and Recipients' names are listed our permanent honor roll.
11. Because Grow Local is a project under a 501c3, all donors received tax receipts, should they wish to claim the deduction.

This fundraiser Valentine brought in $3500

12. Most donations were via Givebutter Online Nonprofit Fundraising Platform.[17]

8. Exclosure

Based on our experience and other local FF, rabbits exert heavy herbivory pressure (as do deer) - so get your Elmer Fudd on.

[16] More on mapping in Section 13
[17] https://givebutter.com/

To avoid any rabbit predation, install your fence before planting, unless you have time to install it on planting day.

Ultimately our site was ringed with 4 concentric circles of posts at 8 ft intervals. The two inner circles are about 30 inches apart and each carries electric wires. The third and next circle out is ½ inch mesh on wooden stakes, not electrified. The mesh tightly abuts and often leans against, the outermost circle, the safety perimeter which is one strand of non-electric wire with warning signs.

We started with just two sets of electric wires, spaced 30 inches apart. The gap kept out deer, and the electricity dissuaded rabbits. The inner circle was five wires at intervals from just above ground level to 24" up. It kept out rabbits nicely - until we had two feet of crusty snow and they walked in right in over the wires. So we added the mesh. Which allowed deer to orient effectively and they jumped in.

So we extended the inner-most fence posts to heights to 7 feet and strung two tiers of rope with flashy tape.

We monitored the site by wildlife camera[18], & saw coyote, fox, dogs, deer, and mice. We also found fisher tracks in the snow.

1. Electric rabbit fence
   - We used the Gallagher Solar array S100 [19] and fence kit, installing two sets of electric wiring ~ 30 inches apart, with posts ~ 8 feet apart.
   - The inner fence has 5 wires at 3-to-4-inch intervals from close to the ground up.
   - The outer fence has 2 wires about 16 and 22 inches off the ground respectively.
2. Physical rabbit fence, the third concentric ring of fencing, abutting the safety fence.
   - 4 ft high, half-inch coated mesh fencing (baby rabbits have small heads).
   - at 8 ft intervals, 4 ft stakes driven one foot into the ground.
   - Shape the mesh into an "L" with 3 ft upright and 1 ft flat on the earth at right angle.
   - Attach the upright mesh to the stakes (for wooden stakes, a staple gun is ideal)
   - Secure the bottom of the "L" to the ground with landscape pins, 8 to 10" long.
3. For deer, we extended the innermost fence post to 7 ft high using light hollow plastic pipes, at the top of which we strung rope with 10 strips of reflective material,

[18] Ronitry camera 4K 48MP Trail Cameras with Night Vision Motion Activated Waterproof, Game Camera with 100ft Clear Night Vision. 140°Angle IP66 Waterproof with 128GB Card. ~ $50, plus 8 AA batteries

[19] Gallagher Exclusion Fencing for Miyawaki forests, contact Heather Gooden, Northeast Territory Manager, 816.503.1305

9. Buy plants

- We bought first year saplings, mostly from NE Wetland Plants in South Hadley[20] given our wet site. The staff were lovely, helpful and accommodating throughout.
- Find native nurseries near you.
- Consult the sources under "**6**" above and other folks.
- Buy as far in advance of planting as you can. The Nursery will thank you – they can plan Better. And you are more likely to get what you want – the Nursery will have, can get or might even grow your stock.

10. PLANT!

- Our Genius Move was to lay out the plants on site before planting day. It made planting much easier and faster.
- At the same time, we (re)labeled plants as needed. We relabeled after the first winter – see below
- We divided the area into 4 quads, to orient us; to simplify mapping and follow-on censusing; to direct planting traffic and to manage people (see spread sheet).
- Surprisingly, it was much simpler and more efficient to do one task at a time, even if the work was done by different groups of people. Lay out the plants. Plant. Mulch. Weed. Tag. Record data.

Plants in place for planting

We over-subscribed the planting, i.e. signed up more people than needed, as there will be no-shows. To plant ~1100 plants in 6,000 sq ft, we signed up 33 people per hour

[20] NE Wetland Plants. https://newp.com/, info@newp.com. 413.548.8000. Write, don't call; they rarely answer the phone

from 9A - 4P, and we finished 3 hours early. Despite steady rain all day.

1. To get our desired density of ~ 3 plants per square yard, we spaced each plant 23 inches from all adjacent plants. For consistency of spacing, each planting-person used a precut 23-inch dowel, and worked as shown in this VIDEO here
   VIDEO Planting tips and placement https://www.youtube.com/watch?v=jNSluwSy44E
2. Plants were laid out randomly, with slight effort not to have 2 of any species adjacent.
3. Water well after planting.
4. Unless you have abundant rainfall, ensure bi-weekly watering of at least an inch until plants are established. A borrowed "orbit broadcast sprinkler" with tripod was a big help.[21]
5 Recycle empty pots.

11. Maintenance

Native plantings in their native area are not a garden and will need minimal care once the plants are established. But until then, protect them & everyone's time, money, effort.

We maintained a text list of dedicated volunteers, who showed up for many activities and could be called on at short notice for maintenance chores like checking the electric fence, watering, weeding, mulching, removing invasives, and weed-wacking the site perimeter.

- Water plants, unless there is bountiful rain, for at least 2 months after planting & maybe till first frost. Once the roots are well developed, plants should be OK on their own.
- Weed & mulch as needed, likely for 2 years. In some spots, our FF canopy is already closed so weeding becomes less necessary. But smaller species need to be cleared of weeds.
- We leave our uprooted weeds as mulch and are adding wood chips as needed.
- Some labels need replacing.
- We expect to maintain the exclosure, perhaps as long as 10 years: until the plants can take some winter bark girdling without dying, and/or predators take out more rabbits

(Relabel as necessary: tagging the already planted plants)

We re-labelled with Everlasting metal labels[22] and "gardener markers."[23] Flagging, while cheap and convenient, is less durable. We did add an 8" length of hot pink flagging to each metal tag to help locate tags in the future. The grey metal tags blend in too well.)

"Gardener marker" labeling pens outlasted the permanent sharpies and others we tried.

- Again, we found that doing tasks separately was more efficient: we threaded the wire and flagging on the tags before bringing them into the field (tag-production takes a bit of wrist action but with a little practice we did under 20 tags per minute.) We wrote and tied the tags in the field.
- We twisted the tags loosely onto plants branches, seeking a balance between cutting the bark of growing plants but not brushing the tags off when we walked through the forest.

[21] Orbit Sprinkler 5000-sq ft Impulse Tripod Lawn Sprinkler
[22] https://www.everlastlabel.com/product-page/k-tie-on-labels "Paw Paw Everlasting tags" out of Michigan.
[23] EK-780 Garden Markers, 0.8 mm Writing Width, UV Resistant, Waterproof Permanent Markers Ideal for Plant Labels, Quick-Dry Garden Marker for Plants Outdoor & Indoor Use - Black

- For trees, we tied the tags at about 5ft up; for shrubs, into the crown

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12. Add Site to existing Map(s)

1. Doug Tallamy's home-grown national park maps
   https://map.homegrownnationalpark.org/
2. Belmont's Mystic Charles Pollinator Pathway group
https://www.sustainablebelmont.net/mystic-charles-pollinator-pathways-group/. And scroll down to the survey.
3. this URL to see Winchester gardens
https://www.google.com/maps/d/u/0/viewer?mid=16F5NBwu3LsRKu_2VzxmDiWm2UHwOEPri&ll=42.45472293549609%2C71.14957799999998&z=12&fbclid=IwAR31_OcN5jhPy8rvKBZ_MQ7lvVYBVw3HQ8Hhcb6s_qIWil5ESEsPXZTdHRw
4. We'd love to have our own Winchester map, if someone wants to make one

13. Tools, Research and other Add-ons

A Fast Forest is a terrific opportunity for data collection, for classroom or citizen science or just for the fun of it. Here are a few tools we especially appreciate and research topics we think are worth pursuing. The tools are relatively simple to use, free, and jump the hurdle of knowing field identification of plants or other critters.

EwA Buggy for Insect data collection

https://www.anecdata.org/projects/view/ewa-buggy

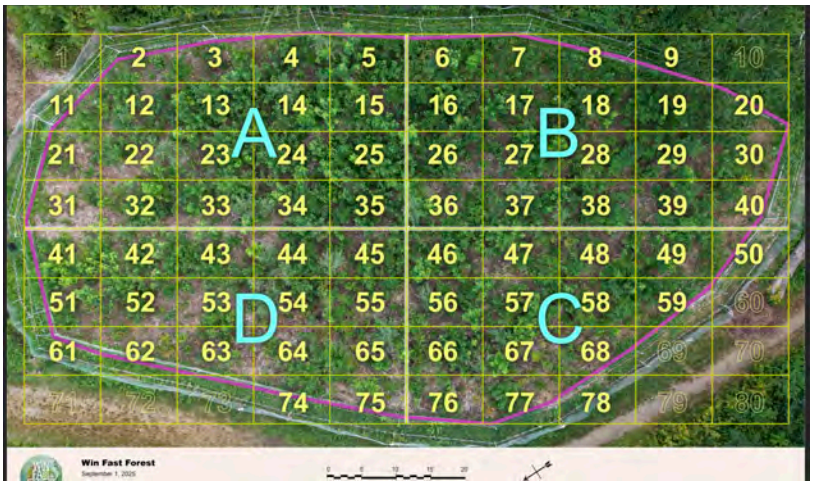
https://docs.google.com/document/d/1hx-eZxVh-MblVaGXXv2A5B7V0wSbN_Va_p2cjdTEYck/edit?tab=t.0

Mapping

The first year, students measured plants along linear transects and created a spread sheet of those data. To increase accuracy and simplify data collection, in year 2 we made two improvements: gave each plant a unique number noted on its tag and the spreadsheet, and established a semi-permanent grid by laying on the ground and staking down 3mm cord[24] in various colors, shown on this drone image. You don't need a drone, an excel spreadsheet works fine – see Section 7 above.

As forest density increases over time, data collection might become more difficult. But unique plant numbers and a grid can only help us find individual plants and stay oriented in the forest.

[24] Alice Catherine 1/8in(3mm) 164ft Nylon Rope Solid Braided Cord 5 Stands Paracord Thin String for Crafts Multipurpose UV Resistant



iNaturalist

iNaturalist is an app for identifying plants, animals, fungi, and more.

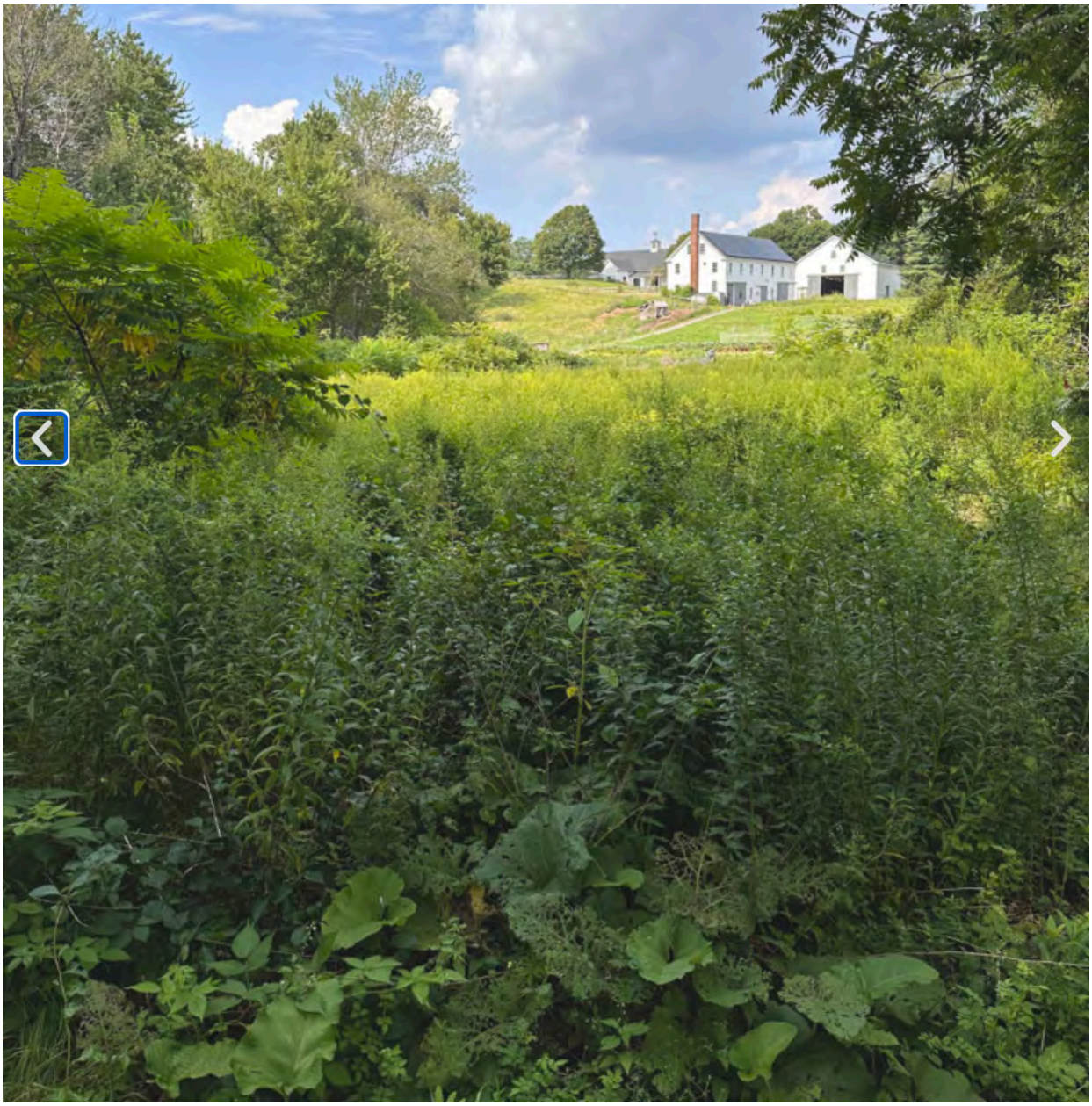
You can also use it to create an iNaturalist site which 'stores' data from your forest. Any site can be ' geolocated" - designated by its GPS parameters. So observations made in that area are automatically stored in and retrievable for the area.

Here's the Win FF iNat site https://www.inaturalist.org/projects/win-fast-forest?tab=observers

Microbiome research; Alleviating Eco-anxiety/ other health benefits to eco-activity

Info TO COME xx

14. WIN Fast Forest, timeline in pix



WIN Fast Forest site before any work, July 2023 (C. Rene)
(Wright-Locke Farm in the background)

Early December 2023

After composting, December 2023

Since we had planned to plant in March 2024, very little happened on-site between February 2024 and planting day in September 2024

Planting Day, September 21, 2024

Planting Day, September 21, 2025 Many children and teens were heavily involved.

Post-planting October 2024 (P Pinella)

Early June 2025

July 25, 202

(Bio4Climate) Note plant heights relative to 7’ pole above the weeder, in from left edge