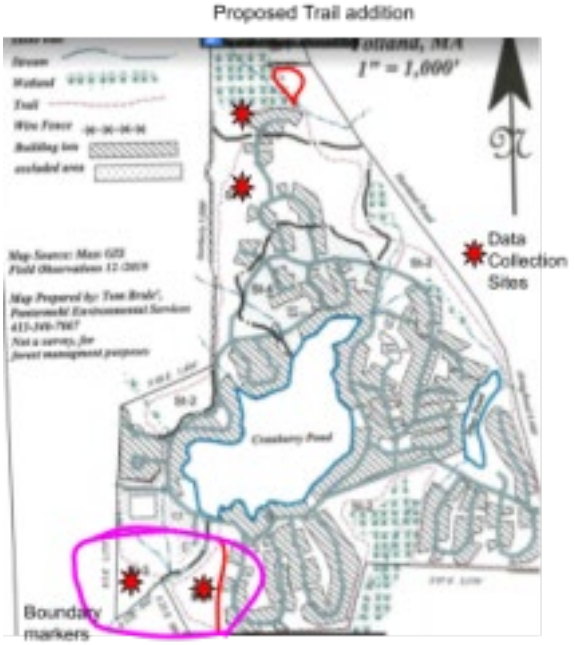
Spring 2023 Forest Management Committee Report- Submitted by Lise LeTellier, Chair

Last spring, we ended our newsletter article with these words: "However, we continue to review research on forest management best practices in light of climate change, as we are aware of many issues confronting our native forests." In August, we wrote about some ideas regarding possible trees you might plant on your property, as your own hemlock, ash, beech or maple trees succumb to disease and insects, as a result of invasives and climate shifts. This spring, we want to give you some details around our current plan/proposals and the rationale behind them. We write this to keep you informed and to solicit your support, as we ask for funds to be released from the reserve funds so we can get started. The three things we are proposing are:

1. Set up long-term forest monitoring and collect the first set of data on three forest sites this year. 2. Establish a visual boundary for a small section of the forest in the southwest corner, where there is currently no markings and it abuts 3 neighboring properties.
3. Establish 2 additional short trails. One off the Mckay Trail, behind Owl's Nest, to make a short, family-friendly loop and the second into the recently cut stand, so monitoring can continue. (See map)

In light of climate change and the accelerated changes occurring in the forests, making decisions should be based not just on ideas and suggestions, but on solid research. WPOA Pond Preservation Committee has monitored the pond for key indicators since WPOA was formed. Now it is time for the Forest Management Committee to do the same. The data collection will occur on three separate, divergent plots, as indicated by the stars on the map. These study pilots would initially be set up by our new Consulting Forester, Adam Brown of Shire Forestry. Once the plots are set up, (the most expensive part) a rotating data collection will occur either biannually or triannually. The health indicators that will be studied will be Crown Condition, Tree Damage,Tree Mortality and Standing Dead Trees, Lichen Communities regions, Down Woody Materials, Vegetation Profile, Nonnative Invasive Plants, Regeneration and Browse Impact and lastly Soil Quality.



I have asked one of our committee members, Wilbert Sanchez, to compile some research on the importance of collecting data and monitoring our forests to explain our rationale for this expense. He writes: Given the dynamic nature of forest disturbances, such as wildfires, storms, invasives, or cuts like ours, there is a need for timely monitoring data (Haertel, 2022). Monitoring is necessary for assessing whether financial resources, funding restoration, were adequately applied and if the goals initially set were met (Viani & al, 2018). Historically, although community forest groups have been successful in protecting resources and biodiversity, communities have been relatively weak in documenting and reporting the necessary statistics (Chapagain & Cheng, 2018). Yet, monitoring forest resources is crucial, in particular to:

- **Support evidence-based sustainable management.** Providing a firm basis for evidence-based decision-making and to advance sustainable forest management. Monitoring is crucial for providing firm evidence-based decision making and to advance sustainable forest management (FAO,2020).
    - By assessing the drivers of failures, monitoring also supports the adoption of adaptive management, which are active interventions to correct the ecological trajectory of an ongoing restoration project (Viani & al, 2018).
- **Maintain forest goods and services.** Sound forest health monitoring is key to maintain and foster forest services and goods (Haertel, 2022).
- **Minimize Risks.** Monitoring also helps to minimize forest risks and to enhance forest adaptation at various scales. Hence, forest monitoring needs to be constantly developed to provide the efficient and comprehensive
  information, which forest-related stakeholders and society need in times of rapid developments and climate change (Haertel, 2022).

- **Qualify for Potential Government Financing.** Monitoring is a powerful instrument for governments to decide which projects can be approved or not when restoration is a mandatory activity for mitigating or compensating environmental damages (Viani & al, 2018).

As the FMC Chair, I would also like to add a reminder to everyone that the forest and pond are intrinsically connected. Wildwood is predominantly forested and forests affect soil moisture. Water that is trapped in the soil plays an important role in forest production, droughts, floods, weather, and temperature regulation. A heavy rain after a long drought doesn't affect the water level in a stream, however, a light rain, after a wet period could cause flooding. This occurs because saturated soils can not absorb any more water, so water runs off the surface and directly into the streams and lake. Different tree species have different daily water uptake and start their water uptake at different times of the year. As climate changes affect forest species diversity, such as less hemlock and more beech and maple, the average water uptake from the soil could change the soil's water saturation. Tracking changes in soil moisture, and observing patterns may provide us with information to predict lake levels and seasonal water availability, even perhaps well water changes.(Kelly & al, 2021) UNH, SUNY and UCONN and MassWildlife are already monitoring the recent cut area. So our three sites will be in addition to this monitoring. **Initial Cost-Approximately $3,000** (Future costs will be drastically less it will only be data collection and not set up)

In addition to data collection and monitoring, there is a small corner of our lands that has no obvious boundary markers, like so much of our property does
with stone walls, roads, etc… The committee feels that this corner should be marked with visual markers, as it abuts four pieces of neighboring land, which is not easily monitored, due to its lack of trails. Our consulting Forester can complete this in the summer or fall, when his schedule opens up. **Cost- $1080**

Lastly, we would like to establish two small trials. One is already marked with yellow flags, so we could lead educational hikes to Stand # One, after the cut. This trail will be established into the cut area, so monitoring and bordering can occur over time. The second one is a small addition to the Mackay Trail behind Owls Nest. This new trail will eliminate a hill for those who wish to avoid hills, and/or it will create a loop that has interesting elements to enjoy and will be family friendly. Both would be good additions to our current trail systems. (See map) **Cost $400**

For all these reasons we, the Forest Management Committee, hope you will support the release of the FMC monies (**Total $4,480)** in reserve to be placed into operations, so we can initiate the monitoring plots, create the trails, and mark our boundaries ASAP.

Forest Management Committee: Lise LeTellier (Chair-2019), Teresa Urbinati, Robert Sullivan, Jane Glover, Wayne Roberts, Al Lenge, Cheryl Binder, Rafe Demers, Wilbert Sanchez.

References

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