

Nash Stream Forest

2022 Natural
Heritage Bureau
Surveys



NH Natural Heritage Bureau (NHB)

Mission mandated by the NH Native Plant Protection Act (1987) **RSA 217-A:**

- Develop and recommend measures for the protection, conservation, enhancement and management of NH's native plant species and exemplary natural communities.
- Help to protect NH's biodiversity by collecting and analyzing data on the status, location, and distribution of rare or declining native plant species and natural communities.



Heart-leaved twayblade (*Neottia cordata*); ST

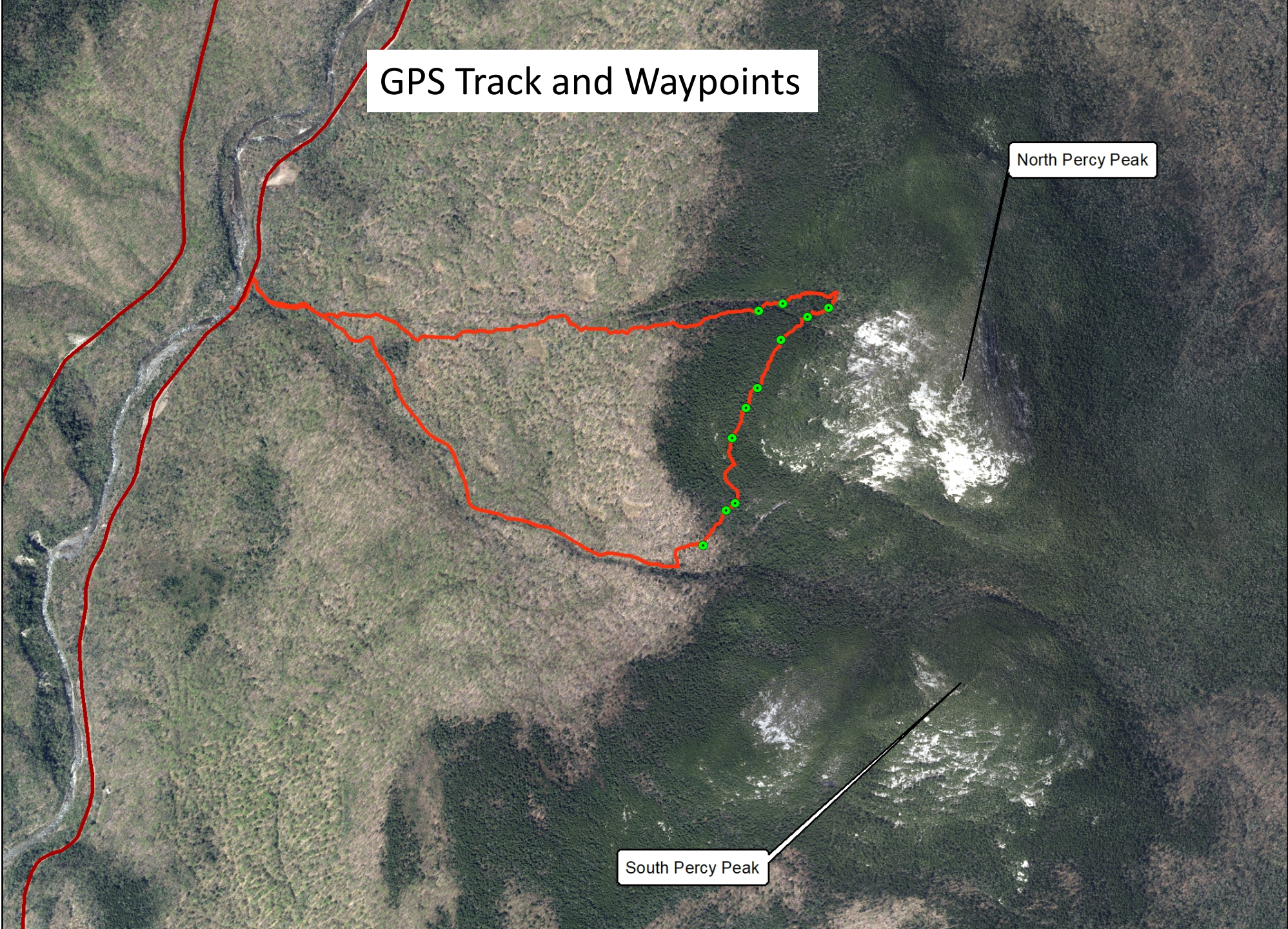
Percy Peaks Old Growth Investigation

- Dave Govatski contacted NHB about possible old growth forest on the west slope of North Percy Peak
- Pete Bowman, NHB's Ecologist/Wildlife specialist, visited the site on August 15, 2022 to document forest conditions.
- Collected vegetation plots and cored trees to determine age

GPS Track and Waypoints

North Percy Peak

South Percy Peak



Observations

- Surveyed forest between 2,100' and 2,600' elevation
- Primarily *high-elevation spruce – fir forest*
- Red spruce dominant, with sizes ranging from 13-20" dbh
- Numerous paper birch snags and downed logs
- Cored 4 red spruce. Field counts between 130 and 160 rings

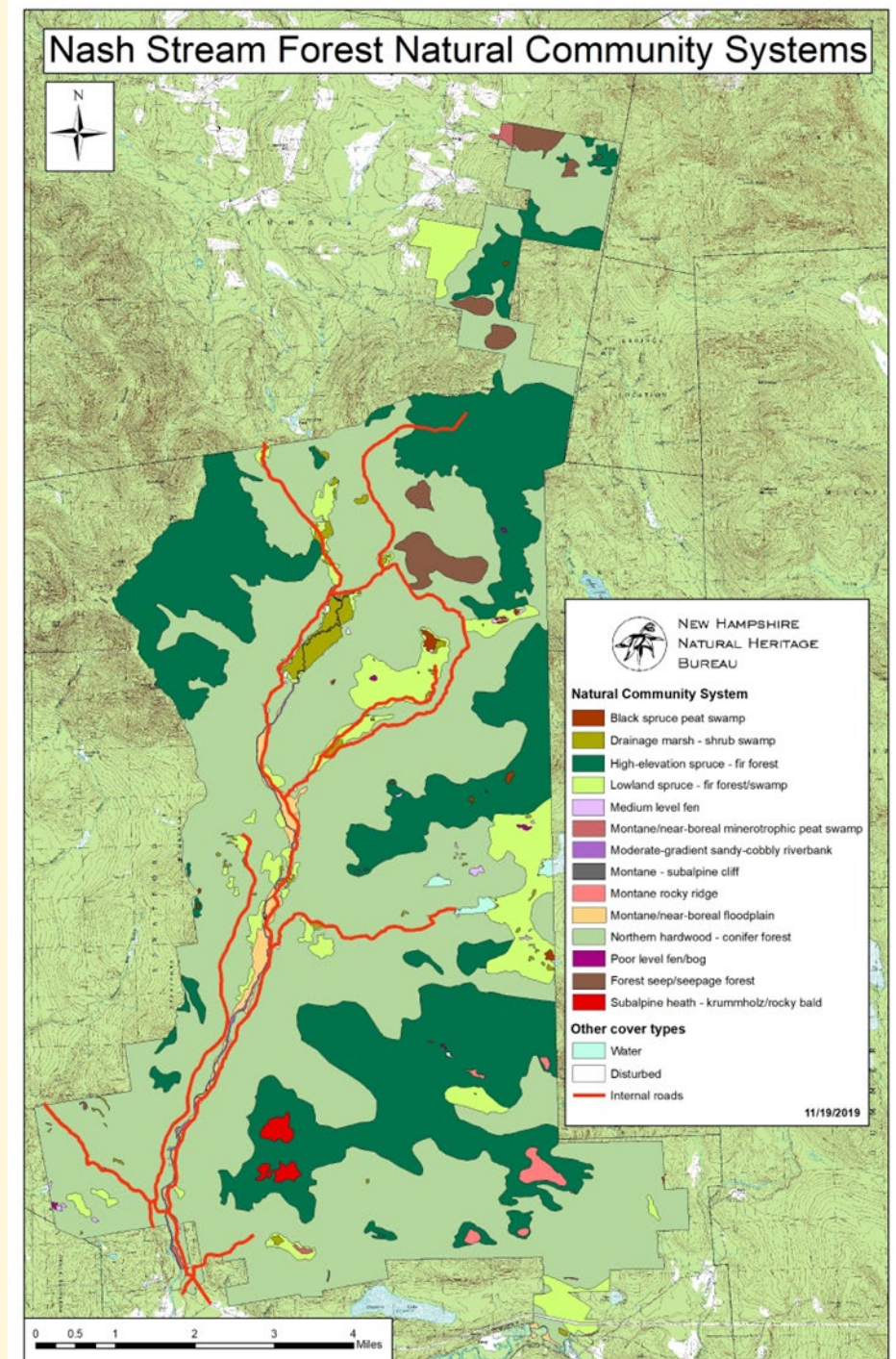


Percy Peaks conclusion

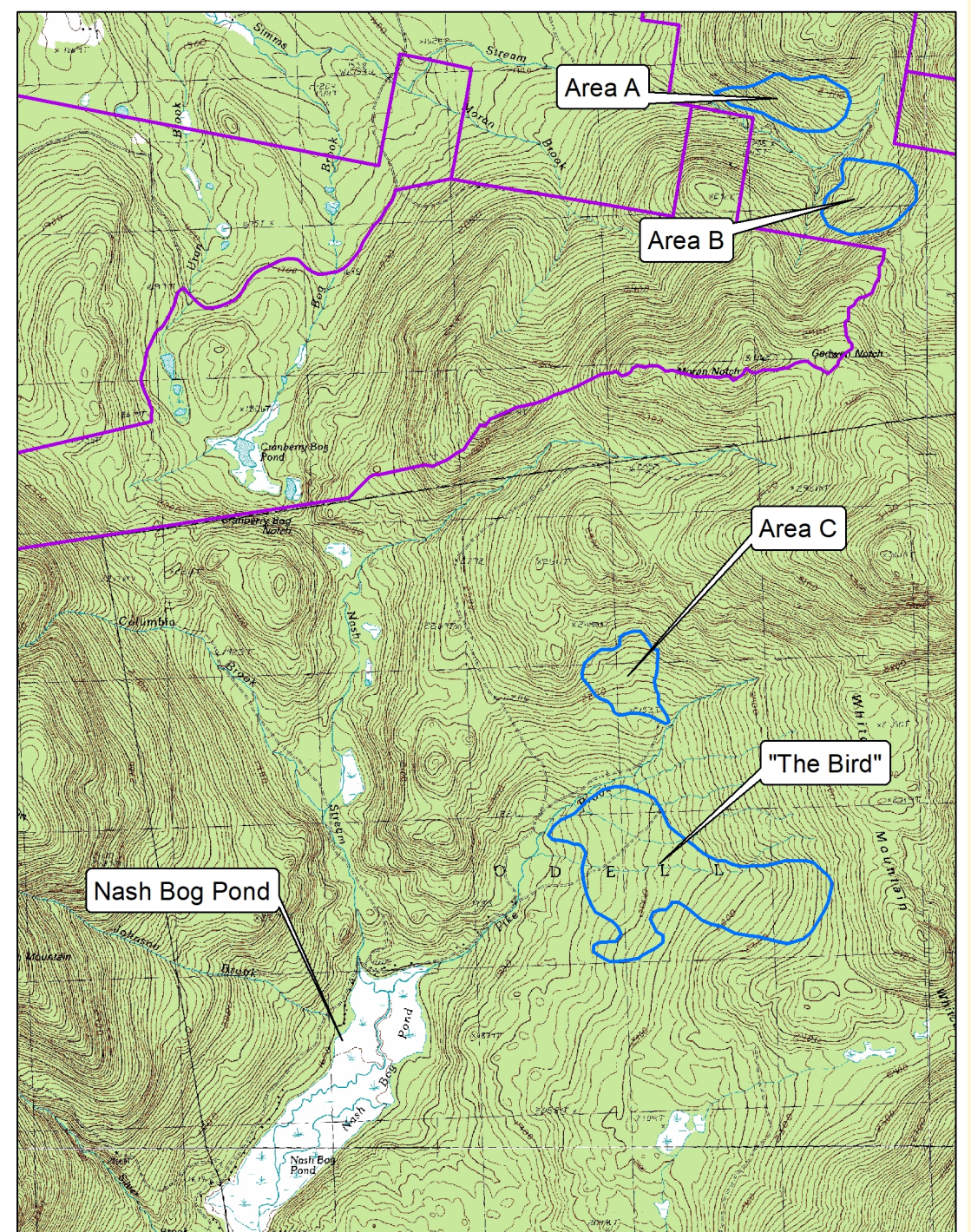
- Based on tree ring counts and forest structure, this stand would be considered mature, but not “old growth”
- At establishment, stand likely consisted primarily of a mix of red spruce, balsam fir, and paper birch
- Paper birch has fallen out of stand due to natural mortality, with spruce now the sole canopy dominant
- Absent large-scale disturbances, forest will continue to mature and eventually develop old-growth characteristics

Northern hardwood seepage forest surveys

- During field surveys for creating NSF systems map, observed several areas of ***northern hardwood seepage forest***, an uncommon natural community in New Hampshire (S3).
- On the NSF systems map, this community was included in the **forest seep/seepage forest system** polygons.



- During surveys in 2019, field delineated “The Bird”, the largest documented occurrence of *northern hardwood seepage forest* (NHSF) in New Hampshire (265 acres)
- Other areas of NHSF (Areas A, B, and C) were observed, but boundaries were not delineated in the field
- In 2022, returned to site to delineate these patches of NHSF



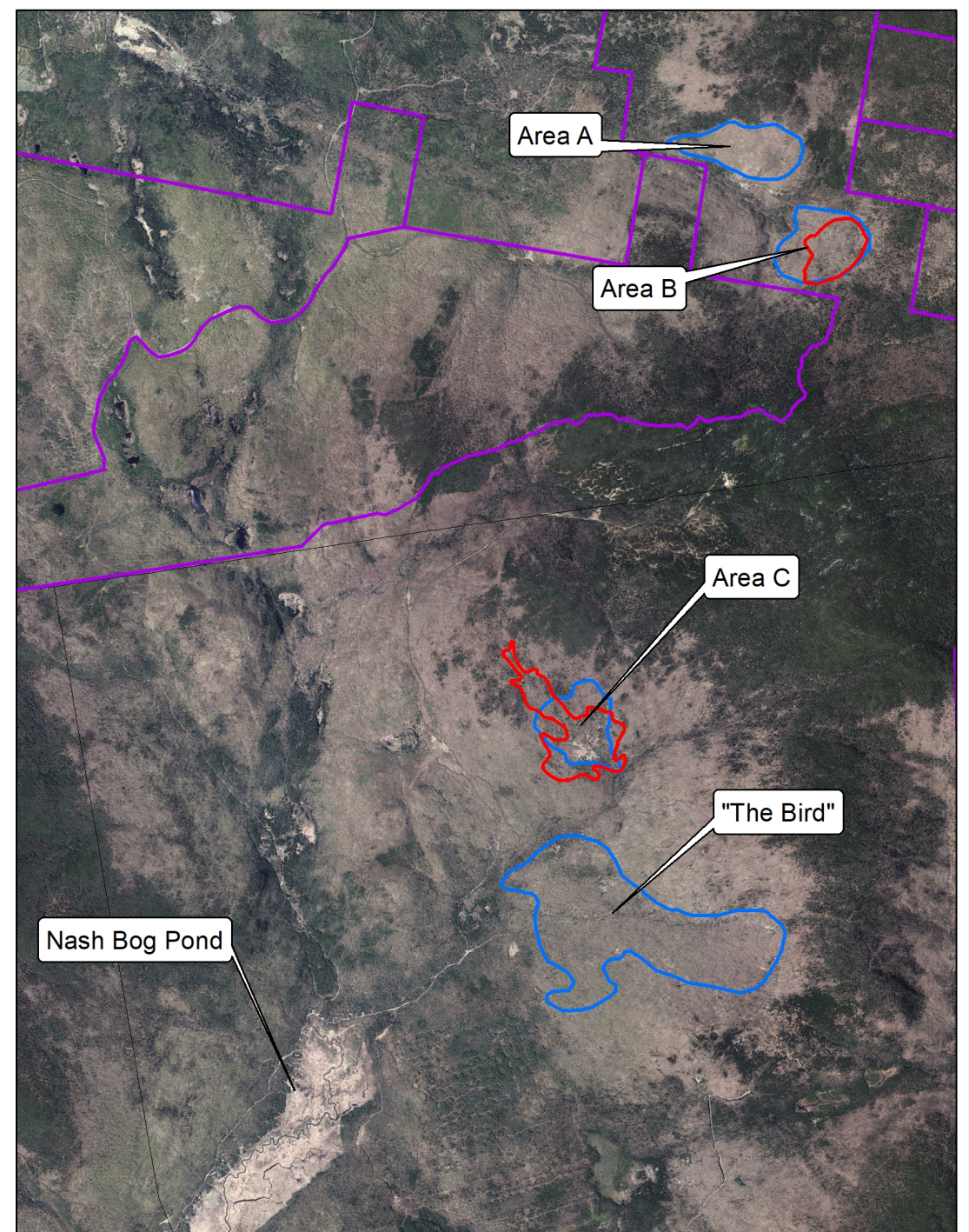
Northern hardwood seepage forest

- Natural community found primarily in northern New Hampshire
- Occurs on slopes where groundwater seepage maintains permanently saturated soils
- Canopy typically dominated by sugar maple and yellow birch, with some balsam fir and occasionally black ash
- Very lush and diverse herbaceous layer, often with glade-like canopy openings
- Wetland community that rarely shows up on National Wetland Inventory maps



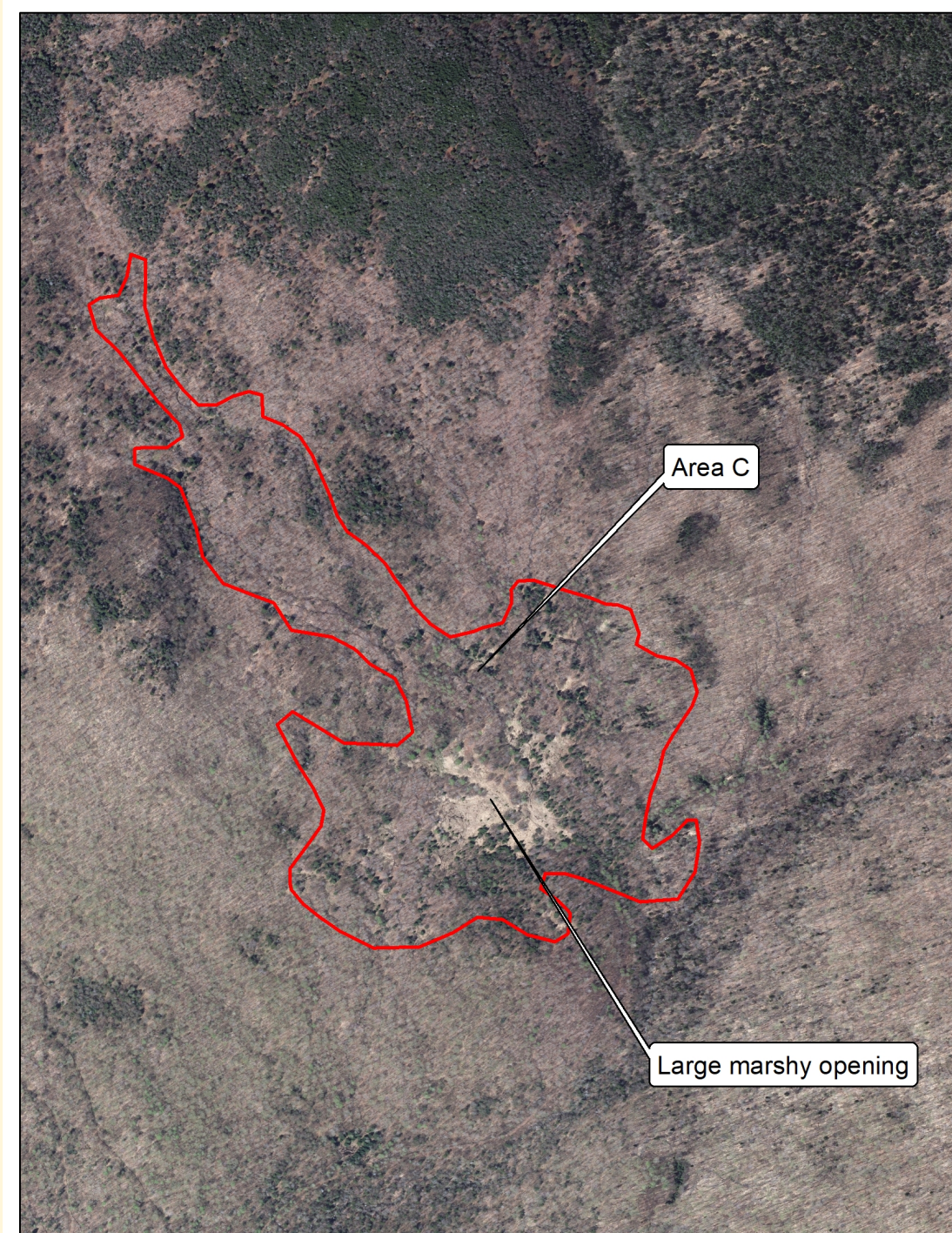
Results of 2022 survey

- Area A: Not extensive enough to be mapped as ***northern hardwood seepage forest***. Should be mapped as typical northern hardwood forest.
- Area B: Reduced from 57 acres estimated extent to 31 acres delineated extent. Should be considered exemplary
- Area C: Increased from 52 acres to 63 acres, with delineated shape much more irregular than original estimated extent



Notes on Area C

- Center of Area C includes large, marsh like opening (~4 acres)
- There are numerous (~12) other small herbaceous openings scattered through Area C
- It is likely that these openings are the result of past timber management activities





Closed canopy seepage forest in Area C



Large herbaceous opening in Area C



Northern hardwood seepage forest conclusions

- Tree removal on saturated soils may raise the water table, making the sites too wet for tree seedlings to establish and compete with dense herbaceous vegetation.
- Recovery to a forested wetland structure may take decades, given the impediments to tree seedling establishment.





Questions?

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