STAND	CURRENT MANAGEMENT	POSSIBLE ADAPTATION ACTIONS
Entire Forested Area 407 acres	▪ Overall site objectives: 1. Retain reserve/legacy trees as groups or individuals throughout the property within harvested stands. 2. Manage the older stands at the site as a reserve for northern mesic/wet-mesic/wet forest, northern sedge meadow, an aquatic reserve and wetland protection area, and as an ecological reference area. Natural processes will determine the structure of the older forest and wetlands. 3. Increase tree species diversity by increasing representation of hemlock, yellow birch, white cedar, white pine, basswood and white ash.	▪ Modify the property management plan's Management Approach language as follows (suggested addition bolded & italicized): "The native species in the core old forest areas are managed passively, which allows nature to determine the ecological characteristics of the site. Exceptions include control of invasive plants and animals, ***climate change adaptation***, maintenance of existing facilities, and access to suppress fires." ▪ Monitor natural regeneration across the forest types; if natural regeneration of desired species fails (due to changing climate or increasing deer browse), consider 1) a resistance approach of planting desired species (perhaps with more investment/support than usual to ensure strong establishment) or 2) a transformation approach of planting or promoting species such as white pine, red oak, black cherry, and basswood that better tolerate warming and deer browse. ▪ Reserve and protect high-quality pockets of hemlock to serve as refugia for that species. ▪ Continue to maintain some unmanaged "benchmark" areas for comparison to managed stands.
Cedar (Stands 4 & 6) 133 acres	▪ Passive management.	▪ Monitor natural regeneration; if natural cedar regeneration fails (due to changing climate or increasing deer browse) consider a resistance approach of planting cedar (perhaps with more investment/support than usual to ensure strong establishment). ▪ Increase monitoring to detect hydrological changes in peatland systems (possibly in collaboration with neighbors); revisit planned management if changes are observed. ▪ Continue to maintain some unmanaged "benchmark" areas for comparison to managed stands.
Northern Hardwood/Red Maple – Passive Management (Stand 8 & 13) 52 acres	▪ Passive management of these less accessible stands, which have not been as aggressively logged/managed in the past, contain larger-diameter trees, and offer RMZ/buffers to adjacent wetlands.	▪ These stands will be maintained as "benchmark" areas for comparison to similar managed stands. ▪ Create or maintain nurse logs to promote hemlock. ▪ Where opportunities arise and site characteristics indicate a good chance of success, consider hand-planting red oak and mid-tolerant species such as basswood, black cherry, and white pine. ▪ Monitor natural regeneration.
Northern Hardwood/Red Maple - Active Management (Stands 2 & 7) 81 acres	▪ Manage by uneven-aged selection (single tree or group selection) harvests to encourage long term multi-aged diversity. Gaps will be created to encourage age class diversity and edge cover. Promote oak, yellow birch and hemlock where opportunities exist. Snags, cavity trees, and other trees that have special value to wildlife will be retained.	▪ Reserve high-quality pockets of hemlock to serve as refugia for the species; Create or maintain nurse logs to promote hemlock. ▪ Diversify tree species and age classes by selecting against sugar maple and promoting mid-tolerant species such as white pine, yellow birch, black cherry, basswood and ash through increasing gap sizes in harvested areas. ▪ Promote red oak and white pine in areas where natural regeneration is occurring by using large group selection where the species are already present; otherwise plant them.
Swamp Hardwood (Stand 5) 97 acres	▪ Passively manage swamp hardwoods.	▪ Monitor natural regeneration; if regeneration fails (due to climate/deer browse), consider 1) a resistance approach of planting desired species such as balsam fir, black spruce, and tamarack (perhaps with more investment/support than usual to ensure strong establishment) or 2) a transformation approach of planting species such as white pine, and red maple that better tolerate warming and deer browse. ▪ Increase monitoring to detect hydrological changes in peatland systems (possibly in collaboration with neighbors); revisit planned management if changes are observed. ▪ Continue to maintain some unmanaged "benchmark" areas for comparison to managed stands.
Aspen (Stands 1 & 4) 41 acres	▪ The aspen stand will primarily be harvested through even-aged coppice regeneration cuts. Convert aspen stands to longer-lived species wherever opportunities exist. Green tree retention will be practiced in these stands while also focusing on snag and den/cavity tree retention. Retention will be concentrated near and between ephemeral ponds. In most cases, all pine, oak, hemlock and cedar will be retained, and areas of advanced regeneration of these species will be protected and released. This stand will be managed to provide diversity of cover types that will complement the older forests in the core of the property and mimic the management objectives on our partner's neighboring lands.	▪ Actively manage for conversion by extending rotation age to gradually reduce the pioneer species component, while planting desired hemlock-hardwoods species, and those species such as red oak, white pine, black cherry and basswood that better tolerate warming and deer browse Monitor establishment and if necessary provide additional investment/support to ensure strong establishment. ▪ Combined with above bullet. ▪ Continue to maintain some unmanaged "benchmark" areas (particularly inaccessible areas) for comparison and allow natural long-term conversion.
Red Pine Plantation (Stand 3) 3 acres	▪ This stand will be managed by periodic thinning every 10 – 15 years or as needed. Convert this stand to hemlock-hardwoods naturally, over time. Super canopy trees can be retained long term for diversity and aesthetic value. This stand will be managed to provide diversity of cover types that will complement the older forests in the core of the property and mimic the management objectives on our partner's neighboring lands.	▪ Promote hemlock-hardwoods species (hemlock, white pine, yellow birch, and basswood), and do so through active means because the site lacks seed trees. ▪ Promote only species such as red oak, white pine, black cherry, and basswood that better tolerate warming and deer browse, and do so through active means because the site lacks seed trees.