

High Conservation Value Areas on BPL *(updated 9/2022)*

The Bureau of Parks and Lands has identified 27 mostly forested areas which qualify as High Conservation Value (HCV). These cover about 100,000 acres, about 16% of the Bureau's fee lands, with about 90% of the area allocated as ecological reserves, on which timber management is excluded. Though the areas differ widely in character, their HCV categories are often similar. Most HCV on BPL's lands are Category 1 and Category 3 HCV, with several discrete point locations of HCV 6 in which total area is relatively small. Categories 2, 4, and 5 were assessed.

The majority of HCV areas on BPL land are encompassed within the Bureau's Ecological Reserve system. Ecological Reserves are areas established by statute (Title 12, Section 1801) to mean "*an area owned or leased by the State and under the jurisdiction of the Bureau, designated by the Director, for the purpose of maintaining one or more natural community types or native ecosystem types in a natural condition and range of variation and contributing to the protection of Maine's biological diversity, and managed: A) as a benchmark against which biological and environmental change can be measured, B) to protect sufficient habitat for those species whose habitat needs are unlikely to be met on lands managed for other purposes; or C) as a site for ongoing scientific research, long-term environmental monitoring, and education.*" Most ecological reserves will encompass more than 1,000 contiguous acres.

In addition to those 27 HCV areas, the managed lands also hold a number of sites with physical evidence of use by indigenous peoples, these qualifying as HCVs under Category 6. Such sites are not shown individually on this document nor described beyond the generic language in this paragraph, but the tracts on which such sites have been identified are listed by region, below the descriptions of other types of HCV. These "Category 6" sites will be buffered/protected as appropriate, reflecting advice provided by Maine's tribes and bands, and archeological sources including the Maine State Museum.

Background Information BPL Resource Allocation System

The Resource Allocation System describes a hierarchy of natural, historic, and cultural resource attributes. They are ranked from those that are scarce and/or most sensitive to management activities to those that benefit from management activities. The resource category which requires the most care of natural, historic, and cultural attributes will dominate over those categories where more active management of the resource occurs or is appropriate.

Designation of HCVF areas, which demand a higher level of protection to ensure long-term function, fits well into BPL's allocation system. Many of the critical HCV areas specific to the Acadian Forest Region (such as old growth forests and concentrations of RTE species' habitat) fit well into the Special Protection allocation. Ecological reserves ("ecoreserves") constitute roughly 90,000 acres. As noted above, these large, contiguous areas were designated for "*the purpose of maintaining one or more natural community types or native ecosystem types in a natural condition and range of variation and contributing to the protection of Maine's biological diversity, and managed: A) as a benchmark against which biological and environmental change can be measured, B) to protect sufficient habitat for those species whose habitat needs are unlikely to be met on lands managed for other purposes; or C) as a site for ongoing scientific research, long-term environmental monitoring, and education.*" These areas are prime candidates for HCVF designation.

Historic/cultural areas (above or below ground) containing valuable or important prehistoric, historic, and cultural features are also allocated as special protection areas and are off-limits to extractive management.

Subcritical areas such as late-successional forests (not-quite-old-growth) are maintained through BPL's policies requiring careful timber harvesting, retention, and a long-term management ethos. These areas are not allocated as no-management zones.

In summary, BPL's Allocation System provides an advantageous and appropriate framework for identifying and protecting all ecologically and socially significant areas in the ownership, both areas that qualify for HCVF and those that don't (whether due to size requirements or non-qualifying species protection (i.e. deer wintering areas)). Further, BPL's forest management prescription process includes specialist review that ensures areas identified as ecologically or socially significant are protected (whether it is in the form of no-cut buffers, BMP planning and implementation, and additional allocation). Lastly, as BPL continues to acquire new lands, manage lands previously not managed by the Bureau, and employ state of the art monitoring and inventory technology, special protection allocation and HCVF designations will continue to evolve.

HCVF Criteria

HCV 1: Species Diversity

"Any area that contains significant concentrations of HCV 1 species (RTE or endemic), or which contains habitat critical to the survival of these species will be an HCV area. It does not mean that any sighting or recorded presence of a RTE species would qualify as HCV, only where the concentration of species is globally, regionally or nationally significant."

This is one of the most common HCVF categories designated on BPL. These areas include concentrations of RTE habitats. Maine Natural Areas Program was and is a key State partner in the identification and protection of these areas. Thus, many of these areas occur within Ecoreserves.

HCV 2: Landscape-level ecosystems and mosaics

"Large landscape-level ecosystems and ecosystem mosaics, that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance."

BPL holds relatively large, contiguous tracts of land, the largest being Nahmakanta at ~40,000 acres (~16,000 ha). However, BPL's holdings are not significantly larger relative to other ownership entities in the State, some of which surpass the widely used 120,000 acre (50,000 ha) threshold. Therefore, no BPL parcels meet the criteria of this designation.

It is recognized that BPL ownership plays an important role in the conservation value of the North Maine woods (along with the greater Northern Forest) which hold regional, national and in some cases, global conservation significance.

HCV 3: Ecosystems and habitats

Qualifying ecosystems include those that are naturally rare, anthropologically rare, threatened/endangered due to imminent threats, and classified as threatened/endangered by a national/international system. The most discernable ecosystem in the State of Maine that meets these criteria is the old growth forest. Additionally, these forests often contain RTE species and thus cooccur as HCV 1.

On BPL lands, old growth forests and forests displaying extraordinary old growth characteristics are classified as HCV 3. An abundance of these forests and forest traits on a given tract of land was often impetus for allocation as Special Protection - Ecoreserves. HCV 3 areas not included in ecoreserves do exist and are identified, although they constitute a low acreage.

HCV 4: Ecosystem Services

Qualifying areas provide *basic ecosystem services* in critical situations including protection of water catchments and control of erosion of vulnerable soils and slopes. *Critical situations* are defined as that service poses a threat of severe, catastrophic or cumulative negative impacts on the welfare, health or survival of local communities, on the

functioning of important infrastructure (roads, dams, reservoirs, hydroelectric schemes, irrigation systems, buildings, etc.), or on other HCVs.

Degradation of forested areas adjacent to and within the watershed of waterbodies poses a threat to water quality, including that of public drinking water supplies. The Maine Forest Practices Act regulates management activities in riparian areas and is enforced by the Maine Forest Service. BPL is subject to these laws. Secondly, BPL classifies riparian areas as specialized habitat features, often applying larger-than-legally-required buffers along certain features (e.g. 330' vs. 250'). Third, BMPs are always employed, reducing greatly the risk of sedimentation and water quality degradation. Lastly, BPL's forest management policies in concert with its allocation system maintain healthy, robust, and resilient forests which (together the latter three) prevent catastrophic erosion.

Nine public drinking water wells are contained within and 22 public drinking water well buffers (as determined by Maine Public Drinking Water Program) overlap with BPL ownerships. Of the 22 buffer overlaps, 4 are for municipal public water wells and pump systems. Each of the wells at these 22 locations was located via GIS and risk of negative impact from BPL management was assessed. It was determined that the existing levels of protection within BPL's management system described above are sufficient at mitigating risk to municipal water sources.

Public drinking water sources and facilities are overseen by the State of Maine Public Drinking Water Program. This state agency has developed the regulatory framework for preserving water quality in Maine.

HCV 5: Community Needs

HCV 5 refers to sites and resources that are fundamental for satisfying the basic necessities of local people. The role of the HCV assessment is to characterize the level of dependence on the resource and to provide management recommendations for how to mitigate negative impacts on local people's livelihoods.

Water

As noted above, public drinking water sources and facilities are overseen by the State of Maine Public Drinking Water Program. BPL does not directly oversee the provision of water to local communities. In one case, a public drinking water well and facility is located on BPL land, land which is leased via deed to a private company in charge of providing the service to the town.

Health

BPL provides "firewood" permits to local residents which are especially important during times when fuel prices have risen to potentially cost-prohibitive levels, which would adversely affect their health and well-being. Trees are marked standing and permits to cut and remove them are sold to private individuals on a highly affordable per cord basis (generally 1-2 cords).

Livelihoods and General Well-being

BPL has an extensive recreation management system and offers some of the most distinguished recreation opportunities in the State. These provisions are funded almost exclusively internally.

After considering the fundamental needs of the people of the State of Maine and the existing policies and practices in place at BPL, it was determined no areas within the FMU qualify for HCV 5 designation.

HCV 6: Cultural Values

These areas are critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities). These areas include religious/sacred sites, burial grounds or sites at which regular traditional ceremonies take place. They may also include outstanding natural landscapes that have evolved as a result of social, economic, administrative, and/or religious imperative (i.e.,

fossils, artifacts, areas representing a traditional way of life); or areas that by virtue of their natural properties possess significant religious, artistic or cultural association.

Summary of High Conservation Value Areas by Region:

NORTH

SHU: N1

---Deboullie, 8,000 acres. 7,250 acres is ecoreserve, the remainder is high end late successional forest being managed to stay in that condition through careful harvesting. This tract includes RTE species and their habitats, late successional forest in softwood, mixedwood, and hardwood types, and matrix-forming forest. There are several small old growth forests and two significant talus slopes, one of which may hold relict ice from the most recent glaciation. One LS spruce stand often holds ice/snow into midsummer.

---Allagash SE public lot, 300 acres. This is two disjunct areas. The smaller area is 35 acres of spruce/hemlock slope forest, which features not only LS softwoods but is the state's most northwesterly stand rich in hemlock. The larger area includes a mile of St. John River frontage with the endangered furbish lousewort on the ice-scraped riverbanks. Much of the forest is used by deer as winter cover, though the cover is less than ideal. This area has had light harvests designed to enhance the cover value. The riparian buffer along the river is allocated as special protection, with timber management excluded.

SHU: N2

---Eagle Lake Old Growth, 15 acres, This stand northwest from Blake Lake has no visible evidence of harvesting though its location within easily accessed commercial forest makes it questionable whether none has ever occurred. The stand holds large old stems of sugar maple and hemlock with some yellow birch and red oak. There are also some very rare lichens.

---Salmon Brook Lake Bog, 1,053 acres, all within ecoreserve. The reserve is centered on the pond-bog complex, which is surrounded by black spruce woodland/forest of varying density. Farther from the bog there are acres in LS cedar-spruce forest, along with younger stands resulting from spruce budworm salvage harvests.

SHU: N3

---Chamberlain, 2,890 acres, all within ecoreserve. The land between Chamberlain and Big Eagle Lakes is mainly spruce-fir-cedar forest, much with LS character, plus some areas of mixedwood. It includes a 500+ acre spruce stand surrounding a nearly overgrown ancient bog. The area receives extensive use as deer winter cover. Within the reserve are several artifacts of early logging, including structures such as Lock Dam and the Tramway which allowed timber within the Allagash drainage area to instead be floated into the Penobscot system and thence to Bangor.

---Gero Island, 3,175 acres, all an ecoreserve. 1-F This island in Chesuncook Lake holds considerable LS softwood acres, old growth pine on its northern side. Though timber management is now excluded, there were several earlier harvests on the island, the most recent an ill-fated salvage of trees damaged or killed by spruce budworm. The mildest February in Maine records brought a dramatic end to that attempt. The island also holds a number of frequently visited campsites.

SHU: N4

---Scopan, 2,100 acres. This area is mainly the ridgeline of Scopan Mountain plus the adjoining slope forests, much of that being LS spruce or Northern hardwoods. At the south end of this area is an extensive cove forest with exceptionally tall (for northern Maine) white ash and sugar maple. This enriched forest holds uncommon species such as wicopy, and following a light harvest in the early 1980s has become a fern grotto with some rare species such as New York fern.

---Scraggly Lake, 200 acres. Two areas have been allocated as special protection. The first is 80 acres of old growth hemlock-hardwood which holds sugar maple, ash, and hemlock over 30" dbh with some hemlock exceeding 400 years of age. There are no visible signs of timber harvest, though the total lack of white pine suggests that some went to the nearby Beaver Brook long ago. The second area is 120 acres surrounding Ireland Pond. This area is high value LS, mainly mixedwood. It has hemlock nearly as large/old as area #1 but has clearly seen harvesting in the past.

EAST

SHU: E1

---Nahmakanta, 11,500 acres. This is nearly all within the ecoreserve at the northerly end of the tract. There are small areas of LS forest and one possible old growth stand farther south. Within the ecoreserve there is a wide diversity of types, ranging from old growth Northern hardwoods to LS spruce to burn-origin aspen-birch. These latter are the most abundant type, though at 90+ years since the fires they are transitioning to different tree species. Though the area has obviously had past harvesting, the circa-1920 wildfires wiped out all visible evidence of logging infrastructure, including any roads.

---Wassataquoik, 2,162 acres. This is an ecoreserve originally centered on a silver maple dominated floodplain forest but which in 2018 was extended to the entire tract. The reserve also includes LS Northern hardwoods and some scattered but impressive old growth white pines. The floodplain forest is a maze of old river channels and cutoff pools, huge ferns, and giant silver maple including Maine's largest tree of any species (if it has survived since last being measured at 98" dbh in 1996. The tree has not been officially measured for the Big Tree roster.)

SHU: E2

---Bradford/Lagrange, natural origin American chestnut. The middle/west part of this 1,900-acre tract holds a handful of chestnut trees, some larger than 15" dbh. The largest has died from the blight but not before its nuts produced several seedlings in the opening made intentionally to its south in the 2003-04 harvest. This HCV includes the sites of each known tree, all located by GPS.

---Seboeis, Leyford Island, 237 acres. This island in Seboeis Lake was last harvested during the 1950s, a fairly heavy higrade that regenerated essentially all acres leaving a modest overstory, principally undersized (in the 1950s) white pine. After 5-6 decades the forest is now in mid-succession and the residual pine is 80-90 feet tall and growing well. Though there is one camp lease near the south end, no other recreational development has occurred though some water-access campsites could be built if demand warrants.

SHU: E3

---Duck Lake, 6,650 acres. These acres are located in two distinct though contiguous ecological reserves. One of 3,850 acres was allocated by BPL in 2000 and covers the Gassabias bog complex, Fifth Lake Stream esker, and a 60-acre stand of old growth red and white pine. The second was pre-designated as part of the Machias River acquisition 8-9 years ago, and includes the riparian buffer around Fifth Machias Lake and that part of Fifth Lake Stream between the lake and the BPL-allocated reserve, plus frontage on Fourth Machias Lake. In addition to the bogs and old growth, the esker holds the largest area of natural origin red pine on BPL lands, and other features are LS spruce, hemlock, and Northern hardwoods plus considerable acreage in stands which originated after fires a few years either side of 1940.

---Lakeville Plt, McGoon Pond Lot, 260 acres. This smallest of Lakeville's three public lots was probably last harvested about 1950, and except for the tiny (2-3 acres) McGoon Pond itself is essentially all high value LS forest, an island of tall trees in the middle of a sea of relatively recent heavy harvests. This lot represents a fine example of the Eastern Maine forest of 200 years ago, with hemlock, spruce, and Northern hardwoods of respectable size and a smattering of 100' tall and 3' diameter pines.

SHU: E4

---Tunk-Donnell, 6,250 acres. There are two ecological reserves separated only by Route 182. To the north, Tunk Mountain's rocky summit and south-facing cliffs offer wonderful views and critical habitat for some rare plants. To the south lie the nearly bald twin summits of Black Mountain, the Rainbow Pond "rocky bog" complex, and Wizard Brook spruce-pine-hemlock old growth stand. Except for the summits and the upper Wizard Brook ravine, the forest has all been harvested several times, with the most recent cuts ranging from the 1950s to the 1980s, resulting in a middle aged forest of species able to thrive on gritty soils of relatively low fertility.

---Rocky Lake, 1,800 acres. The ecoreserve that includes the East Machias River bog system makes up most of this area, with a few hundred acres of deer wintering area along the southeast shore of Rocky Lake being the remainder. Forests within the ecoreserve are mainly mid-aged at best, with spruce budworm and subsequent salvage in the

1970s having left modest overstories but abundant pine-rich regeneration. The DWA stands are hemlock-spruce-cedar which meet LS criteria though at its low end.

---Cutler, 5,500 acres. This is all ecological reserve, in two separate tracts of different character. The 2,000-acre shoreland piece includes four miles of "bold coast" cliffs backed by maritime fir-spruce interspersed with rocky knobs and pocket bogs. The inland section is centered on a thousand-plus acres of meadowland, a feature unique in character and extent for this part of the Northeast. There is evidence that these grassland acres are an unintentional artifact of human origin, having come in following repeated incendiary fires in the middle 1800s. Forestland in this section is young compared to that on most BPL lands, heavy to spruce and fir, with areas of cedar and with hardwoods on the (slightly) better soils, though these latter are generally of poor quality. More demanding species such as hemlock, sugar maple, and white ash are rarely if ever found here.

---Great Heath, 5,500 acres. The overall tract of 5,681 acres includes the largest heath bog in Maine. The HCV excludes some forest land at the north end which has had some timber management not too long ago, and which is adjacent to private low-bush blueberry lands which receive annual applications of pesticides. The heath bog complex has several RTE plant locations, and includes several miles of the Pleasant River, an interesting canoe journey for those willing to haul over multiple beaver dams.

WEST

SHU: W1

---Mahoosucs, 10,200 acres. All of this is ecological reserve and the majority is subalpine fir and spruce at elevations 2,700' to over 4,000. However, there is also significant mature Northern hardwood forest and spruce/hardwoods on the shoulders of the peaks, plus the Goose-eye valley extending down to about 1,100' elevation, taking in multiple communities.

SHU: W2

---Bigelow, 11,000 acres. Most acres lie in The Horns ecoreserve, with smaller mature to old growth forest areas on the East Nubble and around Huston Pond. The ecoreserve covers the Bigelow Range ridgeline and extends down to about 1,900' elevation around it. Also included are segments north and south of the ridge, the north side reaching to 1,150', where Bureau ownership meets that of the operator of Long Falls Dam on Flagstaff Lake. The south side extends to Stratton Brook at about 1,240'. All habitats common to the region are included, from alpine barren to spruce-fir, Northern hardwoods, mixedwood, pine forest, and bog ecosystems. This tract also receives perhaps the heaviest recreational use of any managed by the Lands Division of BPL.

---Bigelow, 400 acres. This HCV is designated in recognition of the Roaring Brook mayfly, currently listed as Endangered by the Maine Department of Inland Fisheries and Wildlife. The HCV consists of 75 foot buffers on either side of watercourses on Bigelow known to or likely to support the insect, and lying outside The Horns ecoreserve described above. Stand types on this HCV are mature Northern hardwoods and mature spruce-fir/Northern hardwoods.

---Crocker Mountain. This recently acquired tract of nearly 12,000 acres lies between the State's Bigelow and Mount Abraham properties. Though the boundaries and acreage of the proposed ecoreserve are not yet determined, its estimated acres for this document are 5,700. This area includes the summit of Crocker Mountain, the north side glacial cirque with potential RTE species in and near the talus, considerable subalpine fir-spruce, plus the steep south slopes of Burnt and Sugarloaf Mountains.

---Mount Abraham, 4,033 acres. This is all ecoreserve, covering the 4,000' elevation ridgeline, a bit of west slope, and east slope down to about 1,600'. Mt. Abraham is said to have Maine's largest area of alpine habitat other than the tablelands at Katahdin. The reserve includes the region's typical elevation-dependent forests, but with a twist thanks to the east side's aspect ranging from south thru northeast. Midlevel (2,200-2,800') forests here are open hardwoods when facing south, rich spruce-fir when SE, less fertile fir-spruce on east aspect, and black spruce bog-on-the-steep when facing NE.

SHU: W3

---Number 5 Bog, 4,809 acres. This came to the state as a pre-designated ecoreserve (as did the ecoreserve portion of Mt. Abraham), and is centered on Bog Pond, surrounded by an extensive bog complex that grades into forest

consisting mainly of red/black spruce, pines, cedar, and fir. It is probable that this forest includes some jack pine in addition to red and white pines, as this part of Maine holds most of the natural-origin stands of that species.

SHU: W4

---Little Moose, Wiggins Bog, 300 acres. In addition to the open bog system, the area includes the riparian buffer around the bog and some "island" forest within it. The bog has a low dam that regulates water level to favor waterfowl. The forest in and around it include a red pine stand, spruce, cedar, fir, and limited hardwoods.

SHU: W5

---No HCVs. Except for the heavily cut (before state acquisition) Kennebec Highlands, these are all small tracts, many of which were former institutional lands and all with a long history of timber management. Some small areas with strong LS character or uncommon species (black gum is one example) have been identified and protected, but (except as noted under Category 6, below) nothing appears to meet HCV criteria.

SHU: W6

---Big Spencer Mountain, 4,242 acres. This is all pre-designated ecoreserve, encompassing the broad summit of Big Spencer and considerable acreage of mixedwood and Northern hardwood forest around its base. (This tract was included in the Seboomook [W6] management plan, but may now be part of W4.)

---St. John Ponds, 3,880 acres. Another pre-designated ecoreserve, this tract includes First, Second, and most of Third St. John Ponds, at the headwaters of the St. John River. Except for the riparian buffers, the forest was heavily harvested during the 1990s and so has stands that are either young (and in some cases treated with herbicide to favor softwoods) or hold relatively low stocking and quality of hardwoods.

Category 6: Sites with **confirmed** physical evidence of aboriginal use – Tract names only

These are treated as point locations, with no area associated though some cover minor acreage.

NORTH

--Baker Lake

EAST

--Duck Lake

WEST

--Bigelow

--Dodge Point

--Holeb/Attean

--Sugar Island

--Topsham