EXHIBIT B.15 ENVIRONMENTAL ASSESSMENT

The natural resources of the project area and vicinity have been extensively studied and documented through the development stage of this project, as well as through earlier studies performed in support of the licensing of the former Kenetech project and the studies performed for the Kibby Wind Power Project currently under construction. TransCanada's consultants have conducted rare plants surveys, vernal pool surveys, wetlands delineations, avian and bat surveys, and a habitat survey for other mammals of concern, in addition to general field studies to characterize the overall resources of the project area. TransCanada is engaged in ongoing consultations with applicable state and federal resource agencies to ensure that resources of concern have been identified and appropriate studies conducted according to appropriate protocols. Documentation of agency consultation is found in Attachment B.15-5. TransCanada's studies, when combined with those conducted over a decade earlier by Kenetech and the Kibby Project studies performed during 2005, 2006, 2007, and 2008 provide a comprehensive, long-term assessment of the natural resources in the project area. This assessment has formed the basis for the detailed project design work, allowing not only an identification of potential project impacts, but development of avoidance strategies resulting in a minimization of those impacts, as well as design of appropriate mitigation measures where impacts are unavoidable. Note that as sensitive natural features have been identified through the course of project field efforts, the project design has been adjusted to avoid and minimize impacts to such areas to the extent possible given engineering and land constraints.

This discussion provides a description of the existing natural resources in the project area and review of potential construction and operation impacts.

B.15.1 Avian and Bat Monitoring

See **Exhibit A.3**

B.15.2 Existing Conditions - Wildlife and Habitat

Section B.15.2 provides an overview of the habitat and wildlife in the project area. Additional details on rare, threatened and endangered species and natural plant communities if provided in Section B.15.4.

B.15.2.1 Vegetation and Habitat

The proposed Kibby Expansion Wind Power Project is located in the Boundary Mountains of western Maine, within the Western Mountains Biophysical Region, which borders northern New Hampshire and Quebec, Canada (see Figure B.15-1). The entire region is generally undeveloped and dominated by working industrial forest and mountainous landscape. The Western

Merrill Strip Twp

Skinner Twp

Kibby Twp

Chain of Ponds Twp

Jim Pond Twp

Alder Stream Twp

T-1
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T-14
T-15

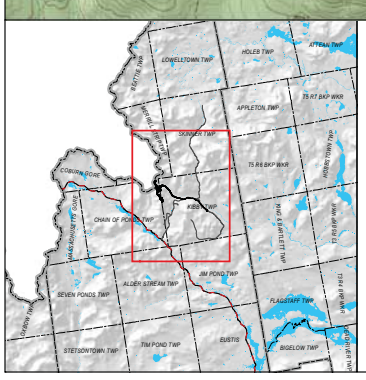
Laydown Area

Laydown Area

Mile Five Rd

Kibby Expansion Substation

Operations and Maintenance Building



Turbine Locations
Project Footprint
Existing Road
State Route

Sources: USGS, Maine OGIS, TRC

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Kibby Expansion Wind Power Project

Figure B.15-1
Project Map

TRC
14 Gabriel Drive
Augusta, ME 04330

Created: 11/28/2009

Mountains Biophysical Region is best characterized by its rugged topography, cool climate, low annual precipitation, and high snowfall. The average maximum temperature in July is approximately 75ºF (24ºC), which is lower than any other part of the state except the Eastern Coastal Region. The average minimum temperature in January is -1ºF (-18ºC), comparable to that of northern Maine. The average annual precipitation in this region is low, at approximately 39 inches (99 cm), although this varies with elevation and aspect. Due to the rain shadow effect that mountains and mountain ranges produce, windward slopes may receive up to 50 inches (127 cm) of annual precipitation while leeward slopes may receive less than 35 inches (89 cm) (McMahon 1990).

The project site, Sisk Mountain, is typical of many of the mountains in the area, and is a relatively rounded, flat ridge with the highest elevation of approximately 3,450 feet (1,051 m). Southern lower slopes of the mountain along the Chain of Ponds and Route 27 have extensive areas of exposed bedrock. The valley bottoms in the project area average between 2,133 and 2,461 feet (650 m and 750m) in elevation. Gold Brook drains the southeastern portion of the area southward, to the North Branch of the Dead River. Kibby Stream drains the northern and eastern parts of the project area eastward, to the Dead River. Clearwater Brook drains the western slope of the mountain to the Chain of Ponds. Vegetation in the project area consists primarily of mixed softwoods and northern hardwoods in the valleys, and spruce-fir on the summits. Field activities in 2009 included reconnaissance for met tower siting and access trail and natural resource survey corridors. These initial investigations were utilized to identify potential natural communities and other natural resources. Notes on the dominant plants, tree heights, hydrology, signs of wildlife use, and physical characteristics were recorded. As snow cover left the site, formal field surveys for wildlife, wetlands, soils, rare plants and natural communities were performed during the spring, summer, and fall of 2009. A site visit was also conducted with Maine Natural Areas Program (MNAP) during the summer of 2009, to observe the habitat and resources found on the site. Consultation with MNAP has been ongoing and has included mapping communities at the site. TransCanada also brought Maine Audubon and the Appalachian Mountain Club on a site visit during the summer of 2009.

A natural community is defined by Gawler and Cutko (2004) as an assemblage of interacting plants and animals and their common environment, recurring across the landscape, in which the effects of recent human intervention are minimal. Notably, the project area is located within a working forest. Virtually all of the lands below 2,700 feet (823 m) elevation are currently subject to forest management activities, and much of this area has been harvested at one time. The methods of harvest range from selective cutting for certain species or quality of wood to clear cutting. During the 1970s, many stands of western and northern Maine forests were severely affected by spruce budworm outbreaks. Consequently, the area's dominant forest types are in a variety of different ages and species composition. In some cases, potential natural

communities are not readily assignable due to recent or active timber harvesting: in these cases, areas have been identified as "regenerating forest". Following are descriptions of natural communities and habitat found in the project area.

Natural communities and potential natural communities found in the project area include the Spruce-Northern Hardwoods Forest; Spruce-Fir-Wood Sorrel- Feathermoss Forest; and Fir-Heartleaved Birch Subalpine Forest found in the highest elevation areas of the project (> 3,100 feet [944 m]). All four of these communities occur within the Spruce-Fir-Northern Hardwoods Forest Ecosystem of Maine (Gawler and Cutko 2004).

Spruce-Northern Hardwood Forest

Spruce-northern hardwood forest is the transitional natural community between the lower elevation hardwood forests and higher elevation softwood-dominated communities. It is believed that many of the regenerating conifer areas at elevations mainly below 2,700 feet were once spruce-northern hardwood forest. Where this community is still intact, the canopy is a mixture between hardwood (birch, beech, and maple) and softwood (mainly spruce) species with a variety of shrub and herb species. In the project area, this community is mostly found from 2,400 feet (731 m) up to 2,900 feet (884 m), in areas that have not been recently harvested.

Spruce-Fir-Mountain Sorrel-Feathermoss Forest

Spruce-fir-mountain sorrel-feathermoss forest is a very common natural community in Maine. It occurs on the side slopes of the mountains, and reaches elevations of approximately 3,100 feet (944 m) in the project area. These forests typically have a closed canopy with red spruce (*Picea rubens*) being dominant and balsam fir being common. From 2,900 feet (884 m) and up it tends to include a larger component of balsam fir, heart-leaved paper birch and mountain ash as it becomes fir-heartleaved birch subalpine forest. The understory is sparse and contains conifer litter, mosses and occasional northern forest herbs such as Canada dogwood (*Cornus candadensis*), common wood-sorrel, bluebead lily, and gold thread (*Coptis groenlandica*). These forests usually occur on very acidic soils (Gawler and Cutko 2004). This community was formerly included within a much broader classification, Subalpine Spruce-Fir Forest, in the 1991 MNAP classification (MNAP 1991).

Fir-Heartleaved Birch Subalpine Forest

Fir-heart-leaved birch subalpine forest is the dominant forest type of the highest parts of western Maine mountains and ridgeline areas above 3,000 feet (915 m). It also was formerly included in the broader 1991 Subalpine Spruce-Fir Forest classification (MNAP 1991). However, since it is a more unique example of high elevation forests within Maine, it has since been identified as a separate community type. This community has an S3 state ranking which is defined as a rare

community in the state with roughly 20 to 100 occurrences statewide (Gawler and Cutko 2004). In western Maine however, it is relatively common, and is found on many of the ridges that are higher than 3,000 feet (915 m) in elevation. The S3 ranking, therefore, is more of an indication of the relative rarity within Maine of the ecological conditions that foster the development of this community –namely, high elevations and a cold climate. These conditions promote the development of this forest community, and limit the existence of most other northern forest plant species. Additional discussion of this natural community is found in Section B.15.4.

Fir-heart-leaved birch subalpine forests in the project area occur on the highest parts of Sisk Mountain (see Figure B.15-2). Balsam fir and heart-leaved paper birch (*Betula papyfera* var. *cordifolia*) are the typical canopy species in this community, although red spruce and mountain ash (*Sorbus* spp.) also commonly occur. Canopy heights of this forest type increase as elevation decreases. In the highest parts of the project area, the canopy height is generally less than 40 feet (12 m) tall and the ground layer is often covered by a low-uniform layer of mosses. On Sisk Mountain and some of the higher peaks in the area (such as the summits of Snow Mountain, Kibby Mountain and Caribou Mountain), wind damage is often evident in the form of blowdowns and broken tree tops. On lower ridgeline areas and more protected lower slopes around 3,000 feet (915 m) in elevation, wind damage is non-existent and tree heights average 40 to 50 feet (12 to 15 m). Understory development varies in this community, depending on canopy characteristics. Where the canopy is broken, such as within blow downs, herbs, shrubs and regenerating canopy trees are found and dominant plants include balsam fir, mountain ash, heartleaved paper birch, red raspberry, wood ferns (*Dryopteris campyloptera* and *Dryopteris intermedia*), large-leaved goldenrod (*Solidago macrophylla*), whorled aster, and wild sarsaparilla (*Aralia nudicaulis*). Where the canopy is complete, understory development is sparse and often limited only to carpets of forest mosses, particularly red-stemmed moss and hairy-cap moss, with occasional goldthread, bunchberry and northern wood-sorrel. "Fir waves", which are successive areas of blowdowns, are an unusual expression of this community (Gawler and Cutko 2004). Some of the small areas of blow down observed on the western side of the ridge exhibit characteristics consistent with the beginning or first wave of a fir wave. The relatively narrow width and moderate slope of the western ridge limit the extent these blow down areas can extend, and restrict further development of these blow down areas into the sequential blow downs that define fir waves.

Regenerating Forest Stands

Young, regenerating forest stands occur throughout the project area and are common up to 2,700 feet (823 m) in elevation. These include clearcuts that are being actively managed to promote softwood growth. Some areas are well to over-stocked with fir and spruce regeneration ranging from 3 to 15 feet (1 to 5 m) in height, though very recent clearcuts frequently have little vegetation at all. Many of these regenerating forests have recently been thinned (pre-

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Kibby Twp
Chain of Ponds Twp
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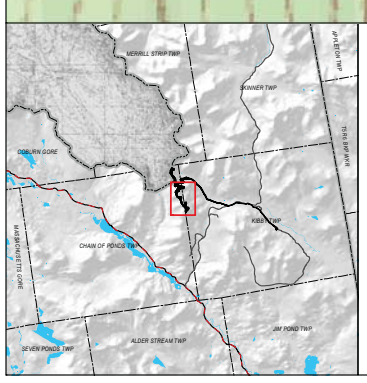
3000
2700
2600


Turbine Locations
Project Footprint
Fir-heart-leaved birch subalpine forest community (156 acres)

Sources: USGS, Maine OGIS, TRC

N

Feet
0 250 500

Kibby Expansion Wind Power Project

Figure B.15-2
Fir-heart-leaved birch subalpine forest community

TRC
14 Gabriel Drive
Augusta, ME 04330

Created: 11/28/2009

commercial). Other areas on lower slopes have been selectively cut. Many of these lower slope areas have a thick regeneration of hardwood. A large proportion of the cut areas have been harvested in the last 15 years. Above 2,700 feet, forest stands within the project area are typically in later stages of regeneration; in some areas, however, stands within the P-MA zones are approaching maturity, or are mature. The condition of forests in the P-MA zone is largely dependent on the extent and timing of forestry impacts prior to the inception of P-MA zoning, as well as the occurrence of natural events, such as spruce budworm infestations and blow downs.

B.15.2.2 Wildlife Resources

A number of wildlife species are known to occur in the vicinity of Sisk Mountain. Extensive field studies have been performed on Sisk Mountain during the spring summer and fall of 2009 and also in the immediate area of Sisk Mountain in recent years, relating to the development of the Kibby Wind Power Project, during 2005, 2006, and 2007. Survey planning and protocols were reviewed with Maine Department of Inland Fisheries and Wildlife during March and April 2009, in advance of survey implementation.

Mammals

There are 49 mammal species that potentially occur in the project area. Of these species, 30 were identified in the project area by tracks, sign, calls, or direct observation while traveling in the project area. Most of the potential species are relatively common, with the exception of Canada lynx (*Lynx canadensis*), and several of the small mammals. Consultation and surveys done for mammals related to the Kibby Expansion Project in 2009 focused primarily on Canada lynx, bog lemmings, and bats.

Canada lynx and the small mammals are discussed in Section B.15.4, addressing Rare, Threatened, and Endangered Wildlife; while the bat studies are summarized here and the survey reports are provided in Exhibit A.3.

While performing other natural resource surveys, incidental observations of wildlife and wildlife sign were also noted. Similar surveys were also performed by Kenetech in 1992 and 1993, and TransCanada in support of the permitting of the Kibby Project in 2005, 2006, and 2007. The findings of surveys performed in 2009 are consistent with the results of these previous surveys.

Evidence of moose (*Alces alces*), white-tailed deer (*Odocoileus virginianus*), black bear (*Ursus americanus*) and medium-sized furbearing mammals such as coyote (*Canis latrans*), Canada lynx, fisher (*Martes pennanti*), and marten (*Martes americana*) have been observed in the project vicinity. Small mammals such as snowshoe hare (*Lepus americanus*), and red squirrels (*Tamiasciurus hudsonicus*) are common. Several wetlands in the area have been identified that provide potential habitat for bog lemmings (*Synaptomys* spp.).

Several Maine Special Concern Species of bats have the potential to occur in the project area. These include the silver-haired bat (*Lasionycteris noctiuagans*), eastern red bat (*Lasiurus borealis*), hoary bat (*L. cinereus*), big brown bat (*Eptesicus fuscus*), northern long-eared bat (*Myotis septentrionalis*), eastern pipistrelle (*Pipistrellus subflavus*), little brown myotis (*M. lucifugus*), and the eastern small-footed myotis (*M. leibii*). Silver-haired bats inhabit forested areas near lakes and streams. These bats are frequently found in mountain coniferous forests (DeGraaf and Rudis 1986). The big brown bat frequents forested areas near human habitation (DeGraaf and Rudis 1986). The little brown bat inhabits caves, quarries, hollow trees and buildings, frequently near streams (DeGraaf and Rudis 1986).

Bat surveys were conducted in the project area between August 12 and October 15, 2009. Three bat detectors were deployed for the majority of this period and one bat detector was place on the then newly install met tower in late September. Two detectors (North Tower and South Tower) were placed on the top of portable towers at approximately 65 feet in height (20 m) above the ground, which was about 15 to 20 feet (5 m) above the surrounding forest canopy. A third detector (Radar Tree) was placed at approximately 5 feet (1.5 m) above the ground along the edge of the clearing where the radar monitoring equipment was set up for the nighttime migration surveys. The fourth detector (Met High) was deployed in late September at a height of approximately 150 feet (45 m).

During the survey, detectors operated properly on all but four detector nights, resulting in 204 detector-nights of data. The detectors documented a total of 94 bat call sequences, resulting in an overall detection rate of 0.5 call sequences per detector night. Activity levels were similar between the three detectors deployed in August, with 32 sequences recorded at the North Tower, 40 at the Radar Tree, and 22 at the South Tower. No call sequences were recorded at the Met High detector, which was not deployed until late September. At all three detectors where bat activity was documented, activity levels were highest in August, declined in September, and either remained level or declined further in October. Nightly activity levels ranged from 0-7 call sequences per night, with no more than 7 call sequences on any given night detected at any site during the survey. Peak bat activity was typically recorded between 3 and 4 hours past sunset.

Of the 94 recorded call sequences, 62 (66.0%) were classified as unknown, 15 (16.0%) were classified as belonging to the big-browned silver-haired guild, 13 (13.8%) were classified as myotis, and 4 (4.3%) were classified as hoary bat. Species composition of recorded bat calls was similar between detectors, with unknown calls comprising the majority at all three detectors that recorded bat activity. See Attachment A.3-3 for the full survey report.

Birds

There are approximately 170 bird species that may occur within or migrate through the Kibby Expansion Project area. Bird species that have been documented at high elevations (above 2,700 feet msl) include blackpoll warbler (*Dendroica striata*), yellow-rumped warbler (*Dendroica coronata*), Nashville warbler (*Vermivora ruficapilla*), winter wren (*Troglodytes troglodytes*), Swainson's thrush (*Catharus ustulatus*), dark-eyed junco (*Junco hyemalis*), fox sparrow (*Passerella iliaca*), common raven (*Corvus corax*), golden-crowned kinglet (*Regulus satrapa*), boreal chickadee *(Poecile hudsonicus)* and cedar waxwing (*Bombycilla cedrorum*). Bicknell's thrush (*Catharus bicknelli*) has also been documented in the area in appropriate habitat.

Bird species documented at lower elevations (below 2,700 feet msl) include winter wren, white-throated sparrow (*Zonotrichia albicollis*), Swainson's thrush, Nashville warbler, common yellowthroat (*Geothlypis trichas*), magnolia warbler (*Dendroica magnolia*), black-throated green warbler (*Dendroica virens*), red-eyed vireo (*Vireo olivaceous*), veery (*Catharus fuscescens*), Lincoln's sparrow (*Melospiza lincolnii*), song sparrow (*Melospiza melodia*), black-throated blue warbler *(Dendroica caerulescens)*, blackburnian warbler (*Dendroica fusca*), black-capped chickadee (*Parus atricapillus*), chestnut-sided warbler (*Dendroica pensylvanica*), ruffed grouse (*Bonasa umbellus*) and red-tailed hawk (*Buteo jamaicensis*).

Identification of avian usage of the wind power project area has been the subject of considerable effort by the TransCanada team. Building on the earlier work done by Kenetech in 1992 and 1993, and by TransCanada in 2005, 2006, 2007, and 2008, and conducted in consultation with the relevant resource agencies, TransCanada's consultants have completed an additional full year of avian surveys during 2009. Specifically, including studies performed for the Kibby Project, TransCanada's consultants have completed:

- Spring 2005 rare raptor nest surveys;
- Fall 2005 and spring 2006 nighttime migration (bird and bat) radar surveys;
- Fall 2005 and spring 2006 morning migrant surveys;
- Fall 2005 and spring 2006 daytime migration surveys;
- Spring 2006 rare raptor nest surveys;
- Spring/summer 2006 breeding bird surveys (with special focus on the Bicknell's thrush);
- Spring 2006 and fall 2006 acoustic bat surveys;
- Spring 2007 rare raptor nest surveys;
- Spring 2008 rare raptor nest surveys;

- Spring 2009 rare raptor nest surveys;
- Spring 2009 and fall 2009 nighttime migration (bird and bat) radar surveys;
- Spring 2009 and fall 2009 daytime migration surveys; and
- Spring/summer 2009 breeding bird surveys.

Protocols for these surveys were developed in consultation with USFWS, MDIFW, and LURC. In addition, agency personnel were able to participate throughout the survey efforts, through infield activities and through consultation. The 2009 studies for the Kibby Expansion Project are summarized and attached in Exhibit A.3.

Reptiles and Amphibians

Reptiles and amphibians are found throughout the project area in spite of often severe weather conditions in the area. Nine species of amphibians and one species of reptile were observed during field surveys in the project area. These observations were consistent with those detailed in the Kenetech LURC application and the observations made during field surveys performed to support the Kibby Project. The most common species observed were the American toad, red-backed salamander, wood frog, and garter snake, which were found throughout the project area. Other species such as eastern newt, spotted salamander, spring peeper, green frog, bullfrog, and two-lined salamander were also observed in the project vicinity. During the wetland, soil and botanical survey work, TransCanada's consultants identified areas that were man-made potential amphibian breeding areas. The results of this preliminary vernal pool survey is discussed in detail below, Section B.15.6.

TransCanada will continue to work with the USACE and USFWS to ensure that all appropriate protections for vernal pools are incorporated into the project design. The project will not impact any natural vernal pool depressions, however some of the habitat buffer areas around the pools will be affected. A discussion of vernal pools and potential project impacts to buffer areas is included in Section B.15.6 below.

B.15.3 Potential Impacts

B.15.3.1 Vegetative Communities

Construction of the proposed project will result in direct impacts within the discrete footprint of construction activities and permanent facilities. The presence of permanent facilities may result in potential indirect impacts, such as invasive species infiltration, habitat conversion, forest fragmentation and edge effects. These types of impacts are discussed below.

Direct Construction Impacts

As discussed in Exhibit B.13, approximately 159.9 acres of land will be disturbed during construction of the proposed project. Only 50.4 acres of this area will be subject to permanent impacts. Tables B.2 and B.13-3 list the acreage by project feature that will be impacted by the construction and final footprint of the Kibby Expansion Project. These estimates include clearing for: turbines and access roads; existing road improvements; equipment and component laydown areas; material handling/storage area; a construction control center and parking; the 34.5 kV collector system corridor; the 115 kV tap line to the Kibby Project transmission line; and a substation. Of the areas subject to construction impacts, only those for turbines and access roads, existing road improvements, and the substation will constitute a permanent loss of existing habitat. All other habitat alteration will be temporary, or will entail transformation from forested habitats to shrub and low forest habitats, such as associated with clearing for the collector system right-of-way. It should be noted that many of the areas below 2,700 feet have been recently harvested and are currently in early successional stages. A description of each project feature and the potential impacts from each is found in the following subsections.

WTG Pad/Assembly Area

The wind turbine generator (WTG) pads as shown in Exhibit B.13, Detail C-17, consisting of the WTG foundation, crane pad, WTG assembly area and in two cases the crane assembly area, will be cleared of trees and graded. Construction of the WTG foundations and crane pads will result in a direct loss of habitat, though each of these areas is relatively small and contiguous with the turbine access road. Clearing for the WTG assembly area and crane assembly area will also result in an indirect impact in the form of habitat conversion from a mature forest to a regenerating forest. These areas will be restored with a covering of erosion control mulch after construction is complete and will be allowed to naturally re-vegetate.

Access Roads

Impacts from the construction of access roads will include direct loss of habitat. Approximately 12.4 acres of habitat loss will occur from the construction of new roads, which will total 4.7 miles in length. Direct impacts from road construction have been minimized to the extent practicable. For example, necessary road width has been thoroughly scrutinized, and will be no greater than necessary.

The existing network of active and inactive logging roads in the area have been used as much as possible for access to the project area ridgelines and will be improved where necessary. New roads have been designed based on detailed consideration of field data such as the location of wetlands, streams, wildlife habitat, bedrock outcrops, and very steep slopes.

Collector Lines

The proposed collector line corridors 60 foot width will be cleared of trees. After construction, the corridors will be allowed to re-vegetate with shrubs and low trees to a height of up to approximately 10 feet (4.6 m). The corridor will become dominated by shrubs and a variety of broad- and narrow-leaved herbaceous vegetation as is typical of transmission ROWs. Vegetation along the corridor will be trimmed or maintained as necessary to maintain electric conductor/vegetation safety clearances, which on Maine ROWs is typically every 4-6 years. TransCanada subscribes to the "Integrated Vegetation Management" (IVM) principles, which strive to encourage the growth of native shrubs which will out-compete tree species that require maintenance. One of the underlying goals of this management strategy is to decrease the amount of management and herbicide use required to maintain a ROW. This approach has proven very successful and is widely used throughout the country.

As with the entire project, the collection system corridors were designed to avoid wetlands to the maximum extent practicable. Wetland avoidance has resulted in only clearing impacts to wetlands from clearing along the collector line routes. No filling of wetlands will be required for the collector lines. Wetland impacts are described in more detail below.

The collection system corridor closely parallels the project crane path, access road, Gold Brook Road and Wahl Road to the extent practical to minimize new clearing required. It crosses 39 streams, 17 perennial and 22 intermittent. Stream crossings are designed to site pole placements well above the streams so woody riparian vegetation can be maintained to the maximum extent practicable. This will help to provide continued shade to the streams, maintaining water quality.

Kibby Expansion Substation

The construction of the substation will impact 1.2 acres of area that is currently regenerating forest. Stormwater runoff will be treated at this site through utilizing rock sandwiches and undisturbed forested buffers. Stormwater is addressed in Exhibit B.14.

Temporary Project Construction Elements

There will be a number of temporary project impacts associated with construction that, in total, will disturb approximately 109.5 acres of land in the project area. These include equipment and component laydown areas (4.9 acres). All of these features will be located below 2,700 feet (823 m) in elevation and, to the extent feasible, will either be sited in areas that have been previously disturbed, or will be co-located with other areas that have to be disturbed to implement the project. Impacts from the use of these areas will be temporary, and will coincide with the construction of the project. Upon completion of construction, these areas will be restored.

Indirect Construction Impacts

Invasive Plant Species

The establishment of invasive plant species is a concern in any area where soil is disturbed. Non-native species currently found in the project vicinity where there is disturbed soil (i.e. along existing roads, and in existing log landings and skidder trails) provide an insight into what exotic plant species may potentially become established in areas disturbed by project construction. Commonly observed non-native plants within the project vicinity include colt's foot (*Tussilago farfara*), white clover (*Trifolium repens*), and helleborine (*Epipactis helleborine*). Most herbaceous vegetation found in disturbed areas within the project vicinity are native species such as sedges, grasses, goldenrods, asters, and raspberries. It is anticipated that any new roads will become colonized with similar plant species.

To eliminate the opportunity for undesirable plant species introductions on new road sections, disturbed soil will not be seeded or mulched with hay, but will be covered with a layer of erosion control mix. The application of this locally chipped mulch will limit the opportunity for non-native and invasive plant species to colonize disturbed areas and provide a suitable medium for indigenous shrub and tree regeneration. Furthermore, the harsh climate inherent to the project vicinity is expected to limit the suite of non-native species that are likely to become established in the due to project construction.

Habitat Conversion

The proposed project has the potential to permanently alter habitat in areas where surrounding habitat differs from that associated with project elements such as the collector line system and stormwater buffers along roads. Habitat conversion incurs a loss of original habitat types which, in turn, may affect species that are dependent on the habitat type being lost. Habitat conversion may also affect species that are attracted to the habitat that is introduced.

In general, given the existing land use and landscape characteristics of the project vicinity, construction and maintenance of proposed project elements below 2,700 feet (823 m) elevation will not result in habitat conversion that is not already extant or occurring in the area. Habitat conversion in P-MA zones will be isolated to the discrete, linear configuration of turbine locations along access roads; this configuration will minimize disruption of the surrounding habitats. For these reasons, wildlife impacts as a result of project-related habitat conversion are expected to be minimal in P-MA zones, and non-extant in areas below 2,700 feet (823 m) elevation. It is fully anticipated that local wildlife populations will adapt and respond to project-related habitat conversion much as they already do to ongoing forest management activities that are inherent to local landscape.

Forest Fragmentation

Fragmentation is the division of habitat into smaller and smaller patches that become more and more isolated from each other and from larger forested areas. These smaller patches are believed to be of lower quality, consequently providing less suitable habitat for native wildlife populations.

Continuous large tracts of mature forest wildlife habitats are considered highly valuable. Fragmentation, loss of habitat and loss of connectivity between large blocks of forested habitat have been cited as threats to Maine's forests. Maine's Comprehensive Wildlife Conservation Strategy (MDIFW 2005) defines threats to upland forest communities in Maine as "Large-scale forestry operations that result in habitat fragmentation, change in over- and under-story species composition (stand conversion); significant reduction in rotation length resulting in reduction in area of mature forest stands; loss of large blocks of forested habitat (>10,000 acres) and connectivity between large blocks; habitat loss and fragmentation associated with development and building of permanent roads…". For the above reasons, the USFWS Interim Guidelines to Avoid and Minimize Impacts from Wind Turbines (USFWS 2003) recommends that such developments:

Avoid fragmenting large, continuous tracts of wildlife habitat. Where practical, place turbines on lands already altered or cultivated, and away from areas of intact and healthy native habitats. If not practical, select fragmented or degraded habitats over relatively intact areas.

Potential Project-Incurred Fragmentation

As previously discussed, logging is a widespread and ongoing practice in the project vicinity. Therefore, the landscape (below 2,700 feet [823 m] elevation) is constantly changing, with mature forests being actively cut and infiltrated by associated logging roads, while regenerating stands inherently grow towards maturity. In general, these landscapes in the project vicinity represents lands that are "already altered…fragmented or degraded (USFWS 2003)".

The Kibby Expansion Project elements are generally narrow and linear in configuration. The roads along the ridges between turbines will have a 34 foot wide travel corridor during construction, only 20 feet of which will be maintained following construction. These roads will represent narrow breaks in the forest vegetation, but will not result in the separation or isolation of forest stands through which they traverse. Clearings for wind turbines will be approximately 1 acre in size, will be located along the road and, except for the turbine foundation and a crane pad, will be covered with erosion control mulch and allowed to naturally revegetate to native low shrubs and herbaceous cover. Likewise, these small openings will occur as islands within the forest, and will not isolate or separate forest tracts where they occur.

Collector line ROWs will be maintained as shrub-dominated habitats within a landscape that already contains a high occurrence of perpetually young, regenerating forest and clearcuts. In summary, given the existing character of the project vicinity, the proposed project is not expected to result in adverse fragmentation impacts beyond that which is already extant, occurring, or impending in this dynamic landscape. In P-MA zones, the collector lines will be collocated with crane paths and access roads to the extent practical and the narrow, linear character of project elements limits fragmentation of the existing vegetative community.

Potential Wildlife Impacts from Forest Fragmentation

Much research has been focused on determining the responses of wildlife assemblages to the size and degree of isolation of forest fragments. Most studies examine bird communities in fragments in agricultural areas, where forest stands are isolated and there has been a marked decrease in the regions' total forest area. Forest fragmentation, however, must be looked at from a landscape scale. Studies which have focused on the effects of fragmentation in forested landscapes are limited, but suggest that known effects (such as increased nest predation and isolation) are suppressed in a forested versus an agricultural or developed landscape (Sabine et al. 1996, Flatebo et al. 1999, Small and Hunter 1988, Rudnicky and Hunter 1993). Notably, the project area is located in a region which, though heavily altered by forestry, still possesses the characteristics of a forested landscape.

Some bird species observed in the project area that may be sensitive to forest fragmentation are the long-distance, neotropical migrants which rely on forest interior habitats. However, plentiful suitable habitat will continue to be found in the project area for these interior forest species. Most of the potential breeding birds that are likely to be found in the vicinity of the proposed project are not dependent on mature forest stands. Such species are typically found in forest settings that have a variety of timber size classes from young regenerating forest areas to larger mature trees (DeGraaf et al. 1992).

Most of the terrestrial mammal species that are likely to be found in the vicinity of the proposed project are not dependent on mature forest. Most mammal species observed are typically found in forests that have a variety of size classes (DeGraaf et al. 1992). Forest fragments have been found to be important to species which do not require forest interior and rely more on the interior of edges (Blake and Karr 1987; Freemark and Collins 1992). Although the current landscape in the project vicinity is heavily altered by forestry, ample forest tracts remain intact for those species which rely on large ranges of interior forest.

In summary, the impacts of fragmentation on wildlife in a forested landscape are still not well understood due to limited studies in this environment (Flatebo 1999). As discussed above, the conditions created by decades of forestry in the project vicinity creates a landscape that is

already degraded and altered. In areas below 2,700 feet (823 m), the proposed project will not result in fragmentation or associated wildlife impacts beyond that which is already extant, occurring, or impending in this dynamic landscape. In P-MA zones, the narrow, linear configuration of project elements limits potential for fragmentation effects on wildlife using these areas. Additionally, project design refinements in response to natural resource survey results and mapping has resulted in moving project elements to the edges of contiguous habitat areas to avoid creating newly fragmented areas and keep communities connected and as whole a possible. Overall, local wildlife species are fully expected to respond to the proposed project much as they already do to current logging impacts.

Edge Effects

Abrupt linear edges are inherent to corridors such as those that will be created by turbine strings, access roads and collector lines; this edge will be most evident where project development occurs in forested areas. In such areas, the abrupt edge can create a transitional zone which is characterized by species, habitat and microclimate that differs from both the forest and the corridor (Willyard et al 2004). Corridors can also, depending on width and structure, form distinct species groups associated with the forest interior, corridor interior, or edge habitats (Anderson et al. 1977, Chasko and Gates 1982, Gates 1991). The transitional zone between forest and corridor is often associated with increased species density and diversity; however, this trend may favor habitat generalists (Willyard et al 2004).

Overall, edge effects may be multiple and complex (Reis et al. 2004). Examples of complex interactions that may occur include alteration of predator/prey relationships, and ecological traps. Predator/prey interactions may be affected by increased densities of either party in edge habitats (Willyard et al 2004), or by facilitation of predator movement along the forest edge (Marklevitz 2003). Ecological traps (or sinks) occur along forest edges when mortality exceeds production (Willyard et al 2004). For example, Flaspohler et al. (2001) found that nest density for two ground-nesting species (hermit thrush and ovenbird) in a forested landscape increased in the forested zone near an opening; meanwhile, nesting success decreased.

As discussed in previous sections, cut areas (in various stages of regeneration) and logging roads are common to the project landscape. These areas already present a high degree of edge habitat that is similar to that which will be result from the proposed project. Given these existing conditions, the proposed project will not create edges (and thereby edge effects) incongruous with those that are extant, being introduced, or are impending due to forestry practices in the region. Edge species and interior edge species are expected to inhabit portions of the collector line and wind turbine clearings. Local wildlife species are fully expected to respond to project-related edge effects much as they already do to current logging impacts in the project vicinity.

B.15.3.2 Impacts to Wildlife

Mammals

Potential effects of wind development on mammals include barrier effects, displacement, habitat loss, direct mortality from vehicles (during construction and operation) and bat collision mortality. The northern bog lemming is the only listed small mammal species that may occur in the project area; the Canada lynx is the only listed large mammal species which may occur in the project area. These listed species are discussed in Section B.15.4 below.

The discrete area of project development, relative to the surrounding region, is not expected to impose barrier effects on the mammals. Large and small mammals within the project vicinity are expected to cross or use project-related openings and access ways in the same ways they use other forest openings (logging cuts and blow-downs) and access roads in the area. Wide, relative undisturbed forest will be found between turbines, which will leave adequate travel corridors for mammals wishing to pass or avoid the wind turbine clearings. For these reasons, the project is not expected to impose barrier effects on resident mammals.

It has been suggested that displacement of mammals may occur in response to visual, noise and vibration affects from turbines, or from vehicle and personnel movements related to site maintenance; however, few conclusive studies regarding displacement impacts of wind farms on terrestrial mammals exist. Any displacement effects related to this project are expected to be limited to the discrete areas of project development. Mammals (large and small) are not expected to avoid wind turbine locations due to vibration, sound, or changes in the habitat characteristic; rather, the vegetative community composition that will occur below the wind turbines will provide more diverse areas on the ridgelines and may increase the use of the turbine clearings by some mammals.

The scale of direct habitat loss resulting from the construction of this project is small relative to the abundant available habitat in the region, and will be isolated to the area of each turbine base and associated access. Many of the large mammals that occur in the project area tend to be highly mobile, range long distances, and hold large territories. A large territory in this landscape is likely to contain many small openings (from logging and blow-down); wind turbine clearings will resemble these natural clearings and are expected to be utilized as such by large mammals. Small mammals in the project area are abundant and highly mobile (within the scale of development); abundant habitat for small mammals exists in the immediate area of project development. For these reasons, habitat loss as a result of this project is not expected to significantly impact regional mammal populations.

Project construction and maintenance will require vehicular travel along project access ways. Inherent to such travel is a minimal risk of collision with mammals (large and small). Travel along project access ways will be limited in speed; this will allow maximum response time and minimize risk of collision with large mammals. After project construction, passage will be light, further reducing risk of collision with all mammals. Overall, risk of collision with large mammals is expected to be extremely low. Small mammals are the most likely to be at risk; however, the robust nature of small mammal populations in the project vicinity are expected to withstand any collision mortality without population impacts.

It is known that some bat species are vulnerable to collision with wind turbines. Recent studies documenting mortality at eastern wind power developments have found collision rates of nearly one bat per turbine per day during a swarming period survey (Arnett 2005). Reported annual bat mortality rates range from 0.0 to 47.5 fatalities/turbine/year among numerous wind farms in the United States and in other countries (Sterze and Pogacnik 2008). Numerous studies from across the United States, Canada and Europe are consistent in finding a dominance of migratory, foliage- and tree-roosting lasiurine species (particularly hoary bat, *Lasiurus cinereus*) killed by turbines (Arnett et al. 2008, Sterze and Pogacnik 2008).

Bat fatalities, although highly variable and periodic, consistently peak in late summer and fall, coinciding with migration of lasiurines and other species. None of the studies assessed by Arnett et al. (2008) found differences in bat fatalities between turbines equipped with lighting and turbines that were unlit. Data from North American wind energy facilities indicates that diameter of the turbine rotor does not influence the rate of bat fatality; however, bat fatalities increase exponentially with tower height (Barclay et al. 2007). All studies (assessed by Arnett et al. 2008) that addressed relationships between bat fatalities and weather patterns found that most bats were killed on nights with low wind speed (<6 m/sec) and that fatalities increased immediately before and after passage of storm fronts (Arnett et al., 2008).

The high elevation ridgelines in the project area are characterized by dense tree canopy, high wind speeds, and cold climatic conditions; furthermore, the project area lacks large, open wetlands and other suitable feeding habitats for bats. For these reasons, it is concluded that the project area does not provide favorable foraging habitat for bats. Consequently, tree roosting species (which are the species that have been found most during mortality studies; Arnett 2008, Sterze and Pogacnik 2008) are not expected to be abundant along project area ridgelines during the breeding and summer swarming season. It is also not anticipated that bats will concentrate specifically over the ridgelines during migration; therefore, potential impacts during migration time periods are expected to be low. These assumptions are supported by acoustic bat surveys performed at Sisk Mountain during 2009 which documented low levels of bat activity; furthermore, activity levels were similar (and low) between three acoustic detectors distributed in

different areas of the Project. Based on these facts, the project is not expected to impose adverse impacts on bats.

Birds

Main potential effects of wind development on birds include barrier effects, displacement, habitat loss, and collisions.

Barrier effects occur when birds alter their migration flyways or local flight paths to avoid a wind farm. None of the barrier effects identified so far have demonstrated significant impacts on avian populations (Drewitt and Langston 2006). Based on study observations to date, the proposed project does not block any significant flight paths used for foraging or migration; therefore, no barrier effect impacts are expected.

It has been suggested that displacement of birds may occur during both the construction and operational phases of wind farm development; however, few conclusive studies regarding displacement impacts of wind farms exist (Drewitt and Langston 2006). The displacement of birds from areas within and surrounding wind farms can amount effectively to habitat loss. The scale of direct habitat loss resulting from the construction of this project is small and will be isolated to the area of each turbine base and associated access. Likewise, any displacement effects are expected to be limited to these discrete areas of development. The small scale of habitat loss (both direct, and indirect via displacement) associated with this project, relative to the abundant available habitat in the region, is not expected to significantly impact regional bird populations.

Avian species are known to occasionally collide with wind turbine structures. Numerous studies have been performed which have attempted to quantify avian mortality at wind sites. The majority of international studies of collisions caused by wind turbines have recorded relatively low levels of mortality (Drewitt and Langston 2006). Where collisions have been recorded, the rates of avian collision per turbine are highly variable with averages ranging from 0.01 to 23 bird collisions annually (Drewitt and Langston 2006). Sterze and Pogacnik (2008) reviewed international studies (including many from the United States) and found that most mortality rates range from 0.0 to 2.0 fatalities/turbine/year. Extremely high rates of collision have been recorded at specific problematic developments, particularly in Spain (Sterze and Pogacnik 2008).

Collision risk depends on a range of factors related to bird species, numbers and behavior; weather conditions; topography; and the nature of the wind farm itself, including the use of lighting (Drewitt and Langston 2006, Drewitt and Langston 2008). Data from North American wind energy facilities indicates that diameter of the turbine rotor does not influence the rate of

bird fatality; also, the height of the turbine tower apparently has no effect on bird fatalities per turbine (Barclay et al. 2007).

Studies of the project area to date (discussed earlier in this section and in Exhibit A.3) show that avian use within the project area, particularly during migration, is low. For this reason, avian mortality rates are expected to be low to null, reflecting the lower end of the range of documented mortality rates. Any mortality events, if they do occur, are expected to be rare and isolated. For these reasons, significant collision related impacts to the regional avian population are not expected.

Reptiles and Amphibians

Conditions for reptiles and amphibians are relatively inhospitable in the project area and Maine in general. As a result, only 17 species of amphibians and 10 species of reptiles are expected to be seen in the project area. Of these, 14 species, such as the eastern newt, American toad, pickerel frog, and eastern garter snake are considered widespread or common in Maine. Vernal pool surveys are summarized in Section B.15.6 below.

MDIFW requested focused surveys for one species of amphibian, the spring salamander. The spring salamander is typically found in cold, undisturbed high relief mountain streams (Hunter et al. 1992) and is a Species of Special Concern in Maine. The species ranges from southern Quebec and central Maine to northern Alabama. Spring salamanders are the least common of Maine's streamside salamanders (Hunter et al. 1992). MDIFW requested that TransCanada perform surveys for spring salamanders in suitable habitat. There is a recent (2008) occurrence for the spring salamander in Gold Brook. TransCanada performed searches for this salamander at four locations in the Kibby Stream watershed. Though the habitat in the streams surveyed is suitable and it is likely they occur in the watershed, no spring salamanders were found. In any case, for construction activities in the Kibby Stream watershed, Best Management Practices as recommended by MDIFW will be followed to the greatest extent practical. These will include avoiding clearing within 250 feet of streams and utilizing erosion control Best Management Practices (BMPs) during construction in the watershed of the stream. At this time MDIFW has not made final recommendations for BMPs and TransCanada will continue to consult with MDIFW. It is anticipated that by following the BMPs there will be no impacts to this salamander species or other aquatic organisms.

B.15.4 Rare, Threatened and Endangered Species and Natural Plant Communities

B.15.4.1 Existing Conditions - Vascular Plants and Natural Communities

In a letter dated February 9, 2009, the Maine Natural Areas Program (MNAP) provided information regarding rare and exemplary botanical features in the vicinity of Sisk Mountain.

The letter, with associated list of rare species occurrences and map, is provided in Appendix B.15. The MNAP search revealed two occurrences of lesser wintergreen (*Pyrola minor*), a S2-ranked state species of special concern, within four miles of Sisk Mountain. One of these occurrences is on the east slope of Sisk Mountain. The MNAP search revealed five occurrences of boreal bedstraw (*Galium kamtschaticum*), a S2-ranked state threatened species, within four miles of Sisk Mountain. One of these occurrences is on the east slope of Sisk Mountain. The MNAP search revealed one occurrence of giant rattlesnake-plantain (*Goodyera oblongifolia*), a S1-ranked state endangered species, within four miles of Sisk Mountain. This occurrence is not located on Sisk Mountain. TransCanada surveys performed during 2009 documented an additional 11 occurrences of *Pyrola minor* and 205 occurrences of *Galium kamtschaticum* on the slopes of Sisk Mountain. No other rare plants were identified in the project area.

MNAP also noted the potential for the occurrence of a heartleaved birch subalpine fir community (S3) on Sisk Mountain. Field survey found that this community does occur on Sisk Mountain, primarily above 3,100 feet in elevation. MNAP visited the site in August 2009. In consultation with MNAP, TransCanada mapped the extent of this community using 2009 aerial photography interpretation, field survey and data plots. The community occupies an area approximately 156 acres in size. This forest is made up of primarily dense stunted and damaged balsam fir. As a result of the field investigations and data review, MNAP has ranked the Fir - Heart-leaved Birch Subalpine Forest community on Sisk Mountain as a 'B'.

MNAP used the 3 standard ranking criteria, 1) Quality/Condition, 2) Size, and 3) Landscape Context, and the A - D scale to derive the rank.

1) Quality/Condition = A, the site being an undisturbed ridge line and the community composition being representative for the type.
2) Size = B, the thresholds for size are >750 acres = A, >100 acres = B, >25 acres = C, > 5 acres = D.
3) Landscape Context = B, the managed forest landscape in which this site occurs is a standard B for this category

Landscape Context ranks:

A – Community surrounded by >= 1000 acres of undisturbed landscape.

B – Community surrounded by fairly intact landscape, though there may be cuts nearby.

C – Community surrounded by fragmented forest or rural landscape.

D – Surrounding area developed.

The three criteria averaged together in this instance = B.

A report that discusses rare plants and the fir heart-leaved birch subalpine forest community is attached as Attachment B.15-1. Also see the attached map, Figure B.15-2, that depicts the extent of this community on Sisk Mountain.

B.15.4.2 Rare, Threatened, and Endangered Wildlife Species

Several rare species of wildlife may inhabit the Kibby Expansion Project area. The project area is mountainous, with relatively high elevations, furthermore the climate in this area is considerably cooler than most of the state. These two factors contribute to habitat that is conducive to harboring several species that are at the southern edge of their range or are habitat specialists. These species include:

- Canada lynx (*Lynx canadensis*): Federal Threatened; State Special Concern;
- Rock shrew (*Sorex dispor*): Not listed;
- Yellow-nosed (Rock) vole (*Mictrous chrotorrhinus*): Not listed;
- Northern bog lemming (*Synaptomis borealis*): State Threatened;
- Golden eagle (*Aquila chrysaetos*): State Endangered;
- Bald eagle (*Haliaeetus leucocephalus*): Not Listed;
- Peregrine falcon (*Falco peregrinus*): State Endangered (breeding population only);
- Bicknell's thrush (*Catharus bicknelli*): State Special Concern;
- Roaring Brook mayfly (*Epeorus frisoni*): State Endangered.

Through consultation with MDIFW and USFWS, surveys have been undertaken by TransCanada to provide additional information to the agencies on Canada lynx, Bicknell's thrush, rare raptors, rare small mammal habitat, spring salamanders (discussed in Section B.15.3, above), and the Roaring Brook mayfly in the project area. These studies have also been used to develop a project layout that minimizes impacts to these. A summary of these studies follows.

Rare, Threatened or Endangered Mammals

Canada Lynx (Lynx canadensis)

Canada lynx are medium-sized, elusive cats that are common to boreal forests throughout Canada and Alaska. The southern portion of their range extends into some areas of the northern United States, with known populations in Montana, Washington, Maine and possibly Minnesota. Populations in Maine have been historically variable, and are largely dependent on suitable habitat and associated snowshoe hare populations (which comprise their primary prey). Ideal habitat for lynx in Maine consists of softwood dominated or mixed regenerating forests, about 10-30 years in progress (MDIFW 2003).

Correspondence with USFWS, dated April 20, 2009 (Appendix B-15), incorrectly identified the Kibby Expansion Project area as within the recently (2009) designated critical habitat for the Canada lynx, a federally-threatened species. More accurately, the project is in Kibby TWP and Chain of Ponds TWP, neither of which are included in the critical habitat but are adjacent to townships (Skinner TWP and Merrill Strip) that have been included in the critical habitat designation.

Winter track surveys for Canada lynx were performed winter 2005-2006 in Kibby and Skinner TWP as part of studies done for the Kibby Wind Power Project. These surveys were based directly upon an unpublished MDIFW protocol as provided by Ms. Jennifer Vashon, lynx biologist for the MDIFW, and discussions with USFWS and MDIFW. As requested by USFWS and MDIFW, agency personnel participated in the surveys when schedules permitted. No Canada lynx tracks were observed during these surveys.

During the winter of 2008, several sets of Canada lynx tracks were observed by Kibby Wind Power Project personnel in Kibby TWP. These observations were shared with the USFWS, furthermore through additional informal consultation with Service staff, anecdotal track observation information has been collected during construction of the Kibby Wind Power Project. Additional Canada lynx tracks have been observed and documented in Kibby TWP during 2008 and 2009.

For these reasons, the USFWS initially recommended that TransCanada perform winter tracking presence/absence surveys for this species in the vicinity of the Kibby Expansion Project. Habitat modeling was also identified by the USFWS as a useful tool that could provide information for Section 7 Consultation. Through consultation with USFWS, TransCanada has committed to assessing Canada lynx in the project area with a habitat modeling exercise. Given that Canada lynx are known to be present in Kibby TWP, and road length suitable to conduct effective track surveys is not found in Chain of Ponds TWP, USFWS has agreed that determining potential impacts to suitable habitat will be the most effective method of assessment.

Small Mammals

Consultation with MDIFW and USFWS for the Kibby Project and the current project proposal identified the potential for the occurrence of northern bog lemming (state-listed threatened), rock voles (also known as the yellow-nosed vole, a state special concern species), and rock shrew (a state special concern species). Due to the sensitivity of these species to trapping activities, a determination was made on the Kibby Project, in consultation with the resource agencies, to conduct field surveys for habitat rather than trapping individuals. Where appropriate high-quality habitat is identified, TransCanada worked to avoid impacts to such habitat, thereby avoiding potential impacts to the species. This same approach was proposed by TransCanada for the

Kibby Expansion Project and agencies once again determined that this approach was appropriate. Habitat surveys were conducted on Sisk Mountain during the spring, summer and fall of 2009.

In determining the potential presence of appropriate field conditions for each species, the following characteristics were considered:

- Northern bog lemming – wet meadows or boggy areas with deep sphagnum, sedges, and grasses in spruce-fir forest.
- Rock vole – talus slopes, rocky outcrops, and boulder strewn areas of coniferous, deciduous, and mixed deciduous-coniferous forests near flowing or subsurface water.
- Rock shrew – wet, moss-covered rocks or boulders along streams, among talus; rock slides; in deciduous, coniferous, and mixed forests.

In addition to focused habitat surveys, field personnel were responsible for noting occurrences of such habitat within the proposed work areas associated with the project during the course of other project related surveys (i.e., for vernal pools, wetlands, soils mapping, botanical, and other activities). Based upon the surveys completed, no characteristic habitat areas for the yellow-nosed vole or rock shrew were noted within the proposed project work areas. Three wetland complexes on Sisk Mountain were identified with habitat characteristics suitable for northern bog lemming. Once identified, additional field efforts were undertaken to search for evidence of use by bog lemmings (runways, toilets, etc.) and two-foot contour data was utilized to identify the sub-watershed boundaries of each wetland complex, which was used to delineate the habitat areas. See Figure B.15-3 for a map of the habitat identified in the vicinity of the project.

Rare, Threatened and Endangered Birds

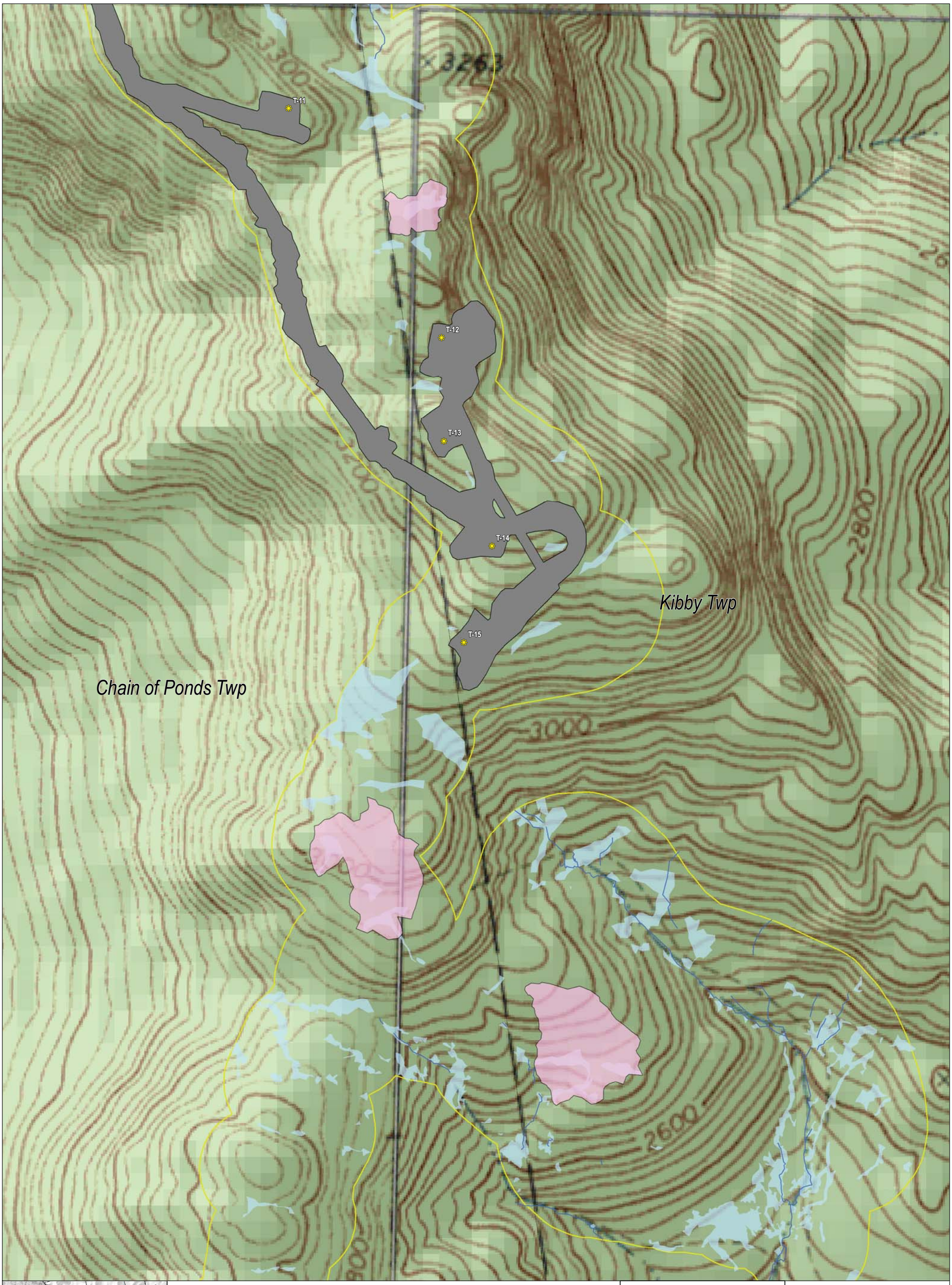
Raptors

There are three species of rare raptors that may occur in the western mountains of Maine: bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), and peregrine falcon (*Falco peregrinus*). The once-listed bald eagle, is no longer protected under either the Maine or federal Endangered Species Acts. Golden eagles are state-listed as endangered, but are not federally listed. Both bald eagles and golden eagles and their nests are protected by the Bald and Golden Eagle Protection Act, 16 USC §§ 668-668d. The breeding population of the peregrine falcon found in Maine is listed as endangered on the Maine ESA list, but is not on the federal list.

Correspondence with the USFWS and MDIFW (Appendix B.15) identified the presence of a known historical golden eagle nest site on the southern side of Sisk Mountain as well as the presence of two other historic nest sites in the Chain of Ponds area (one is in Chain of Ponds at Indian Stream Mountain, and one is in Coburn Gore at Moosehorn). These three historic golden eagle nests occur within a ten-mile (16-km) radius of the Kibby Expansion Project area; the

closest of these sites is on the southern slopes of Sisk Mountain, and is over 2 miles (3.2 km) from the closest proposed turbine sites. The other historic sites are greater than 4 miles from the proposed project. The most recent known occupancy of any of these sites was in about 1970.

There are no nest sites of bald eagles located in the project area; however, breeding bald eagles are present in northwestern Maine, and there are known recent nest sites on nearby Flagstaff and Spencer Lakes. Although the project area is possibly within these nesting eagles' home range, they typically focus their time around larger waterbodies and it is unlikely they would frequent the ridges within the project area during breeding season (personal communication with Charlie Todd, MDIFW).



Turbine Locations
Project Footprint
Potential Bog Lemming Habitat (18 acres)
Wetlands
Streams
Wetland Survey Limits

Sources: USGS, Maine OGIS, TRC

N

Feet
0 250 500

Kibby Expansion Wind Power Project

Figure B.15-3
Potential Bog Lemming Habitat

TRC
14 Gabriel Drive
Augusta, ME 04330

Created: 11/28/2009

In addition to statements regarding nesting, the USFWS also states that Sisk Mountain may have some importance to migratory golden eagles and that there is the potential for the presence of occasional transient bald eagles in the project area.

TransCanada was originally aware of historic eagle data for the area through consultation with agencies for the Kibby Wind Power Project. Survey protocols for rare raptors were developed in consultation with both state and federal resource agency biologists for the Kibby Project, and similar protocols have been used for the Kibby Expansion Project. Rare raptor (bald eagle, golden eagle, peregrine falcon) nest surveys have been performed in potential breeding areas for the Kibby Wind Power Project during 2005, 2006, 2007, and 2008. Surveys were also done in 2009. These surveys were conducted by observing potential and historic nest sites from the ground and air (via helicopter) in March, April and May. Areas surveyed include great ponds, wide rivers, and cliff sites within 10 miles of the proposed project. Aerial surveys have been performed by helicopter during several of these years, including 2009, and have included biologists from MDIFW. Waterbodies surveyed include Tea Pond, Jim Pond, Chain of Ponds, and the South and North Branches of the Dead River. Surveys from the ground have also been conducted at the cliff sites in several recent years, including 2009. Cliff sites that have been surveyed include Indian Stream Mountain, Sisk Mountain, and Moosehorn (adjacent to Arnold Pond). None of these historic golden eagle nest sites are known to have been occupied by golden eagles in recent years, and surveys of these sites performed in 2005, 2006, 2007, 2008, and 2009 verified absence of use by golden eagles.

During 2009, additional ground surveys were performed at several different vantage points in Chain of Ponds TWP and Coburn Gore at the suggestion of USFWS. These additional surveys were intended to survey large expanses of the surrounding terrain for eagle activity in the area.

In summary, the survey activities over the past five years have not found any breeding, nesting, or territorial activity by golden eagles, bald eagles, or peregrine falcons within ten miles of the project area. The survey protocol and results are discussed in Exhibit A.3.

All three rare raptor species have been observed in Kibby and/or Chain of Ponds Townships during non-breeding and migration seasons during surveys done for the Kibby Expansion Project during 2009. In addition, Golden eagles and bald eagles that are being tracked with satellite transmitters have also been located in the general area during non-breeding and migration seasons over the last several years. These birds are part of studies being done by the National Aviary (www.aviary.org/cons/project.php) and the Center for Conservation Biology at the College of William and Mary (http://ccb-wm.org).

Songbirds

Breeding bird surveys were performed during June and July of 2009 on Sisk Mountain, with an emphasis on detecting Bicknell's thrush.

Bicknell's thrush populations are primarily limited due to suitable habitat availability on both their breeding and wintering grounds (Rimmer et al. 2001, Rimmer and McFarland 2001) as they are a habitat specialist. The species selects patches of high elevation regenerating balsam fir forests in areas on mountain tops more prone to disturbance (i.e. wind throw, ice and snow damage, fire, and stunted fir altitudinal fir forests) (Rimmer et al. 2001). It is estimated that 110,934 hectares (ha) (277,335 acres) of potentially suitable conifer-dominated montane forest habitat is available within the breeding range of the Bicknell's thrush (Rimmer et al. 2001). Of this, Maine accounts for 23% of the potential suitable habitat, with New Hampshire having the greatest potential at 43% suitable habitat. Potentially suitable habitat was identified through the use of field surveys and aerial photo interpretation and covers approximately 35.7 hectares (88.25 acres) on Sisk Mountain. Sisk Mountain potential habitat accounts for less than 1% of the total potentially suitable habitat in the species range as modeled by Rimmer et al. (2001).

It is important to also take note that Bicknell's thrush is not listed under the Federal Endangered Species Act or the Maine Endangered Species Act. It is however, along with 51 other bird species found in Maine, listed as a Species of Special Concern in Maine.

A survey protocol similar to that used for breeding bird survey on Kibby Project, which is based on the Vermont Center for Ecostudies (VCE), formerly Vermont Institute of Natural Science(VINS) Mountain Birdwatch program and Bird Studies Canada's High Elevation Landbird Program protocols. This protocol has been developed in consultation with MDIFW and includes a spot mapping methodology to help identify areas that are actively used and frequented by Bicknell's thrush. Three-1 kilometer long survey transects were established on the ridge from near the southern peak of the mountain extending north beyond the northern peak. Survey points were located every 250 meters along the transect, for a total of 15 survey points. Surveys were augmented to identify the presence of Bicknell's thrush through use of playback.

Bicknell's thrush were observed by sight or audible calls at six of the fifteen breeding bird survey point counts during the first week of June. After consultation with Tom Hodgman, MDIFW, a spot mapping exercise was performed per the survey protocol within 10 hectare plots centered on each point where the birds were observed. Locations where Bicknell's thrushes were observed, through visual and audible calls, were plotted using a GPS unit. The spot mapping surveys demonstrated a higher use within four of these plots and the observation data were used to delineate two core areas that are used by Bicknell's thrush during breeding season. The total size of the core area is 7.3 hectares (18 acres). Based on the observation data collected

during 2009, the estimated density of Bicknell's thrush on the Sisk Mountain breeding grounds is approximately 0.33 thrush per hectare (2.49 acres).

The survey protocols and results are discussed in Exhibit A.3.

Rare, Threatened, or Endangered Invertebrates

Roaring Brook mayfly

Through consultation with MDIFW, the recent (2008) documentation of the occurrence of a state-listed endangered Roaring Brook mayfly (*Epeorus frisoni*) in Gold Brook, Kibby TWP, came to TransCanada's attention. Gold Brook is a tributary to the North Branch Dead River, and it's headwaters on the southeastern slopes of Sisk Mountain. MDIFW asked TransCanada to perform additional surveys for these mayflies in streams found in the vicinity of Sisk Mountain. Assuming that the mayfly is found in Gold Brook and it's tributaries, in consultation with MDIFW, TransCanada did not perform additional survey of Gold Brook. Surveys were completed by TransCanada at four sites in the Kibby Stream watershed, however, following a MDIFW survey protocol (see Attachment B.15-2). Two *Epeorus* species of mayflies were collected from two of these sites and are being identified by a mayfly expert. Results will be shared as available.

B.15.4.3 Potential Impacts – Rare Vascular Plants and Natural Communities

Impacts to the rare plants lesser wintergreen and boreal bedstraw will be avoided completely by routing project access roads away from known plant locations.

There will be impacts to the now mapped fir heart-leaved birch subalpine community from road and WTG construction. A total of 34.8 acres (22%) of this community out of the 156 acres mapped will be removed in order to construct these project elements. The layout of the primary crane path has been moved to the fringes of the community to the extent possible to minimize clearing impacts and fragmentation. Crane path access to WTG sites within the community are by direct spur roads that follow the most direct routes feasible from an engineering perspective. Consultation with MNAP is ongoing, and any additional information resulting from these discussions will be shared with LURC.

B.15.4.4 Potential Impacts to Rare, Threatened and Endangered Wildlife

Rare, Threatened or Endangered Mammals

Canada Lynx

Though the recently designated Canada lynx critical habitat does not include any of the Kibby Expansion Project area, lynx are likely to be found in the project area. We know this as evidenced by tracks observed during 2008 and 2009 in Kibby Township. Canada lynx have not been documented in Chain of Ponds TWP, but its proximity abutting Kibby TWP makes it likely.

TransCanada recently concluded consultation with the USFWS regarding the recently designated critical habitat (designated February 24, 2009) with regard to the area of the approved and constructed Kibby Wind Power Project that is in Skinner TWP, which is included in the critical habitat. This consultation was based on habitat modeling performed for Skinner TWP. The USFWS concluded, in a letter dated August 4, 2009, that the Kibby Project is not likely to adversely affect critical habitat as a result of construction of the project.

Similarly-, the Kibby Expansion Project, is unlikely to adversely affect the lynx for the same reasons.

- the project will remove a relatively small area from matrix forest habitat (50.4 acres);
- the habitat that is being affected does not support a high density of snowshoe hare;
- revegetation around turbines, along roads and in collector line corridors may improve habitat suitability for snowshoe hares;
- the removal of some of the abundant coarse woody debris found in the area will not adversely affect lynx denning habitat; and
- the openings created by the project are smaller than those that might deter lynx movement.

TransCanada will also commit to documenting incidental observations post-construction to document occurrence of lynx. Traffic speeds during and after construction will be kept less than 30 mph to minimize risk of collision with lynx. Furthermore, TransCanada will investigate the possibility of gating new roads to vehicle traffic during the fall hunting and trapping seasons to further reduce the likelihood of incidental take of lynx.

Small Mammals

The northern bog lemming, a threatened state species, may occur in the project area. Three areas of suitable habitat have been identified on Sisk Mountain. Locations of proposed roadways and

wind turbines have been adjusted to completely avoid impact to any of these identified habitat areas. This includes not only avoiding impacts to the wetland but also the entirety of the upland habitat within each sub-watershed. By avoiding construction activities within the watershed of this habitat, TransCanada is insuring that wetland hydrology and associated habitats will not be adversely impacted. This approach will help to maintain a significant area of both upland and wetland habitats.

The rock vole is known to inhabit coniferous and mixed forests at higher elevations, and MDIFW has two recent records of the rock vole on the lower slopes of Kibby Range (MDIFW 2005). These voles favor damp moss-covered rocks and talus slopes in the vicinity of streams (DeGraaf and Rudis1986). Another small mammal that has similar habitat preferences is in the rock shrew. Habitat for the rock shrew includes wet, moss-covered rocks or boulders along streams, among talus; rock slides; in deciduous, coniferous, and mixed forests. Based upon the surveys completed, no characteristic habitat areas for the rock vole or rock shrew were noted within the proposed project work areas.

Rare, Threatened, or Endangered Birds

Raptors

General potential project impacts to avian species, including barrier effects, displacement, habitat loss, and collision are addressed in section B.15.3.1.

Loss of historic golden eagle nesting habitat, either directly or indirectly by displacement has been addressed as a potential impact of project development. None of the known historic golden eagle nest sites (i.e. potential peregrine falcon nest sites) are in the area of proposed development; therefore, no direct loss of nesting habitat will occur. In general, research has shown that displacement of raptors at wind farms is negligible (Madders and Whitefield 2006). For this reason, no indirect loss of nesting habitat via displacement is expected.

As discussed in section B.15.3.1, the overall risk of avian collision with proposed project turbines is estimated to be very low. Diurnal raptor migration surveys performed at Sisk Mountain during the spring and fall of 2009 demonstrated that Sisk Mountain is only lightly used by migrating raptors (A full report is provided in Attachment A.3-2). Passage rates at this location were significantly lower than any comparative or concurrent regional data. The number of birds flying down the ridge line, specifically, was also very low. These observations provide evidence that the ridge does not provide wind characteristics (i.e., little updraft or thermal production) that create a focus or concentration point for raptors moving through the area.

As discussed, migratory golden eagles have been observed in the vicinity of the Kibby Expansion Project; specifically, observations have been documented in the fall of 2005, the fall

of 2007, and spring and fall of 2009. The golden eagles observed in 2005 and 2007 were associated with Kibby Mountain and Kibby Range, respectively, and were not associated with the Sisk Mountain ridge. Three golden eagles were observed during 2009 migration surveys. One of these golden eagles was observed in the spring of 2009, crossing the ridge of Sisk Mountain in a perpendicular direction. It was not soaring along the ridge or using updrafts from the ridge and therefore did not exhibit flight behavior that is known to increase collision risk. The other two golden eagles seen in the vicinity of Sisk Mountain during fall 2009 surveys did not fly along or over Sisk Mountain but were observed to the east, over the slopes of Kibby Range.

Bald eagles may also be found in the project area during migration, as was evidenced by the small number of bald eagles (two, total; one individual per season) that have been observed in the project area during spring and fall migration surveys conducted in 2009. One of these eagles crossed the Sisk Mountain ridge at tree-top level in a perpendicular direction; the other was observed flying over Chain of Ponds (waterbody, not township). One additional unidentified eagle was observed crossing perpendicular to the ridge. None of these eagles were observed soaring along the ridge top or using updrafts rising from the ridge top.

Peregrine falcons have also been documented to occasionally migrate through the project vicinity. In 2009, no peregrine falcons were observed during the spring migration period and one was recorded during the fall. This bird was traveling along the eastern lower slope of Sisk Mountain and did not approach the ridge.

Overall, the low number of listed raptor species in the project area and their flight behavior suggests that risk of collision with project turbines is low.

Bicknell's Thrush

During 2009, potentially suitable habitat was identified through the use of field surveys and aerial photo interpretation and covers approximately 35.7 hectares (88.25 acres) on Sisk Mountain. This potentially suitable habitat accounts for less than 1% of the total potentially suitable habitat in the species range as modeled by Rimmer et al. (2001). Through consultation with MDIFW, the project layout has been adjusted to minimize impacts to the potential habitat and avoid core habitat areas to reduce potential impacts to the Bicknell's thrush. Project layout impacts 5 ha (12.4 acres) of the 35.7 ha (88.25 acres) of potential habitat, and has been adjusted to be mostly on the edges of the habitat. Given an estimated density of Bicknell's thrush on the site of 0.33 thrush/ha, 2 thrushes may be displaced by the construction of the project. Though the core habitat areas are avoided by the project layout, TransCanada has also committed to MDIFW to curtail operation of WTG 11 at dawn and dusk, which is in close proximity to the

core habitat, during the Bicknell's thrush breeding season, June 1 to June 30, to further reduce the risk of potential impacts to the bird.

Rare, Threatened, or Endangered Invertebrates

Roaring Brook mayfly

The Kibby Expansion Project will have minimal area within the Gold Brook watershed, where this species of mayfly is known to occur. The Project has also been designed to minimize impacts in the Kibby Stream watershed. All streams in the project area that are in the Kibby Stream watershed with potential habitat for Roaring Brook mayfly are crossed by an existing gravel and winter road (the "Mile 5 Road"). Improvements to the existing road for the project will improve the stability of this road and drainage and improve water quality. For construction activities in the Kibby Stream watershed, Best Management Practices as recommended by MDIFW will be followed to the greatest extent practical. These will include avoid and minimize clearing within 250 feet of streams and utilizing erosion control Best Management Practices (BMPs) during construction in the watershed of the stream. At this time MDIFW has not made final recommendations for BMPs. TransCanada will continue to consult with MDIFW to identify these BMPs.

B.15.5 Wetland Alterations

B.15.5.1 Study Area

A study area for natural resource assessment efforts was identified based on potential WTG locations and road layout derived from terrain analysis. A 375-foot buffer was projected from these potential new development sites to create a generally 750-foot wide study corridor in currently undeveloped areas, which is much wider in some areas. A study corridor 300-feet wide was established along existing roads. This study area initially covered approximately 780 acres, it was expanded, however, throughout stages of project planning to address shifts in alignment. Upon completion of fieldwork, the survey area encompassed approximately 1,084 acres; 177.9 acres of this area comprise the final project construction area. The survey area is depicted in Figure B.15-4.

B.15.5.2 Methodology

Wetland and stream delineation and mapping surveys were conducted during the summer and fall of 2009.

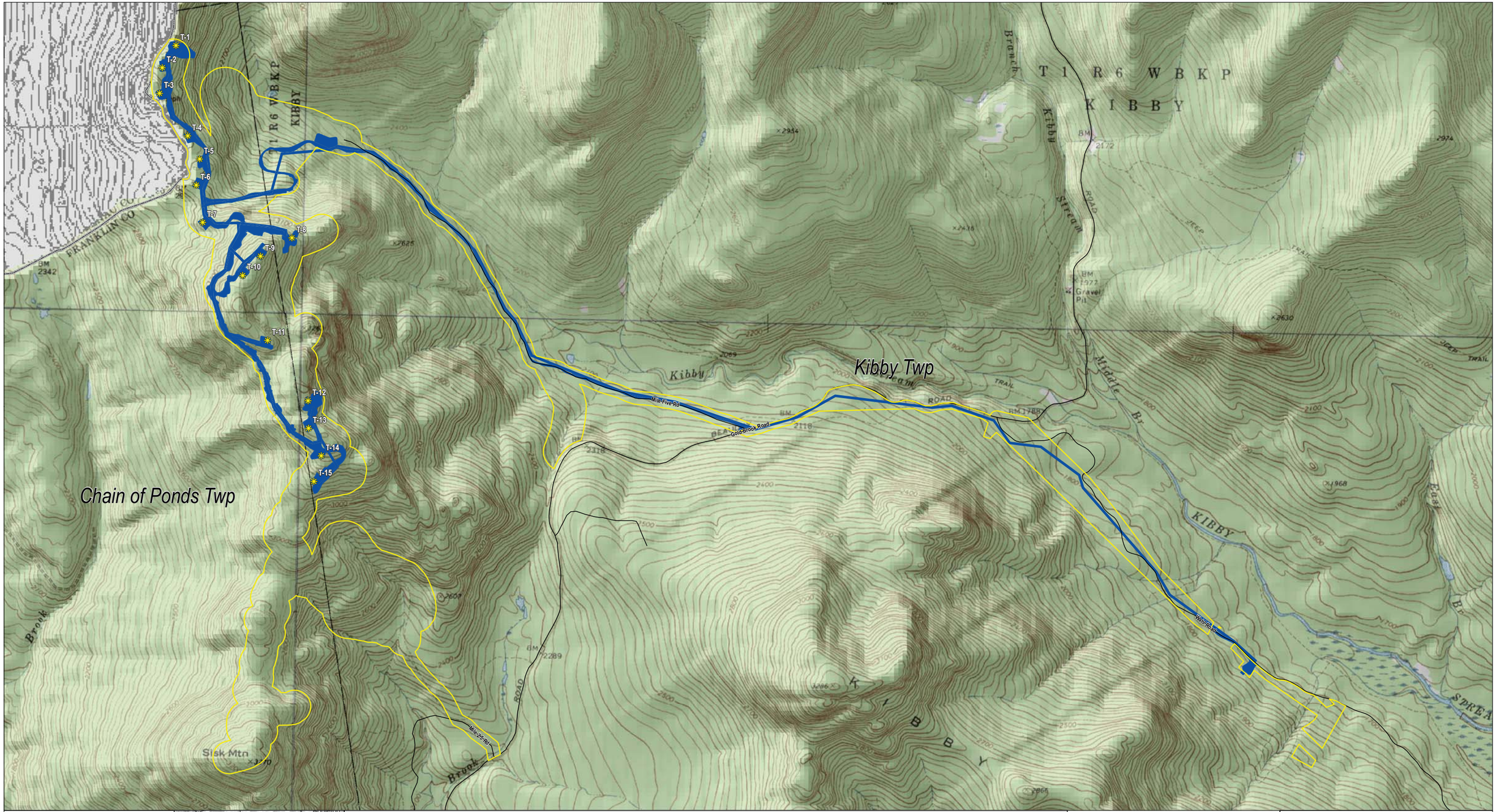
The specific objectives of wetland and stream resource surveys were to: 1) identify, delineate, and map wetlands and streams located within the proposed project area; and 2) determine their

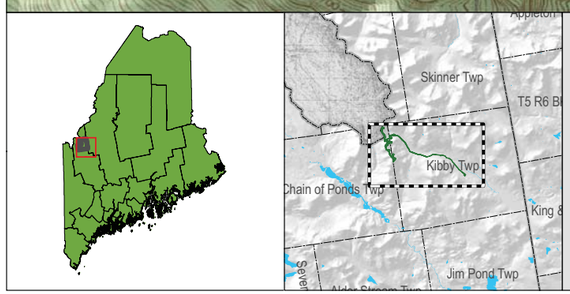
federal and state jurisdictional status. This information has also been used to analyze project development alternatives to avoid and minimize impacts to wetlands and streams.

The LURC, USACE, and the Maine Soil Scientist confirmed delineation methodologies and selected boundaries during 2009 field visits.

In preparation for field surveys, USFWS National Wetland Inventory (NWI) maps and USGS topographic maps were reviewed to gather background information on the proposed project area. After evaluating the available data and the nature of the proposed project, the "Routine On-Site Determination Method" described in the USACE Wetland Delineation Manual (USACE 1987) was selected as the most appropriate wetland delineation technique.

Following the review of background information, wetland and soil scientists performed wetland field studies to determine the types and extent of wetlands located within the proposed project area. The delineation procedure began with general reconnaissance to identify topographical features and obvious vegetation patterns that would indicate the potential presence of jurisdictional wetlands. Once a potential wetland area was identified, field crews thoroughly examined and assessed soils, vegetation, and hydrology indicators. All wetlands were classified using the USFWS classification system (Cowardin et al. 1979). Based on physical characteristics such as plant cover and hydrology, wetlands found in the project area were





Project Footprint

Project Survey Area (1084 acres)

Proposed Turbine Locations

Existing Road

Sources: Maine OGIS, USGS, TRC

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Kibby Expansion Wind Power Project

Figure B.15-4
Project Survey Area

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qualified as Palustrine Scrub-shrub (PSS), Palustrine Forested (PFO), or Palustrine Emergent (PEM). The majority of the delineation work was conducted during July, August, and September 2009. All of the wetlands within the proposed project area were mapped to facilitate the best access design and to avoid and minimize impacts.

In addition to the wetland delineation and mapping work, a quality assurance/quality control (QA/QC) review was performed in the fall of 2009. This QA/QC review involved conducting field inspections of randomly selected wetlands that had been mapped during the summer of 2009 to ensure that these areas had been correctly delineated and characterized.

Specific methods for characterizing and evaluating soils, vegetation, and hydrology within each wetland were as follows:

- Soils – At each sampling location, a soil auger or tile spade was used to extract a sample to examine the soil for evidence of hydric indicators. Soils were characterized by determining texture, structure, and color. Soil matrix colors were identified using a Munsell Soil Color Chart (Munsell Color 1993), and hydric indicators such as mottling, gleying, organic matter accumulation, drainage class, and oxidized rhizospheres were noted. In addition, hydric soil criteria were assigned in accordance with the manual Field Indicators for Identifying Hydric Soils in New England – Version 3 (NEIWPCC 2004).
- Vegetation – Dominant plant species in each major vegetation stratum (tree, sapling/shrub, and herbaceous) within the study area were identified and listed. Each plant's wetland indicator status (e.g., OBL, FACW, FAC, FACU, and UPL) was assigned using the USFWS National List of Plant Species that Occur in Wetlands, Region 1 (Reed 1988) to determine if there was a prevalence of hydrophytic vegetation at the site.
- Hydrology – Each sampling location was examined for evidence of wetland hydrology. Indicators of wetland hydrology generally include the presence of hummocks, watermarks on vegetation, drift lines, sediment deposits, standing water, soil saturation within 12 inches of the mineral soil surface, and drainage patterns within the wetland.

Surveys were performed by four, two or three-person field crews that consisted of two wetland scientists or two wetland scientists and one environmental technician/GPS operator. Following analysis of soils, hydrology, and vegetation at each potential wetland, a determination was made as to whether or not the site met the criteria for designation as a wetland. Through observation of these three parameters, the approximate wetland boundary was identified and flagged. Streams were identified using the definition of a "river, stream or brook" as described in the Natural Resources Protection Act – Statute. All stream channels were marked with flags as well. Streams within the proposed project area had bank-to-bank widths less than 10 feet (3 m). Flags were installed on overhanging vegetation to mark the approximate centerline. In general, flags were installed at each bend in the stream channel. Best professional judgment was used to determine if each stream was perennial or intermittent. Wetland boundaries and streams were

recorded using GPS units. All GPS data were corrected using commercial base station control points to ensure a high level of mapping accuracy.

B.15.5.3 Results

A total of 359 palustrine wetlands were identified, delineated, and mapped in the study area. The majority of these wetlands are no longer within the project area, as identification of wetlands was utilized during project layout design to shift and revised the location of project elements in order to accomplish wetland avoidance to the greatest extent practicable.

As a result of project design refinements, only 90 wetlands and 37 streams remain within the final project construction area. Of these wetlands, 21 were associated with streams and identified as P-WL1 Wetland Protection Subdistricts or freshwater wetlands of special significance (WOSS), as defined in the LURC Land Use Districts and Standards – Chapter 10.23, N. These wetland and stream areas are shown in the attached Wetland and Stream Maps, Figure B.15-5. Each wetland is identified on these figures by an alpha-numeric code corresponding to team letter and wetland sequence. These codes will be used to discuss specific wetlands hereinafter.

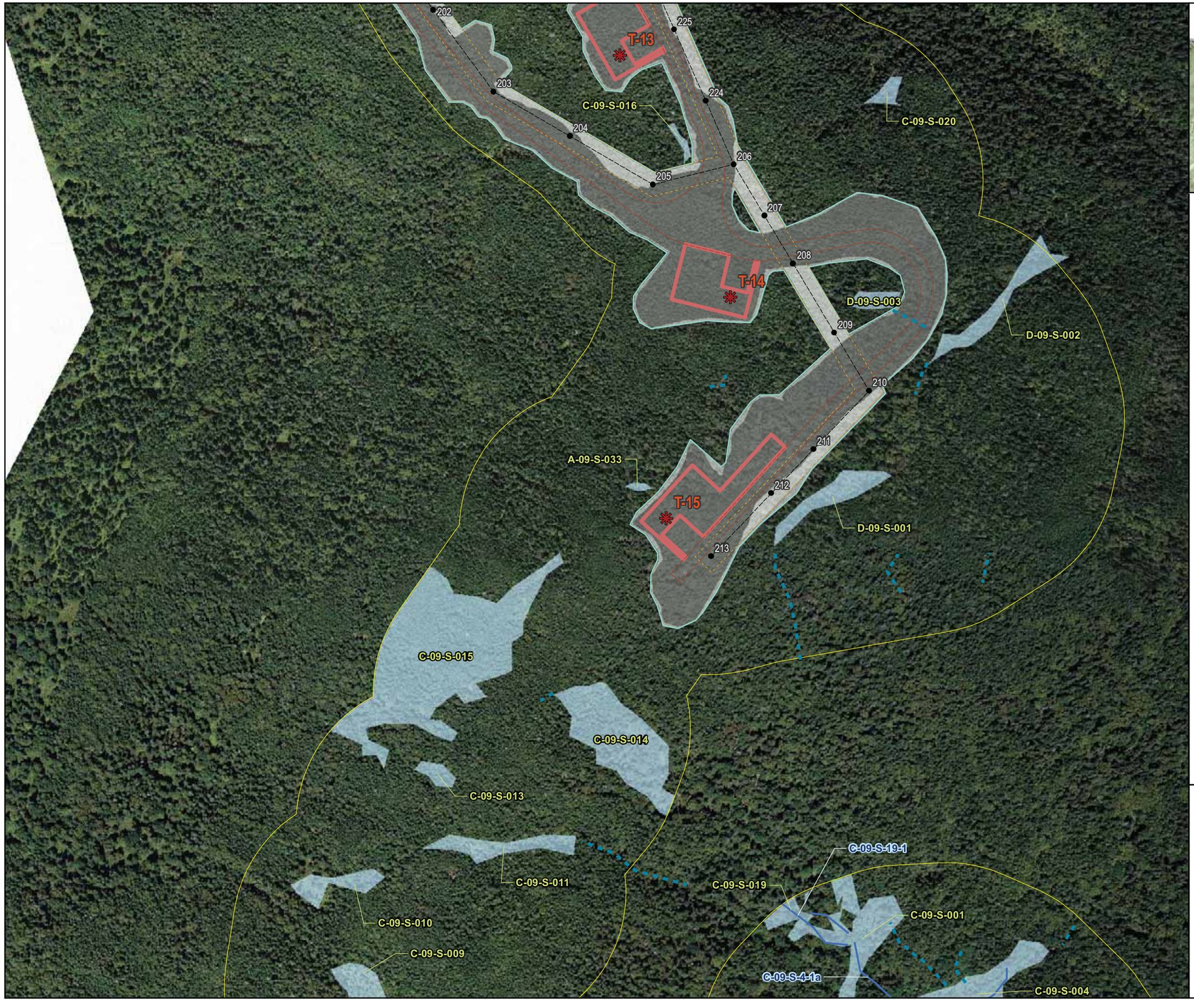
It is important to note that many of the wetlands are early successional as a result of wood harvesting and associated building of access roads.

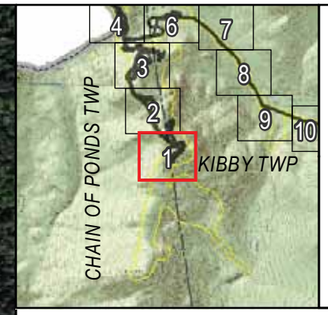
Soils were shallow, less than 12 inches deep within most areas, although they were as thick as 20 inches in some wetlands. The top layer in each wetland was a well decomposed, sapric, organic layer below fibric material. The B horizon matrix was depleted with either a silt-loam or sandy loam texture. Sometimes, especially near streams, a coarse loamy sand BC layer would directly underlay the O horizon. Matrix colors were generally a light yellow-gray with depletions or concentrations.

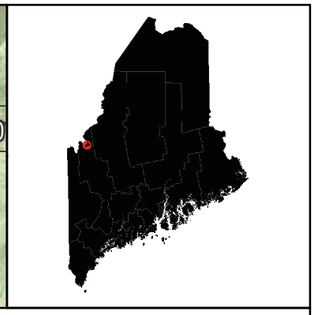
B.15.5.4 Functional Assessment

The following discussion provides wetland character descriptions of the 95 wetlands and 37 streams that, following layout shifts and refinements, remain within the project area. Wetlands identified within each class (i.e., PSS, PFO, PEM) are similar enough to one another to group and describe wetlands within each class collectively.

Different project elements have varying potential to result in wetland impacts. For example, new access roads and WTG site impacts will include new fill in wetlands, improvements to existing roads are primarily impacts to previously impacted wetlands and streams, and collector line construction impacts include clearing and temporary impacts from access. For this reason, survey areas addressed in this section are divided and discussed within the following categories:







- Proposed Turbine Locations
- Streams
- Non-Jurisdictional Drainages
- Wetlands
- Wetland Survey Limits
- Turbine Pad
- Substation Area
- Project Access
- Collector Corridor
- Proposed 34.5kV Collector Transmission Line
- Proposed Collector Structure Locations
- Existing Transmission Line

Project Footprint by Impact Type

- Collector
- Grading
- Temp

Sources: Maine OGIS, TRC, Color Orthophotography: Aerial Survey 2009

N

250 Feet

Kibby Expansion Wind Power Project

Figure B.15-5
Wetland and Stream Maps

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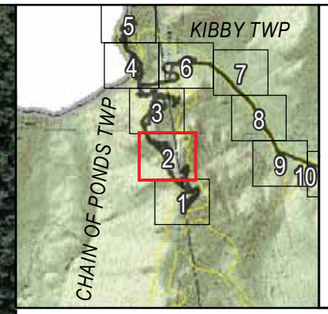

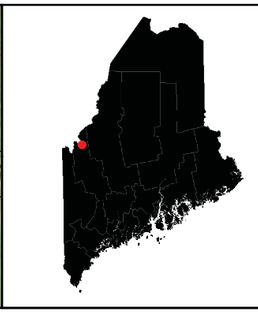

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Project Footprint by Impact Type

- Collector
- Grading
- Temp

Sources: Maine OGIS, TRC, Color Orthophotography: Aerial Survey 2009

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250 Feet

Kibby Expansion Wind Power Project

Figure B.15-5
Wetland and Stream Maps

Page 2

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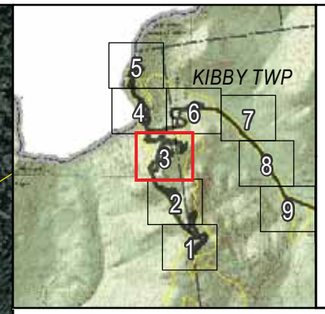

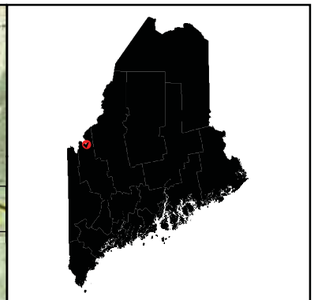

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Project Footprint by Impact Type

- Collector
- Grading
- Temp

Sources: Maine OGIS, TRC, Color Orthophotography: Aerial Survey 2009

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250 Feet

Kibby Expansion Wind Power Project

Figure B.15-5
Wetland and Stream Maps

Page 3

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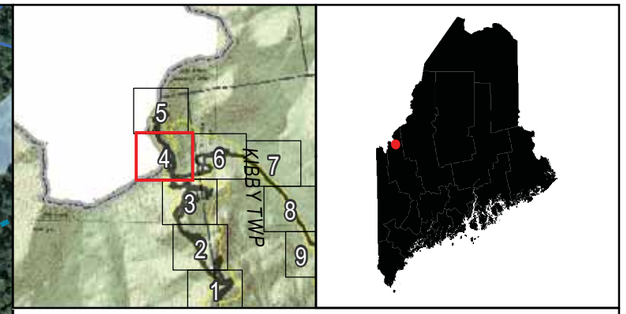

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Project Footprint by Impact Type

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Sources: Maine OGIS, TRC, Color Orthophotography: Aerial Survey 2009

250 Feet

Kibby Expansion Wind Power Project

Figure B.15-5
Wetland and Stream Maps

Page 4

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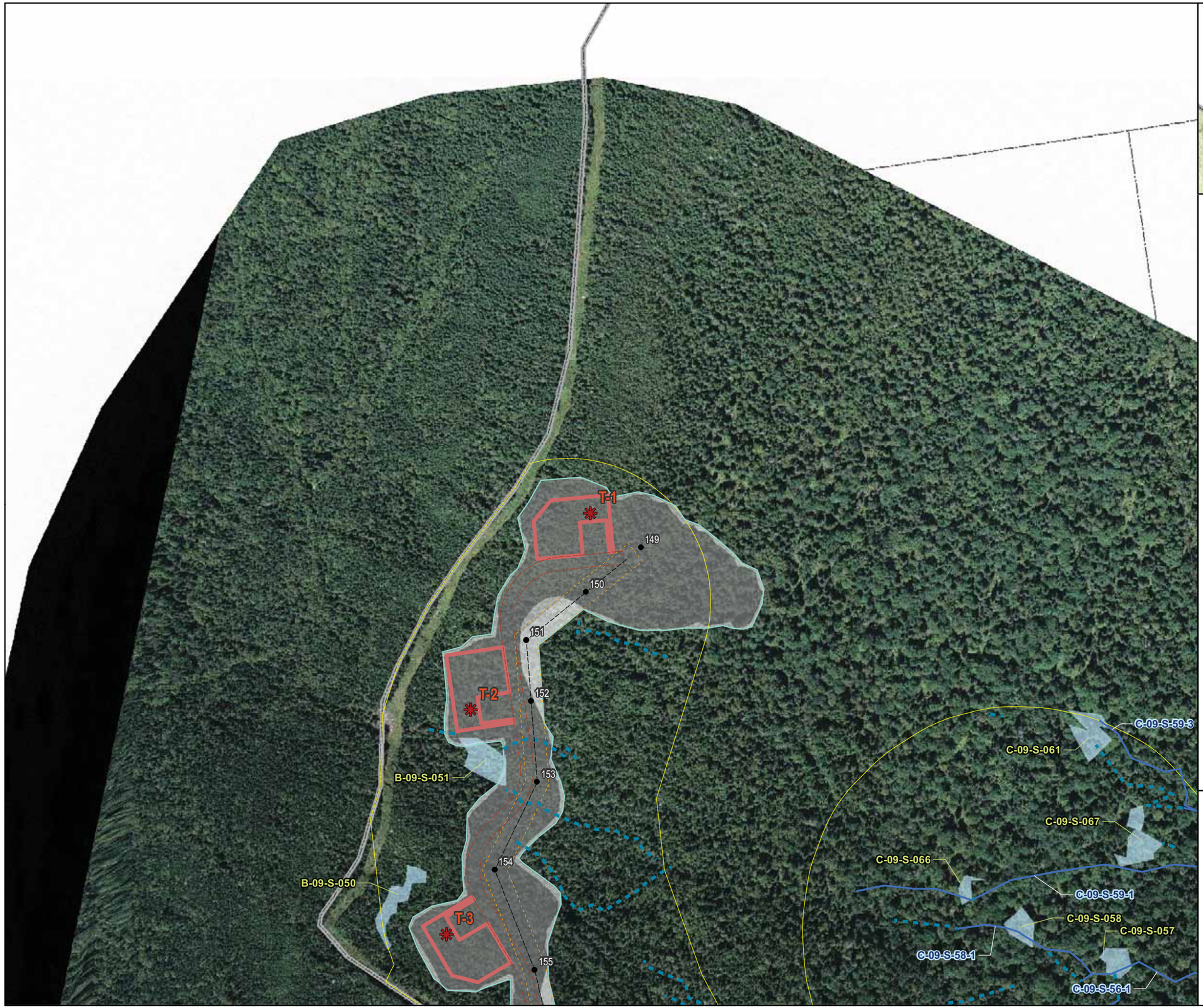

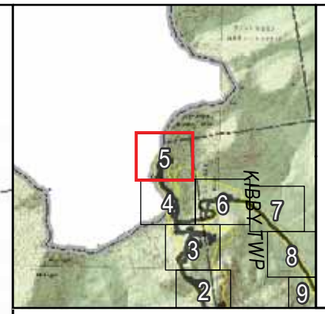

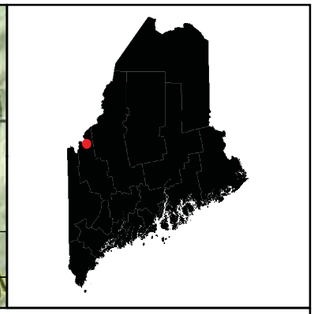

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Project Footprint by Impact Type

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Sources: Maine OGIS, TRC, Color Orthophotography: Aerial Survey 2009

250 Feet

Kibby Expansion Wind Power Project

Figure B.15-5
Wetland and Stream Maps

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- Collector
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250 Feet

Kibby Expansion Wind Power Project

Figure B.15-5
Wetland and Stream Maps

Page 6

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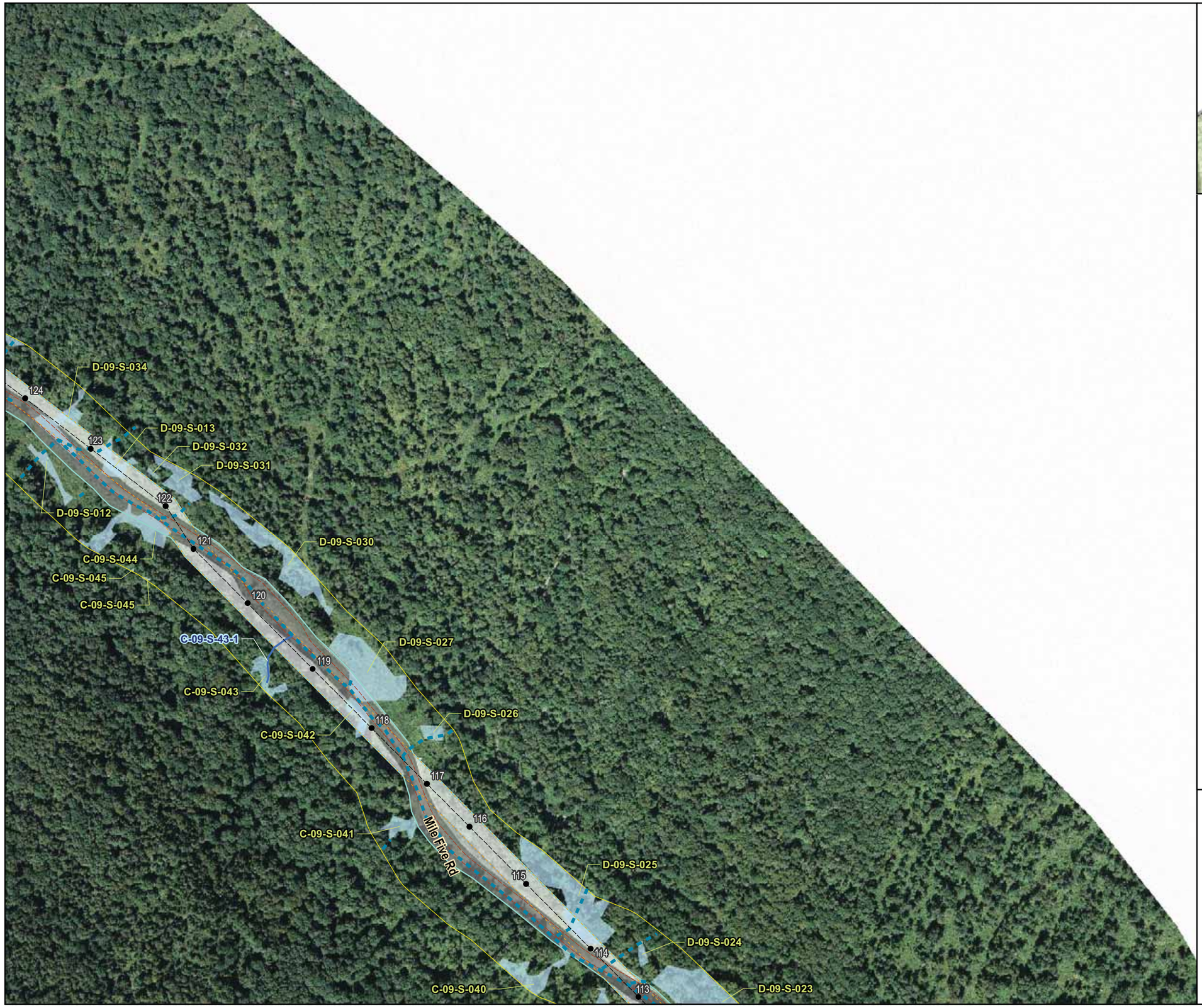

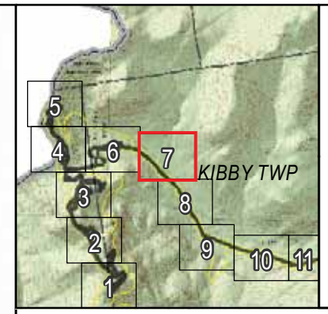

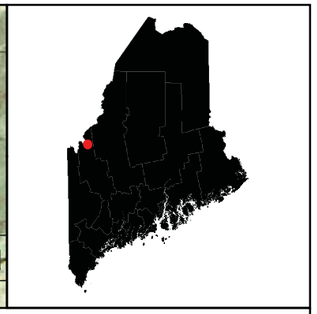

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Project Footprint by Impact Type

- Collector
- Grading
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Sources: Maine OGIS, TRC, Color Orthophotography: Aerial Survey 2009

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250 Feet

Kibby Expansion Wind Power Project

Figure B.15-5
Wetland and Stream Maps

Page 7

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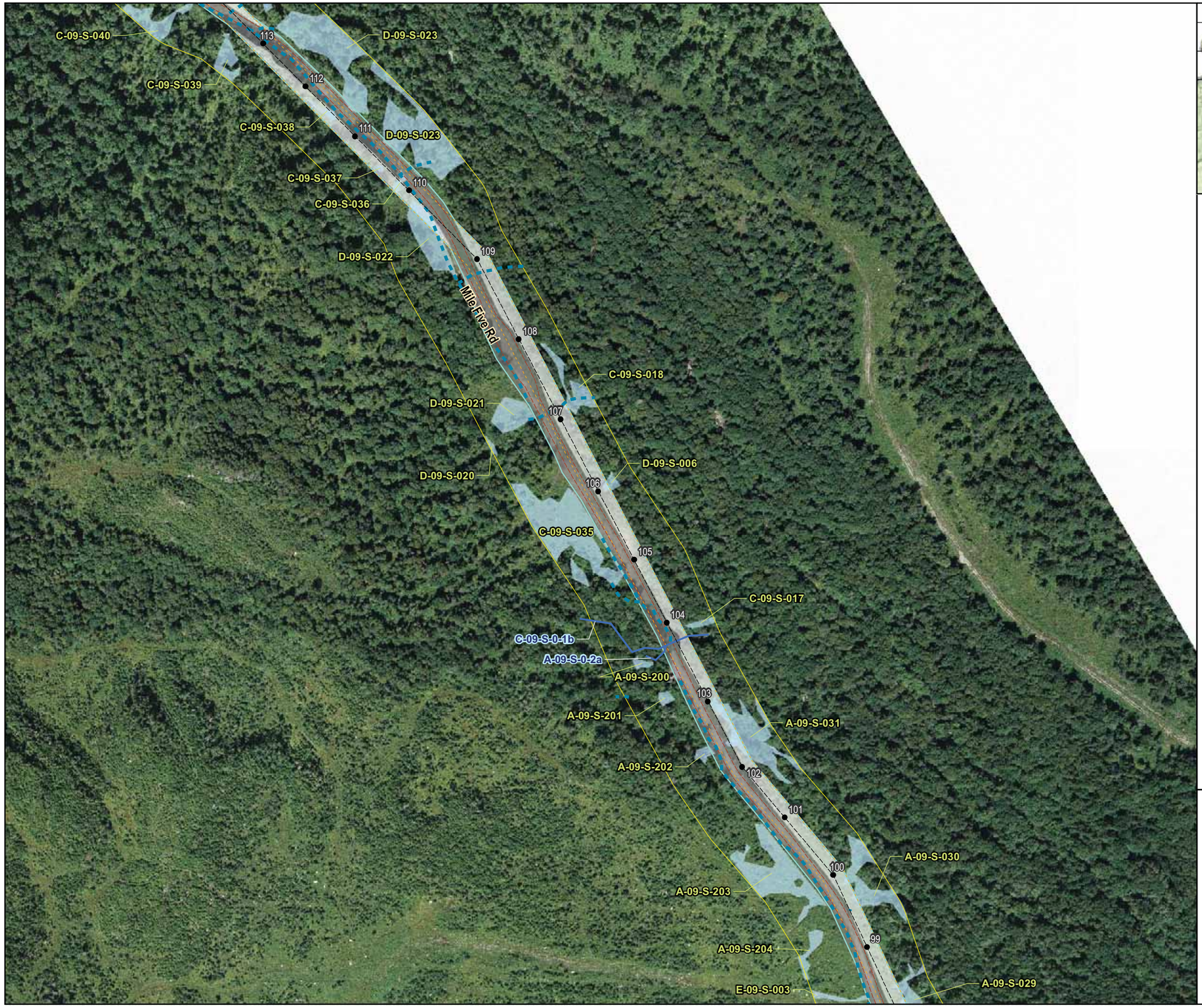

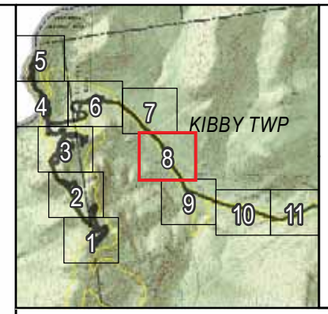

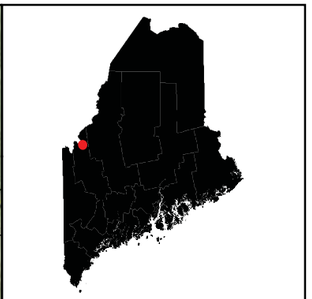

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250 Feet

Kibby Expansion Wind Power Project

Figure B.15-5
Wetland and Stream Maps

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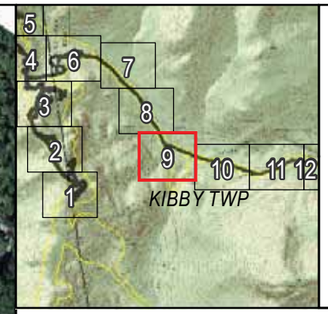

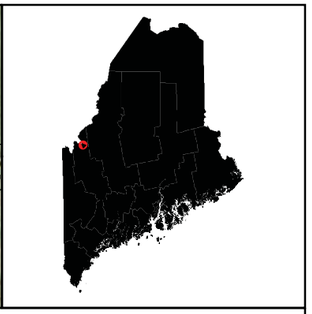

- Proposed Turbine Locations
- Streams
- Non-Jurisdictional Drainages
- Wetlands
- Wetland Survey Limits
- Turbine Pad
- Substation Area
- Project Access
- Collector Corridor
- Proposed 34.5kV Collector Transmission Line
- Proposed Collector Structure Locations
- Existing Transmission Line

Project Footprint by Impact Type

- Collector
- Grading
- Temp

Sources: Maine OGIS, TRC, Color Orthophotography: Aerial Survey 2009

250 Feet

Kibby Expansion Wind Power Project

Figure B.15-5
Wetland and Stream Maps

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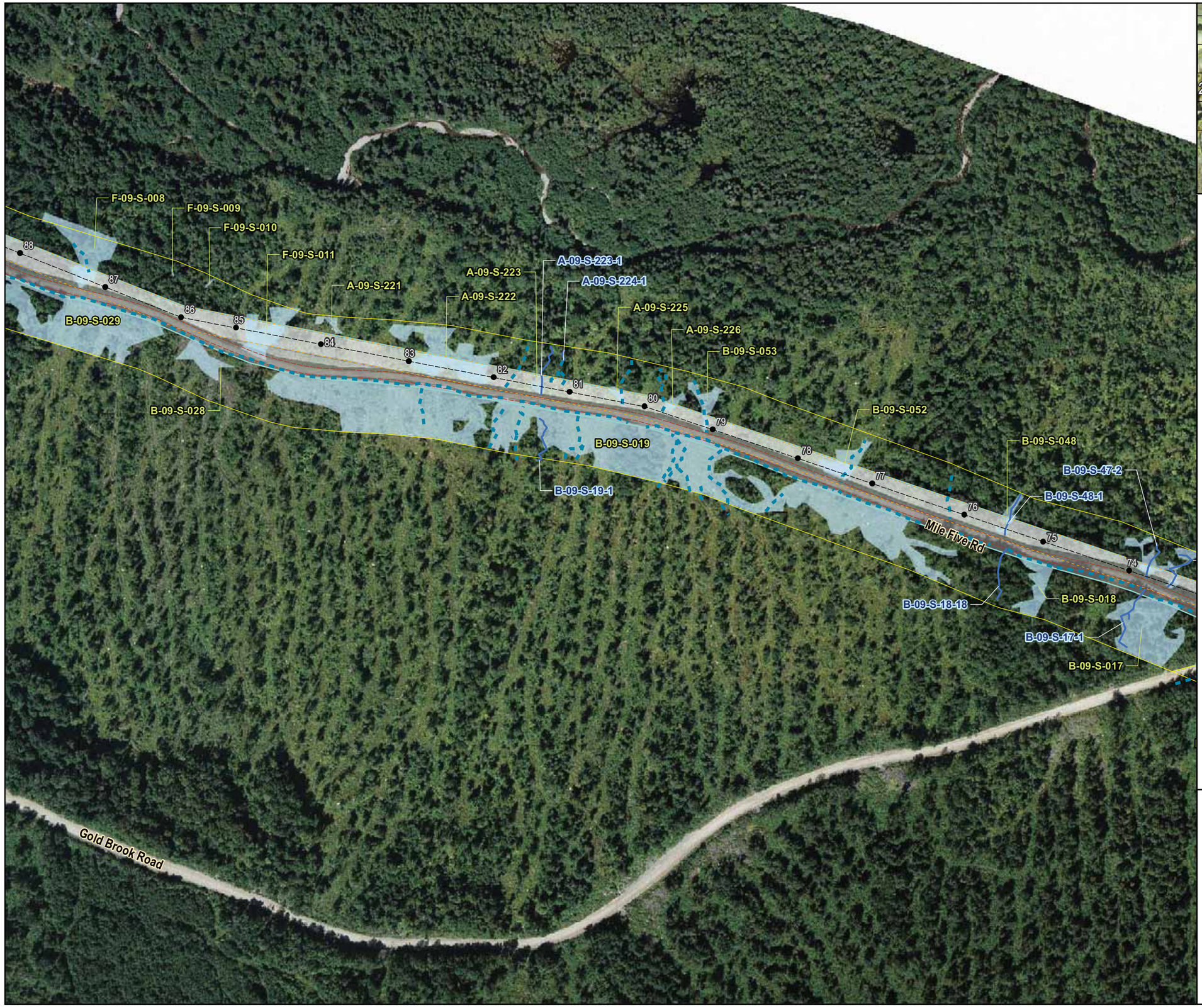

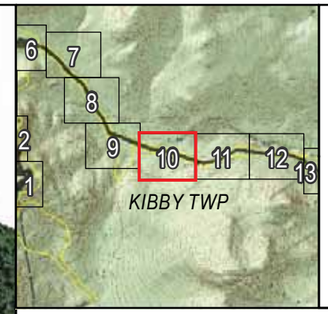

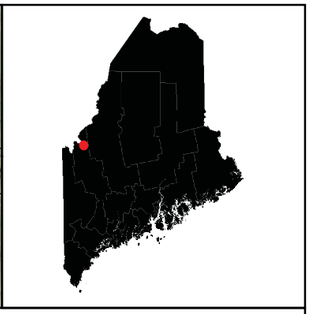

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Figure B.15-5
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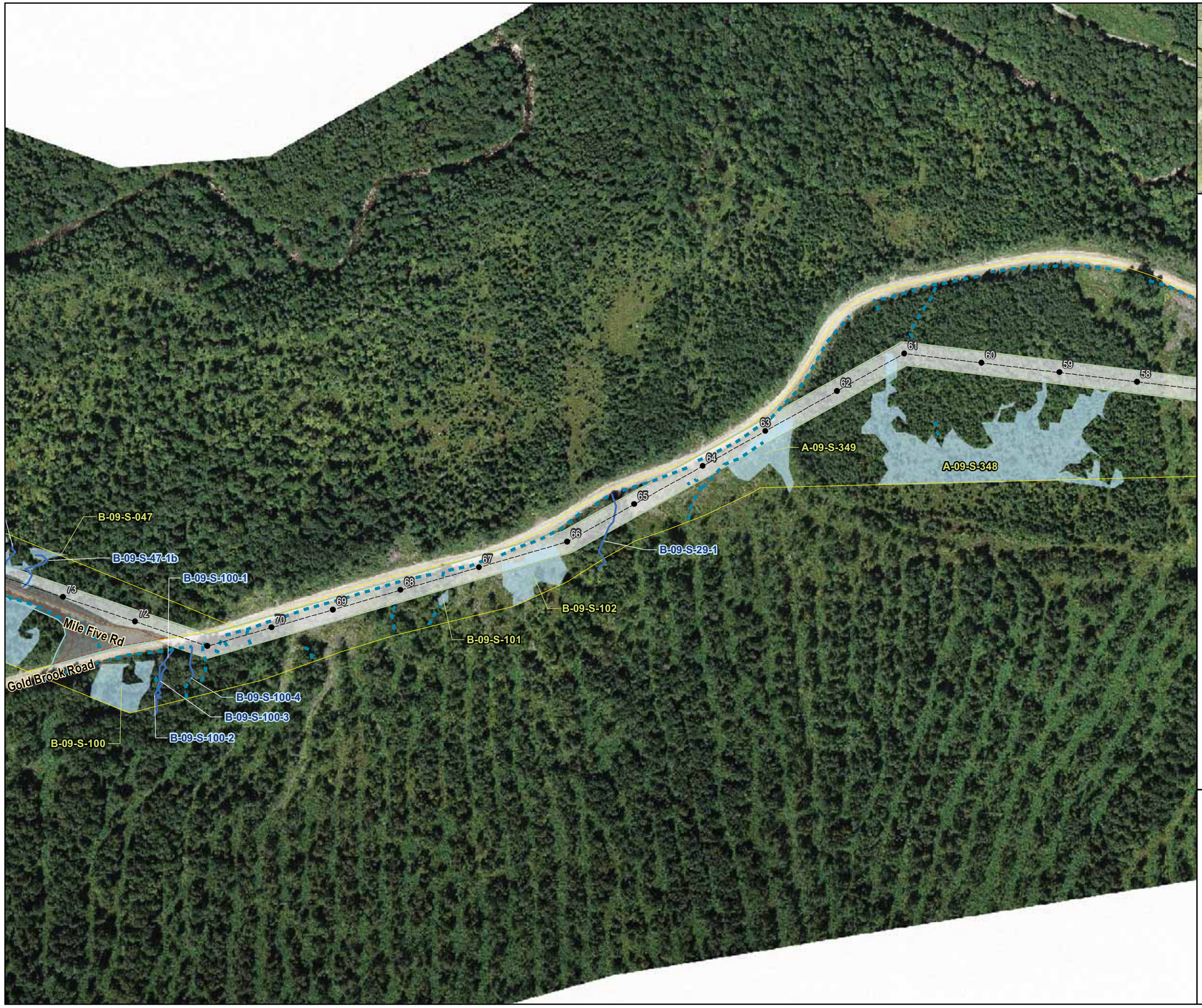

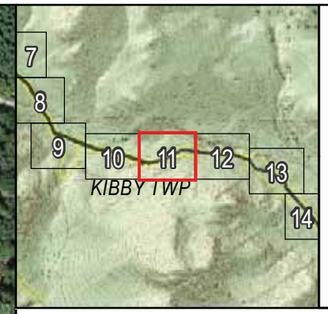

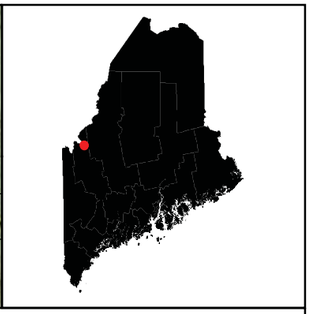

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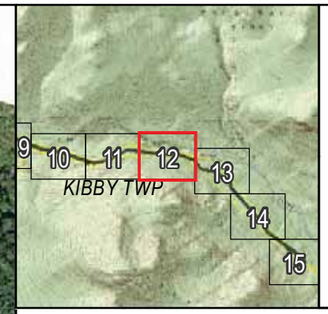

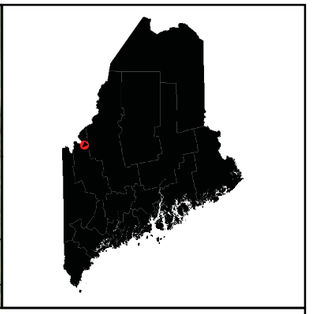

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Figure B.15-5
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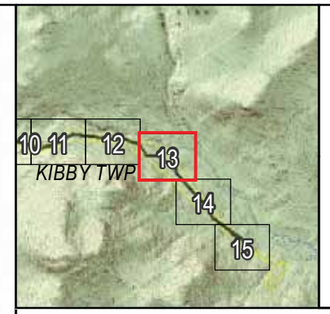

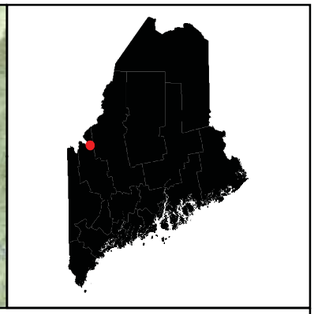

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Figure B.15-5
Wetland and Stream Maps

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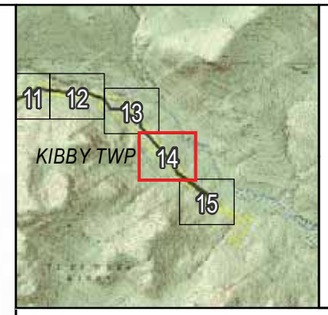

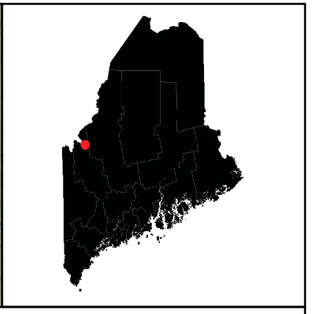

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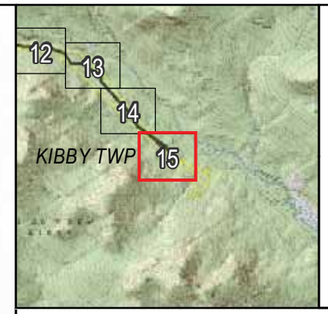

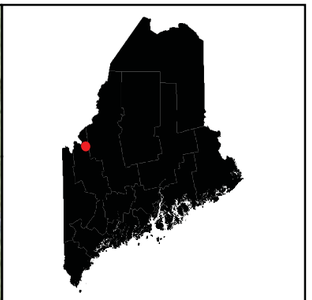

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- Areas associated with new access or crane roads and WTG pad locations;
- Areas associated with electrical collector lines leading from the turbines to the project substation;
- Areas associated with improvements to existing roads.

Wetlands and Streams Associated with Access Roads and Turbines

LURC Subdistricts P-WL2, P-WL1: Palustrine Scrub-Shrub (PSS) Wetlands ([B-65] and [F-2] and [D4].

Wetlands [F-2] and [D-4] are associated with streams and are P-WL1 subdistricts.

Wetlands categorized as Palustrine Scrub-Shrub (PSS) were generally comprised of a shrub and sapling community of speckled alder (*Alnus incana rugosa*), yellow birch (*Betula alleghaniensis*), balsam fir (*Abies balsamea*), hobblebush (*Viburnum lantanoides*), red maple (*Acer rubrum*), and northern white cedar (*Thuja occidentalis*). Scattered occurrences of upland shrub species including striped maple (*Acer pensylvanicum*), red spruce (*Picea Rubens*), sugar maple (*Acer saccharum*), and red elderberry (*Sambucus pubens*) were observed. The shrub layer was generally not dense as each wetland was surrounded by forested uplands providing heavy shade. The herbaceous layer was also generally sparse due to shading, and was comprised of northeastern mannagrass (*Glyceria melicaria*), rattlesnake mannagrass (*Glyceria canadensis*), pointed broom sedge (*Carex scoparia*), drooping sedge (*Carex crinita*), red raspberry (*Rubus idaeus*), wool-grass (*Scirpus cyperinus*), New York fern (*Thelypteris noveboracensis*), whorled wood aster (*Oclemena acuminata*), Canada bluejoint (*Calamagrostis canadensis*), mountain wood fern (*Dryopteris campyloptera*), bristly black currant (*Ribes lacustre*), wild sarsaparilla (*Aralia nudicaulis*), jewelweed (*Impatiens capensis*), long beech fern (*Phegoteris connectillis*) and giant goldenrod (*Solidago gigantea*). Sphagnum (*Sphagnum* sp.) was abundant in some of these wetlands.

Hydrology in the PSS wetlands consisted of soil saturation within the top 12 inches of the ground as evidenced by observation, drainage patterns, elevated roots on shrubs, scouring, and water-stained leaves. Shallow ponding was observed in some areas and was likely seasonal.

Each PSS wetland provides groundwater discharge, food chain functions such as nutrient removal and production export, and wildlife habitat. Functions and values such as flood-flow alteration, fish habitat, sediment and shoreline stabilization, uniqueness, and visual quality would likely not be provided by these wetlands. Each wetland has the potential to provide areas for recreational hunting although hunters or evidence thereof was not observed.

LURC Subdistricts P-WL3, P-WL1: Palustrine Forested (PFO) Wetlands ([A-29], [A-31], [A-205], [A-208]. [A-214], [A-215], [A-217], [A-219], [A-220], [A-305], [B17], [B-18], [B-47], [B-

48], [B-51], [B-65], [C-16], [C-21], [C-41] [D-6], [D-23] [E1], [E4], [F-5], [F-6], [F-8], and [F-11]).

Wetlands [A-31], [A-205] [A-208], [B-17], [B-47], [B-48] [E-1] and [E-4] are associated with streams and are P-WL1 subdistricts.

Palustrine Forested (PFO) wetlands were observed and categorized as such due to a dense canopy cover of yellow birch, balsam fir, black spruce (*Picea mariana*), and red spruce. Generally canopy species were of moderate diameters from 6 to 18 inches. The midcanopy layer in each wetland was a mixture of speckled alder, hobblebush, and pole and sapling individuals of the canopy species. The herbaceous layer was typically sparse due to dense shade cover. Herbaceous species present were a mixture of flat-topped white aster (*Doellingeria umbellata*), northeastern mannagrass, Canada bluejoint, gold thread (*Coptis trifolia*), cinnamon fern (*Osmunda cinnamomea*), interrupted fern (*Osmunda claytoniana*), New York fern, whorled wood aster, purple-stem aster (*Symphyotrichum puniceum*), bunchberry (*Cornus canadensis*), lady fern (A*thyrium filix-femina*), three-seeded sedge (*Carex trisperma*), sallow sedge (*Carex lurida*), and boreal bedstraw, a state-listed S2 species, was observed in three wetlands (C-41, A-29 and A-200), primarily along the wetland/upland border at or near groundwater discharge areas.

Hydrology and soils, in the PFO wetlands, were similar to those conditions observed in the PSS wetlands. Soil saturation with some shallow ponding was characteristic with shallow organic and A horizons underlain by depleted matrices, depletions, and concentrations. Furthermore, wetland functions were comparable with one exception. Wildlife habitat in the forested wetlands favored avian species that use trees for nesting and foraging such as finches, jays, warblers and woodpeckers.

LURC Subdistricts P-WL2, P-WL1: Palustrine Emergent (PEM) Wetlands ([A-30], [A-202], [A-206], [A-211], [A-212], [A-216], [A-222], [A-223], [A-225], [B-19], [B-28], [B-29], [B-33], [B-52], [B-53], [C-18], [C-35], [C-36], [C-37], [C-38], [C-40], [C-42], [C-44], [D-13], [D-21], [D-22], [D-25], [D-27], [D-42], [E-2], [E-3], and [F-6]).

Wetlands [A-216], [A-223], [D42], and [E-2] are associated with streams and are P-WL1 subdistricts.

Palustrine Emergent (PEM) wetlands were categorized based on a dense herbaceous plant cover comprised of northeastern mannagrass, sallow sedge, drooping sedge pointed broom sedge, common flat-top goldenrod (*Euthamia graminifolia*), whorled wood aster, Canada bluejoint , wool grass, three seeded sedge, lady fern, coltsfoot (*Tussilago farfara*), tall meadow rue (*Thalictrum pubescens*), northern willow herb (*Epilobium strictum*), long beech fern, false

hellbore (*Veratrum viride*), purple-stem aster, jewelweed, red raspberry, flat-topped aster, and soft rush (*Juncus effusus*). These wetlands typically occurred in areas of openings in the forest canopy on the ridge or more commonly in logged areas along the proposed access road.

Hydrology and soils, in the PEM wetlands, were comparable to those characteristics observed in the PSS and PFO wetlands. Furthermore, wetland functions were comparable, except that wildlife habitat favored species that may use herbaceous habitat. None of these areas would provide habitat for waterfowl and wading birds. Boreal bedstraw was observed in Wetland D-25 only.

LURC Subdistricts P-SL2: Streams ([A-0-2a], [A-0-3b], [A-102-1], [A-200-1], [A-205-1], [A-223-1], [A-224-1], [B-17-1], [B-18-1], [B-30-1], [B-30-2], [B-47-1b], [B-47-2], [C-0-1b], [C-0-7], [C-43-1], [D-4-2], [D-4-3], [D-54-1], [E-1-1], [E-1-2], [E-1-3], [E-2-1], [F-2-1], [F-7-1].

16 streams intersect the development plan, roughly half intermittent and half perennial. The streams mostly flow west to east toward Kibby Stream. A change in road design was made to avoid several headwater stream crossings below Wetland [C-50]. As a result of this change, the majority of access road stream impacts are along existing gravel road or winter road and require installing culverts or extending existing culverts in disturbed commercial forest land.

Wetlands and Streams Associated with Collector Line Corridors

The ridgeline locations for the collector lines are included in the roadway discussion above, as the collector lines will extend within the roadway impact corridor. The collector line will continue 3.3 miles along the new access and the reconstructed Mile 5 Road, 1 mile along Gold Brook Road and 1 mile along Wahl Road to the substation. Impacts to wetlands and streams along this section of the collector line will not require fill or permanent alteration. Furthermore, use of existing roads will minimize wetland and stream impacts. Nonetheless wetland delineations were conducted within a greater survey area than the needed alignment width to avoid unnecessary impacts. Wetlands and streams located along the proposed corridors are described below.

LURC Subdistricts P-WL2, P-WL1: Palustrine Scrub-Shrub (PSS) Wetlands ([A-315], [A-316], [A-326], [A-333], [A-340], [A-344], [A-345], [A-347], [A-349], [B-83], and [B-102]).

Wetlands [A-333] and [A-340] are associated with streams and are P-WL1 subdistricts.

Eleven Palustrine Scrub-Shrub (PSS) wetlands are located within the proposed collector line corridor. Wetlands are a diverse mixture of speckled alder, black spruce, northern white cedar, and balsam fir with wool grass, soft rush, drooping sedge, pointed broom sedge, sensitive fern, whorled aster, and evergreen wood fern. Soils in these wetlands are comprised of a shallow

organic layer and a lower horizon of a depleted matrix. Soils are predominantly sandy loams, with coarser texture in the P-WL1 wetlands identified above. Hydrology is perched water above shallow bedrock or saturation within the upper 12 inches of the top of the soil profile. In a few places, shallow seasonal inundation occurs. The larger wetlands that the collector line passes through (e.g [A-340]) discharge wet meadows above to the west. They are moderately sloped, with variable surface saturation and cover.

Each wetland provides some groundwater discharge, food chain functions such as nutrient removal and production export, and wildlife habitat. Each wetland has the potential to provide areas for recreational hunting.

LURC Subdistrict P-WL3, P-WL1: Palustrine Forested (PFO) WetlandsCollector Line Corridor [B-89] and [B-95].

Wetland [B-95] is associated with a stream and is a P-WL1 subdistrict.

Two wetlands categorized as Palustrine Forested (PFO) are within the collector line corridor. These wetlands had canopy species of yellow birch, red maple, planted black spruce, and balsam fir with understory vegetation of cinnamon fern, sensitive fern, goldthread, interrupted fern (*Osmunda claytoniana*), jewelweed, and northeastern mannagrass.

Hydrology within each wetland was soil saturation; evidence of surface scouring and drainage patterns were also observed. Soils displayed a dark A horizon underlain by a depleted matrix of a yellow-gray color and fine-sandy-loam texture.

Functions and values that each of these wetlands likely provides are similar to those expected from the PSS communities, except that each can provide some habitat for avian species that require a forested habitat component.

LURC Subdistrict P-WL2, P-WL1: Palustrine Emergent (PEM) Wetlands ([A-321], [A-337], [A-349], [B-84], and [B-85).

Wetland [B-84] is associated with a stream and is a P-WL1 subdistrict.

Palustrine Emergent (PEM) wetlands were categorized based on a dense herbaceous plant cover comprised of northeastern mannagrass, sallow sedge, drooping sedge pointed broom sedge, common flat-top goldenrod (*Euthamia graminifolia*), whorled wood aster, Canada bluejoint , wool grass, three seeded sedge, lady fern, coltsfoot (*Tussilago farfara*), tall meadow rue (*Thalictrum pubescens*), northern willow herb (*Epilobium strictum*), long beech fern, false hellbore (*Veratrum viride*), purple-stem aster, jewelweed, red raspberry, flat-topped aster, and

soft rush (*Juncus effusus*). These wetlands typically occurred in areas of openings in the forest canopy along logged areas along the proposed access road.

Hydrology and soils, in the PEM wetlands, were comparable to those characteristics observed in the PSS and PFO wetlands. Furthermore, wetland functions were comparable, except that wildlife habitat favored species that may use herbaceous habitat. None of these areas would provide habitat for waterfowl and wading birds.

LURC Subdistrict P-SL2: Streams ([A-0-1b], [A-0-3a], [A-0-3b], [A-0-4a], [A-0-4b], [A-0-6], [A-0-8], [A-0-18], [A-0-19], [A-0-20], [A-0-21], [A-0-25], [A-0-27], [A-326-10], [A-333-9], [A-333-17], [A-0-334-8], [A-0-339-13], [A-339-15], [B-29-1], [B-82-1], [B-82-2], B-82-3], [B-83-1], [B-87-1], [B-87-2], [B-94-1], [B-100-4]).

The collector corridor will span 23 streams. All of these streams are less than five feet wide, with the exception of [A-0-25] and [A-0-19] which reach widths of 6 and 8 feet respectively. All streams have sand, cobble, and/or boulder mineral substrates.

B.15.5.5 Unavoidable Impacts to Wetlands and Streams

Results of the wetland and stream surveys described above were used to modify preliminary project plans to avoid or minimize impacts to these resource areas wherever practicable. Significant focus has been placed on adjusting layout during early stages of project design to avoid wetland and stream impact where possible.

Wetlands

A total of 90 wetlands occur within the project construction area and will be impacted, to some degree, by the construction of access and crane roads and WTG pad locations or temporarily by collector line clearing. The total wetland impact area will be approximately 4.35 acres (189,513 square feet). Of this total impact, less than one acre (approximately 0.78 acres) is permanent fill, and the balance is either temporary clearing impacts that will be allowed to fully regenerate or permanent clearing impacts associated with the collector system. See Table B.15-1 for a summary of the wetland impacts by LURC subdistrict. These impacts are detailed by wetland in Tables B.15-2, B.15-3, B.15-5, B.15-6 and B.15-8.

Table B.15-1

Summary of Wetland Impacts Associated with the Kibby Expansion Project

Crane Path and Turbine Development		
	Permanent Fill Impacts	**Clearing Impacts (Temporary/Will be Allowed to Revegetate Fully)**
P-WL1	--	--
P-WL2	0.03 acres (1,262square ft)	<0.01 acres (74 square ft)
P-WL3	0.05 acres (2,236 square ft)	0.04 acres (1,650 square ft)
Streams	< 0.01 acres (137 square ft)	--
Subtotal	**0.08 acres (3,635 square ft)**	**0.04 acres (1,724 square ft)**
Access Road		
	Permanent Fill Impacts	**Clearing Impacts (Temporary/Will be Allowed to Revegetate Fully)**
P-WL1	0.04 acres (1,753 square ft)	<0.01 acres (17 square ft)
P-WL2	0.51 acres (22,323 square ft)	0.01 acres (618 square ft)
P-WL3	0.13 acres (5,499 square ft)	0.03 acres (1,095 square ft)
Streams	0.02 acres (820 square ft)	--
Subtotal	**0.70 acres (30,395 square ft)**	**0.04 acres (1,730 square ft)**
Collector line		
	Permanent Fill Impacts	**Clearing Impacts (Permanent/Will be Maintained in a Herbaceous or Scrub Shrub State)**
P-WL1		0.94 acres (40,856 square ft)
P-WL2		2.22 acres (96,894 square ft)
P-WL3		0.33 acres (14,278 square ft)
Subtotal	**0.0 acres (0 square ft)**	**3.49 acres (152,028 square ft)**
Grand Total	**0.78 acres (34,030 square ft)**	**0.08 acres (3,454 square ft) Temporary Clearing Impacts and 3.49 acres (152,028 square ft.) of Permanent Clearing Impacts**

Permanent impacts are limited to relatively small wetlands or larger wetland edges. The estimated area of permanent impacts for access and crane road and WTG construction is 0.78 acres (34,030 square feet). Of this total, only 0.08 acres (3,635 square feet) is from the crane roads and WTG pads. Impacts along the existing Mile 5 Road, where wetlands and stream hydrology and water quality have been affected by the existing road, is 0.70 acres (30,395 square feet) of impact. These impacts will be from road upgrades and improvements to the existing road. Road upgrades will improve hydrology by reconnecting wetland and stream flows that are currently captured in the existing road ditches and flow down the edge of or into and down the existing road. Water quality will also improve as the road construction will result in a stable road surface and stable water conveyances. As a result, the impacts along Mile 5 Road will result in an overall environmental improvement.

Clearing impacts from the collector line corridor total 3.49 acres (152,028 square feet). Fill impacts will be avoided as the poles can be located in adjacent uplands. There will be no wetland fill from pole setting.

TransCanada is in the process of consulting with the Army Corps of Engineers regarding the need, if any, for mitigation for these wetland impacts.

Streams

Widening existing roads for access may also include improvements for up to 10 existing stream crossings, per Level A Road Project standards. New stream crossings will have culverts installed so that flow is not interrupted or reduced. Water quality during construction will be maintained through BMPs as discussed in Exhibit B.14 to control and prevent erosion and sedimentation.

Table B.15-4 identifies unavoidable impacts to each stream associated with access and turbine work areas. Table B.15-7 list streams spanned by the collector line. Streams located along existing access roads will be further investigated as part of project final design.

Impacts to streams from collector line construction will be minimal. Erosion and sedimentation control measures implemented during construction will provide water quality protection and 100-foot buffers will be maintained on the perennial streams in the collector corridor. Woody vegetation will be allowed to grow to a height of approximately 8-10 feet in these buffer areas and herbicide use will not be allowed. Because there are many small streams in the development area, 39 poles will be placed within the 100 foot buffer from stream banks: 20 from 5-Mile Road to the substation and 19 from Gold Brook Road to the turbines. Buffers on perennial streams can still be maintained with pole structures set within the buffer. When poles are set closer to streams, the wire height over the stream is greater, thus increasing vegetation height and

shoreline stabilization. The 39 poles that will be placed within the 100-foot stream buffers are identified in Table B.15-9.

Table B.15-2 Kibby Expansion Project Unavoidable Wetland Impacts Associated with Crane Path and Turbine Construction

Wetland ID	Wetland Type	LURC Subdistrict	Total Permanent Impact		Total Temporary Impact		Explanation
			ft^2	acres	ft^2	acres	
C-09-S-16	PFO 4	P-WL3	1.2	0	0	0	The T-12/13 spur road passes by wetland C-16 upslope to the east. Wetland boundaries will be flagged and fill will likely be avoided for this very small impact.
C-09-S-21	PFO 4	P-WL3	154.8	.004	128.5	0.003	A cliff to the east limits the alignment of the T-12/13 spur to impact wetland C-21. A rock sandwich will be installed to maintain hydrology.
A-09-S-305	PFO 4	P-WL3	291.6	0.007	0	0	The T-9/10 spur road is ideally located on a gentle slope, reducing cuts and fills. The spur travels northeasterly avoiding mapped Bicknell's Thrush habitat to the extent possible. As a result. Wetland A-305 is impacted with road fill. The wetland is small with no significant functions or values.
B-09-S-65	PSS 4	P-WL2 (a)	184.3	0.004	71.1	0.002	Same as A-305
F-09-S-6	PEM 1	P-WL2 (a)	902.9	0.021	2.4	0	Several factors create unavoidable impact to Wetland F-6: steepness to the north and sub-alpine fir habitat to the west. The crane path will fill a majority of this resource.
F-09-S-5	PFO 4	P-WL3	579.9	0.013	240.2	0.006	T-8 will require fill down slope to support the turbine location. Natural drainage shall remain intact.
A-09-S-214	PFO 4	P-WL3	1.4	0	44.7	0.001	T-6 clearing will impact the northern edge of Wetland A-214. Pre-construction flagging of the wetland boundary may enable avoiding this very small wetland impact.
A-09-S-217	PSS 1/4	P-WL2 (a)	174.6	0.004	0	0	The T-6 pad layout is located over the small isolated wetland A-217. The topography is ideal for a turbine site, and ideal sites are limited.

Wetland ID	Wetland Type	LURC Subdistrict	Total Permanent Impact		Total Temporary Impact		Explanation
			ft^2	acres	ft^2	acres	
A-09-S-215	PFO 4	P-WL3	0	0	21.5	0.001	A steep slope to the downhill side of the crane path requires clearing to Wetland A-215. No grubbing will be required. The wetland will retain natural hydrology and functions. The cleared area will be allowed to regenerate to the original cover type.
A-09-S-219	PFO 4	P-WL3	127.8	0.003	232.2	0.005	Construction over Wetland A-219 allows the T-5 layout to avoid impacts to Wetlands A-215 and B-49. Use of rock fill will minimize the wetland impact.
A-09-S-220	PFO 4	P-WL3	92.1	0.002	121.9	0.003	The crane path is constrained by a steep slope to the east and a larger wetland (B-49) to the west. Hydrology will be maintained through the use of a rock sandwich. Maintaining hydrology along this drain is important because *Gal. kamtschaticum* populations exist along the drain below the road.
B-09-S-51	PFO 4	P-WL3	987.5	0.023	860.9	0.020	This impact is to the edge of the wetland. The crane path alignment is constrained by steep slopes the east, and wetland impact has been minimized to the extent possible. A rock sandwich will be installed to maintain hydrology flowing out of the wetland to the east
TOTAL			**3498 ft^2**	**0.0803 acres**	**1724 ft^2**	**0.0396 acres**	

Table B.15-3 Kibby Expansion Project Unavoidable Wetland Impacts Associated with Ridge Access, Gold Brook Road to Ridge

Wetland ID	Wetland Type	LURC Subdistrict	Total Permanent Impact		Total Temporary Impact		Explanation
			ft^2	acres	ft^2	acres	
B-09-S-47	PFO 4/5	P-WL1 (c-vi)	455.5	0.011	0	0	Access for the Kibby Expansion Project utilizes the existing Mile 5 Road off of Gold Brook Road. Road construction in this area has already altered wetland systems. Upgrades to the existing road will meet Level A and Level B Road Project standards and will improve hydrology and water quality. Use of the existing road avoids new impacts and helps minimize overall impact area.
B-09-S-17	PFO 1	P-WL1 (c-vi)	482.2	0.011	0	0	Same as B-47.
B-09-S-18	PFO 1	P-WL3	555.3	0.013	0	0	Same as B-47.
B-09-S-19	PEM 1	P-WL2 (a)	10801.5	0.248	0	0	Same as B-47.
B-09-S-52	PEM 1	P-WL2 (a)	237.9	0.006	0	0	Same as B-47.
B-09-S-53	PEM 1	P-WL2 (a)	125.8	0.003	0	0	Same as B-47.
A-09-S-223	PEM 1	P-Wl1 (c-vi)	3.2	<0.001	0	0	Same as B-47.
A09-S-222	PEM 1	P-WL2 (a)	81.7	0.002	0	0	Same as B-47.
F-09-S-11	PFO 1/4	P-WL3	993.7	0.023	854.3	0.020	Same as B-47.
B-09-S-28	PEM 1	P-WL2 (a)	113.4	0.003	0	0	Same as B-47.
B-09-S-29	PEM 1	P-WL2 (a)	2199.4	0.051	0	0	Same as B-47.
F-09-S-8	PFO 4/1	P-WL3	157.8	0.004	0	0	Same as B-47.
F-09-S-2	PSS 1	P-WL1 (c-vi)	24.4	0.001	0	0	Same as B-47.
B-09-S-33	PEM 1	P-WL2 (a)	1074.5	0.025	0	0	Same as B-47.
A-09-S-208	PFO 1/4	P-WL3	12.3	<0.001	0	0	Same as B-47.

Wetland ID	Wetland Type	LURC Subdistrict	Total Permanent Impact		Total Temporary Impact		Explanation
			ft^2	acres	ft^2	acres	
A-09-S-205	PFO 4/1	P-WL1 (c-vi)	17.42	<0.001	17.0	<0.001	Same as B-47.
E-09-S-1	PFO 1	P-WL1 (c-vi)	292.0	0.07	0	0	Same as B-47.
E-09-S-2	PEM	P-WL1 (c-vi)	173.6	0.004	0	0	Same as B-47.
E-09-S-3	PEM 1	P-WL2 (a)	258.6	0.006	0	0	Same as B-47.
E-09-S-4	PFO 1/4	P-WL1 (c-vi)	71.9	0.002	0	0	Same as B-47.
A-09-S-202	PEM 1	P-WL2 (a)	95.7	0.002	0	0	Same as B-47.
A-09-S-31	PFO 1/4	P-WL1 (c-vi)	179.9	0.004	0	0	Same as B-47.
C-09-S-35	PEM 1	P-WL2 (a)	63.3	0.002	5.0	<0.001	Access for the Kibby Expansion Project utilizes the existing Mile 5 Road off of Gold Brook Road. Road construction in this area has already altered wetland systems. Upgrades to the existing road will meet Level A road standards and will improve hydrology and water quality. Use of the existing road avoids new impacts and helps minimize overall impact area.
D-09-S-21	PEM 1	P-WL2 (a)	6.2	<0.001	0	0	Same as C-35
D-09-S-22	PEM 1	P-WL2 (a)	51.4	0.001	0	0	Same as C-35
C-09-S-36	PEM 1	P-WL2 (a)	359.8	0.008	0	0	Same as C-35
C-09-S-38	PEM 1	P-WL2 (a)	43.2	0.001	0	0	Same as C-35
D-09-S-23	PFO 1/4/5	P-WL3	272.0	0.006	240.2	0.006	Same as C-35
C-09-S-40	PEM 1	P-WL2 (a)	174.2	0.004	0	0	Same as C-35
C-09-S-41	PFO 1	P-WL3 RTE Plant	20.2	0.001	0	0	Same as C-35
C-09-S-42	PEM 1	P-WL2 (a)	1075.4	0	0	0	Same as C-35
D-09-S-27	PEM 1	P-WL2 (a)	1947.2	0.045	522.3	0.012	Same as C-35

Wetland ID	Wetland Type	LURC Subdistrict	Total Permanent Impact		Total Temporary Impact		Explanation
			ft^2	acres	ft^2	acres	
C-09-S-44	PEM 1	P-WL2 (a)	2899.4	0.067	0	0	Same as C-35
D-09-S-13	PEM 1	P-WL2 (a)	554.2	0.013	0	0	Same as C-35
D-09-S-34	PFO 1	P-WL3	3487.7	0.080	0	0	Same as C-35
D-09-S-4	PSS 1	P-WL1 (c-vi)	53.1	0.001	0	0	Same as C-35
J-09-S-1	PEM 1	P-WL2 (a)	160.3	0.004	90.5	0.002	Wetland J-1 is an unavoidable new wetland impact. The switchback road design avoids an alternate route that had greater wetland and stream impacts.
Total Impact			**29576 ft^2**	**0.680 acres**	**1,729 ft^2**	**0.040 acres**	

Table B.15-4 Kibby Expansion Project Unavoidable Stream Impacts Associated with Access Road Crossings

Stream ID	INT / PER	LURC district	Width (feet)	Permanent Impact		Temporary Impact		Explanation
				Lin. feet	ft^2	Lin. feet	ft^2	
B-09-S-47-1b	PER	P-SL2	1.5	17	26	0	0	A culvert extension may be necessary at this stream crossing to allow for road improvements.
B-09-S-17-1	INT	P-SL2	1.5	19	29	0	0	Same as B-09-S-47-1.
B-09-S-47-2	PER	P-SL2	2	14	28	0	0	Same as B-09-S-47-1.
B-09-S-18-1	PER	P-SL2	3	14	42	0	0	Same as B-09-S-47-1.
A-09-S-223-1	INT	P-SL2	3	2.3	7	0	0	Same as B-09-S-47-1.
F-09-S-2-1	PER	P-SL2	5	17	75	0	0	Same as B-09-S-47-1.
F-09-S-7-1	PER	P-SL2	3	19	57	0	0	Same as B-09-S-47-1
B-09-S-30-1	PER	P-SL2	4	5	20	0	0	Same as B-09-S-47-1.
B-09-S-30-2	INT	P-SL2	3	10	30	0	0	Same as B-09-S-47-1.
A-09-S-102-1	PER	P-SL2	9.5	0	0	0	0	There is an existing road crossing by bridge at this stream crossing.
E-09-S-1-1	PER	P-SL2	8	24	192	0	0	Same as B-09-S-47-1.
E-09-S-2-1	PER	P-SL2	4	35	140	0	0	Same as B-09-S-47-1.
C-09-S-0-1b	PER	P-SL2	8.5	0	0	0	0	There is an existing road crossing by bridge at this stream crossing.
A-09-S-200-1	INT	P-SL2	3	17	51	0	0	Stream A-09-S-200-1 currently flows into the existing road ditch and along the existing access road into C-09-S-01 adjacent to the bridge footings. Some impact will be necessary to stabilize this stream channel when the existing road is improved.
C-09-S-43-1	INT	P-SL2	1	19	19	0	0	The existing road ditch diverts C-09-S-43-1 along the road. A culvert will be installed to reconnect the original flow-path of this stream across the road.
D-09-S-4-2	INT	P-SL2	1	44	44	2	2	The stream flow is perpendicular to the road alignment, necessitating a crossing. An appropriately sized culvert will be installed to maintain flow as needed.

Stream ID	INT / PER	LURC district	Width (feet)	Permanent Impact		Temporary Impact		Explanation
				Lin. feet	ft^2	Lin. feet	ft^2	
D-09-S-54-1	PER	P-SL2	2	44	88	11	22	The stream flow is perpendicular to the road alignment, necessitating a crossing. An appropriately sized culvert will be installed to maintain flow as needed.
C-09-S-0-7	INT	P-SL2	1	49	49	24	24	The stream flow is perpendicular to the road alignment, necessitating a crossing. An appropriately sized culvert will be installed to maintain flow as needed.
A-09-S-3b	INT	P-SL2	1.5	39	60	4	6	This stream will need a culvert extension to account for improvements to Wahl Road.
Total	**19**			**388 ft**	**957 ft^2**	**41 ft**	**54 ft^2**	

Table B.15-5 Kibby Expansion Project Unavoidable Wetland Clearing Impacts Associated with Collector Line, Gold Brook Road to Ridge

Wetland ID	Wetland Type	LURC Subdistrict	Total Clearing Impact		Explanation
			Square Feet	Acres	
B-09-S-47	PFO 4/5	P-WL1 (c-vi)	1227	0.028	Collector Line wetland impacts are alongside the access road from Gold Brook Road to the ridge turbine site. Alignment along the developed road will enable pole setting and line clearing activities to minimize wetland disturbances.
B-09-S-48	PFO 4/1	P-WL1 (c-vi)	660.06	0.015	Same as B-47.
B-09-S-52	PEM 1	P-WL2 (a)	2938.4	0.067	Same as B-47.
B-09-S-53	PEM 1	P-WL2 (a)	348.8	0.008	Same as B-47.
A-09-S-226	PSS 4/1	P-WL2 (a)	549.1	0.013	Same as B-47.
A-09-S-225	PEM 1	P-WL2 (a)	833.26	0.019	Same as B-47.
A-09-S-222	PEM 1	P-WL2 (a)	9041.5	0.207	Same as B-47.
A-09-S-223	PEM 1	P-WL1 (c-vi)	823.2	0.019	Same as B-47.
F-09-S-11	PFO 1/4	P-WL3	4815.5	0.11	Same as B-47.
F-09-S-8	PFO 4/1	P-WL3	2449.3	0.056	Same as B-47.
F-09-S-2	PSS 1	P-WL1 (c-vi)	4402.1	0.101	Same as B-47.
F-09-S-1	PSS 1/4	P-WL2 (a)	1131.2	0.026	Same as B-47.
A-09-S-205	PFO 4/1	P-WL1 (c-vi)	1576.3	0.036	Same as B-47.
A-09-S-206	PEM 1	P-WL2 (a)	450.9	0.010	Same as B-47.
A-09-S-207	PFO 1/4	P-WL3	596.1	0.014	Same as B-47.
A-09-S-208	PFO 1/4	P-WL1 (c-vi)	617.5	0.014	Same as B-47.
E-09-S-1	PFO 1	P-WL1 (c-vi)	675.3	0.016	Same as B-47.
E-09-S-2	RSB	P-WL1 (c-vi)	236.2	0.005	Same as B-47.
E-09-S-4	PFO 1/4	P-WL1 (c-vi)	867.4	0.020	Same as B-47.
A-09-S-29	PFO 4	P-WL3 RTE plant	2578.2	0.059	*Gal. kamtschaticum* populations are located in this wetland, outside of the impact area.

Wetland ID	Wetland Type	LURC Subdistrict	Total Clearing Impact		Explanation
			Square Feet	Acres	
A-09-S-30	PEM 1	P-WL2 (a)	599.3	0.014	Same as B-47.
A-09-S-31	PFO 1/4	P-WL1 (c-vi)	3203.2	0.074	Same as B-47.
D-09-S-6	PFO 1/4	P-WL3 (a)	246.5	0.006	Same as B-47.
C-09-S-18	PEM 1	P-WL2 (a)	103.2	0.002	Collector Line wetland impacts are alongside the access road.
D-09-S-22	PEM 1	P-WL2 (a)	2387.1	0.055	Same as C-18
C-09-S-36	PEM 1	P-WL2 (a)	484.7	0.011	Same as C-18
C-09-S-37	PEM 1	P-WL2 (a)	286.5	0.007	Same as C-18
C-09-S-38	PEM 1	P-WL2 (a)	1160.6	0.027	Same as C-18
D-09-S-25	PEM 1	P-WL2 (a) RTE plant	3386.4	0.078	A small patch of *G. kamtschaticum* will be flagged and avoided to the extent possible.
C-09-S-42	PEM 1	P-WL2 (a)	1859.8	0.043	Same as C-18
D-09-S-13	PEM 1	P-WL2 (a)	2780.3	0.064	Same as C-18
D-09-S-34	PSS 1	P-WL2 (a)	1034.8	0.024	Same as C-18
A-09-S-216	PEM 1	P-WL1 (c-vi)	452.0	0.011	Same as C-18
D-09-S-27	PEM 1	P-WL2 (a)	2469.5	0.057	Same as C-18
D-09-S-10	PSS 4/1	P-WL2 (a)	525.5	0.012	Same as C-18
D-09-S-9	PEM 1	P-WL2 (a)	1023.9	0.024	Same as C-18
D-09-S-4	PSS 1	P-WL1 (c-vi)	3565.75	0.082	Same as C-18
A-09-S-211	PEM 1	P-WL2 (a)	2340.7	0.054	Same as C-18
A-09-S-212	PEM 1	P-WL2	490.8	0.011	Same as C-18
A-09-S-300	PFO 4/1	P-WL3 RTE Plant	460.6	0.011	Same as C-18
C-09-S-16	PFO 4	P-WL3	24.7	0.001	Same as C-18
TOTAL			**65703 ft^2**	**1.51 acres**	

Table B.15-6 Kibby Expansion Project Unavoidable Wetland Clearing Impacts Associated with Collector Line, 5 Mile Road to Substation

Wetland ID	Wetland Type	LURC Subdistrict	Total Clearing Impact		Explanation
			Square Feet	Acres	
B-09-S-102	PSS 1	P-WL 2 (a)	3972.8	0.091	The Collector Line from 5 Mile Road to the substation is located along the existing Gold Brook Road and Wahl Road to the extent possible. This will minimize impacts to wetlands. Where the ROW leaves the road side, the ROW length is shortened reducing total cleared area impacts.
A-09-S-349	PEM 1	P-WL2 (a)	4744.0	0.109	Same as B-102
A-09-S-348	PSS 4/1	P-WL2 (a)	1767.2	0.041	Same as B-102
A-09-S-347	PSS 1	P-WL2 (a)	2153.9	0.056	Same as B-102
A-09-S-344	PSS 1	P-WL2 (a)	7746.0	0.178	Same as B-102
A-09-S-345	PSS 1	P-WL2 (a)	424.1	0.010	Same as B-102
A-09-S-342	PSS 4	P-WL2 (a)	1024.4	0.024	Same as B-102
A-09-S-333	PSS 4/1	P-WL1 (c-vi)	2639.9	0.061	Same as B-102
A-09-S-337	PEM 1	P-WL2 (a)	7636.1	0.175	Same as B-102
A-09-S-340	PSS1/4	P-WL1 (c-vi)	6959.0	0.160	Same as B-102
B-09-S-95	PFO 4/1	P-WL1 (c-vi)	9578.1	0.220	Same as B-102
B-09-S-89	PFO 4/1	P-WL3	3107.5	0.071	Same as B-102
B-09-S-85	PEM 1	P-WL2 (a)	8337.4	0.191	Same as B-102
B-09-S-84	PEM 1	P-WL1 (c-vi)	3373.8	0.078	Same as B-102
B-09-S-83	PSS 1/4	P-WL2 (a)	3713.0	0.085	Same as B-102
A-09-S-326	PSS 1	P-WL2 (a)	1655.3	0.038	Same as B-102
A-09-S-321	PEM 1	P-WL2 (a)	275.4	0.006	Same as B-102
A-09-S-319	PSS 1	P-WL2 (a)	3597.2	0.083	Same as B-102
A-09-S-316	PSS 1	P-WL2 (a)	12239.4	0.281	Same as B-102

Wetland ID	Wetland Type	LURC Subdistrict	Total Clearing Impact		Explanation
			Square Feet	Acres	
A-09-S-315	PSS 1	P-WL2 (a)	1381.2	0.032	Same as B-102
Total Impact			**86326 ft^2**	**1.98 acres**	

Table B.15-7 Kibby Expansion Project Unavoidable Stream Crossing Impacts, Collector Line Adjacent to Access from Gold Brook Road to Ridge

Stream ID	INT / PER	LURC district	Width (feet)	Temporary Impact		Explanation
				Lin. feet	ft^2	These impact numbers reflect area of the streams within the collector ROW.
B-09-S-47-1b	PER	P-SL2	1.5	27	41	The collector line is adjacent to the access road which will provide machinery operators with an existing alternative route for crossing streams.
B-09-S-47-2	PER	P-SL2	2	21	42	Same as B-09-S-47
A-09-S-223-1	INT	P-SL2	3	50	151	Same as B-09-S-47-1
F-09-S-2-1	PER	P-SL2	5	57	285	Same as B-09-S-47-1
F-09-S-7-1	PER	P-SL2	3	64	192	Same as B-09-S-47-1
A-09-S-205-1	INT	P-SL2	2	40	80	Same as B-09-S-47-1
A-09-S-102-1	PER	P-SL2	9.5	77	770	Same as B-09-S-47-1
E-09-S-1-1	PER	P-SL2	8	68	544	Same as B-09-S-47-1
E-09-S-1-2	PER	P-SL2	4	19	76	Same as B-09-S-47-1
E-09-S-1-3	INT	P-SL2	2	5	10	Same as B-09-S-47-1
E-09-S-2-1	PER	P-SL2	4	66	264	Same as B-09-S-47-1
C-09-S-0-1b	PER	P-SL2	8.5	22	187	Same as B-09-S-47-1
C-09-S-43-1	INT	P-SL2	1	38	38	Same as B-09-S-47-1
D-09-S-4-3	INT	P-SL2	1	163	163	Same as B-09-S-47-1
D-09-S-4-2	INT	P-SL2	1	63	63	Same as B-09-S-47-1
C-09-S-0-7	INT	P-SL2	1	95	95	Same as B-09-S-47-1
Total	**15**			**875 ft**	**3001 ft^2**	

Table B.15-8 Kibby Expansion Project Unavoidable Stream Impacts, Collector Line Crossings from 5 Mile Road to Substation

Stream ID	INT / PER	LURC district	Width (feet)	Temporary Impact		Explanation
				Lin. feet	ft^2	These impact numbers reflect area of the streams within the collector ROW.
B-09-S-100-4	INT	P-SL2	2	16	32	The collector line parallels Gold Brook Road and Wahl Road in most places. Where it leaves the road side, a decrease in linear distance will reduce total area of impacts.
B-09-S-29-1	PER	P-SL2	3	88	264	Same as B-09-S-100-4
A-09-S-0-27	INT	P-SL2	3.5	177	620	Same as B-09-S-100-4
A-09-S-0-25	PER	P-SL2	4.5	63	252	Same as B-09-S-100-4
A-09-S-0-21	INT	P-SL2	1.5	77	116	Same as B-09-S-100-4
A-09-S-0-19	PER	P-SL2	5.5	91	501	Same as B-09-S-100-4
A-09-S-333-17	INT	P-SL2	2	65	130	Same as B-09-S-100-4
A-09-S-333-9	INT	P-SL2	3	61	183	Same as B-09-S-100-4
A-09-S-339-15	INT	P-SL2	2.5	64	160	Same as B-09-S-100-4
A-09-S-0-18	INT	P-SL2	3	36	108	Same as B-09-S-100-4
B-09-S-94-1	PER	P-SL2	2	63	126	Same as B-09-S-100-4
B-09-S-87-1	PER	P-SL2	3	83	249	Same as B-09-S-100-4
B-09-S-83-1	PER	P-SL2	3	76	228	Same as B-09-S-100-4
B-09-S-82-1	INT	P-SL2	2	40	80	Same as B-09-S-100-4
B-09-S-82-2	INT	P-SL2	2	20	40	Same as B-09-S-100-4
B-09-S-82-3	INT	P-SL2	1	50	50	Same as B-09-S-100-4
A-09-S-0-3a	PER	P-SL2	3	65	195	Same as B-09-S-100-4
A-09-S-326-10	PER	P-SL2	4	62	248	Same as B-09-S-100-4
A-09-S-0-1	INT	P-SL2	2	80	160	Same as B-09-S-100-4
A-09-S-0-8	INT	P-SL2	3	77	231	Same as B-09-S-100-4
A-09-S-0-6a	INT	P-SL2	1.5	67	101	Same as B-09-S-100-4
A-09-S-0-4a	INT	P-SL2	3.5	70	245	Same as B-09-S-100-4
A-09-S-0-3b	INT	P-SL2	1.5	52	78	Same as B-09-S-100-4
TOTAL				**1543 ft**	**4397 ft^2**	

Table B.15-9 Kibby Expansion Project
Poles within 100 ft. of Streams

Pole Structure Number	Stream ID	INT/PER	Station	Setback Distance (feet)
2	A-09-S-0-3b	INT	227.120	63
10	A-09-S-0-4a	INT	1527.250	11
14	A-09-S-0-6a	PER	2488.981	30
14	A-09-S-0-8	INT	2488.981	88
15	A-09-S-0-1b	INT	2710.686	28
15	A-09-S-0-8	INT	2710.686	99
16	A-09-S-0-3a	PER	2921.003	38
16	A-09-S-326-10	PER	2921.003	33
23	A-09-S-0-4b	INT	4313.927	78
23	B-09-S-82-1	INT	4313.927	81
23	B-09-S-82-3	INT	4313.927	89
25	B-09-S-83-1	PER	4751.916	56
31	B-09-S-87-1	INT	5972.326	75
31	B-09-S-87-2	INT	5972.326	63
32	B-09-S-87-1	INT	6195.432	100
35	B-09-S-94-1	PER	6850.518	94
37	A-09-S-0-18	INT	7241.020	90
37	A-09-S-0-20	INT	7241.020	96
38	A-09-S-0-18	INT	7436.519	55
38	A-09-S-0-20	INT	7436.519	91
39	A-09-S-334-8	INT	7624.346	70
39	A-09-S-339-15	INT	7624.346	56
40	A-09-S-339-13	INT	7788.700	60
40	A-09-S-339-15	INT	7788.700	68
44	A-09-S-333-17	INT	8623.111	46
44	A-09-S-333-9	INT	8623.111	70
52	A-09-S-0-19	PER	10269.734	33
53	A-09-S-0-21	INT	10493.899	23
55	A-09-S-0-25	PER	10860.688	41
56	A-09-S-0-27	INT	11085.035	84
57	A-09-S-0-27	INT	11309.381	25

Pole Structure Number	Stream ID	INT/PER	Station	Setback Distance (feet)
65	B-09-S-29-1	PER	12952.418	49
66	B-09-S-29-1	PER	13154.279	87
71	B-09-S-100-4	INT	14136.137	41
73	B-09-S-47-1b	PER	14535.702	100
74	B-09-S-47-2	PER	14751.745	47
81	A-09-S-223-1	INT	16293.486	75
81	A-09-S-224-1	INT	16293.486	84
89	F-09-S-2-1	PER	18040.626	77
92	A-09-S-102-1	PER	18771.312	31
95	A-09-S-205-1	INT	19404.502	98
96	A-09-S-205-1	INT	19571.741	68
96	E-09-S-1-1	PER	19571.741	84
97	E-09-S-1-1	PER	19768.862	96
97	E-09-S-1-2	PER	19768.862	90
97	E-09-S-1-3	INT	19768.862	78
97	E-09-S-2-1	PER	19768.862	54
104	A-09-S-0-2a	INT	21257.341	60
104	C-09-S-0-1b	PER	21257.341	54
126	D-09-S-4-3	INT	25787.295	52
127	D-09-S-4-3	INT	26038.667	75
128	D-09-S-4-2	INT	26242.296	65
128	D-09-S-4-3	INT	26242.296	29
129	D-09-S-4-2	INT	26423.234	63
143	C-09-S-0-7	INT	29131.072	61
144	C-09-S-0-7	INT	29312.921	62

B.15.6 Vernal Pools

B.15.6.1 Delineation and Functional Assessment

During wetland surveys in July, August, September, and October 2009, vernal pool field surveys were conducted where project elements are likely to occur. These surveys were done to identify potential vernal pools that might meet the Maine DEP and/or the Army Corps of Engineers definition. The survey could only identify *potential* pools, as the ideal survey window is in the month of May. Additional surveys would be performed in the spring of 2010 to check for amphibian use and egg masses at any natural vernal pools that were identified during the off-season surveys. The specific purposes of these surveys were to: 1) identify natural pools within the project area; 2) identify other areas being used by breeding amphibians; 3) determine if natural pools and other areas were being used by breeding amphibians; and 4) determine if any of the natural pools or other areas meet the Maine DEP or USACE definition of vernal pool.

The DEP definition of a vernal pool, as found in Chapter 335 of the Natural Resources Protection Act:

"A vernal pool, also referred to as a seasonal forest pool, is a natural, temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet or outlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (Rana sylvatica), spotted salamanders (Ambystoma maculatum), blue-spotted salamanders (Ambystoma laterale), and fairy shrimp (Eubranchipus sp.), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition."

The following definition from the Army Corps was also applied to base the jurisdictional determination and assessment of significant habitat:

> "**Special Inland Waters and Wetlands:** Vernal Pools - Temporary to permanent bodies of water occurring in shallow depressions that fill during the Spring and Fall and may dry during the Summer. Vernal pools have no permanent or viable populations of predatory fish. Vernal pools provide the primary breeding habitat for wood frogs, spotted salamanders, blue-spotted salamanders, and fairy shrimp, and provide habitat for other wildlife including several endangered and threatened species."

No natural pools were identified during these surveys, therefore none meet the Maine DEP definition of vernal pool. A total of 14 potential federal special waters were identified within the proposed project area. All 14 of these areas within the proposed project area appear to contain

all the characteristics to meet the federal definition of a vernal pool. All of the pools were man-made in origin, primarily being ruts made by skidders or other forest harvesting equipment, impoundments created by water bars on skidder trails or ditching and impoundment by logging roads. These pools will meet only the Army Corps definition of a vernal pool. The information on these pools is being provided here for informational purposes only and to facilitate development of a common application for use by LURC and the ACOE.

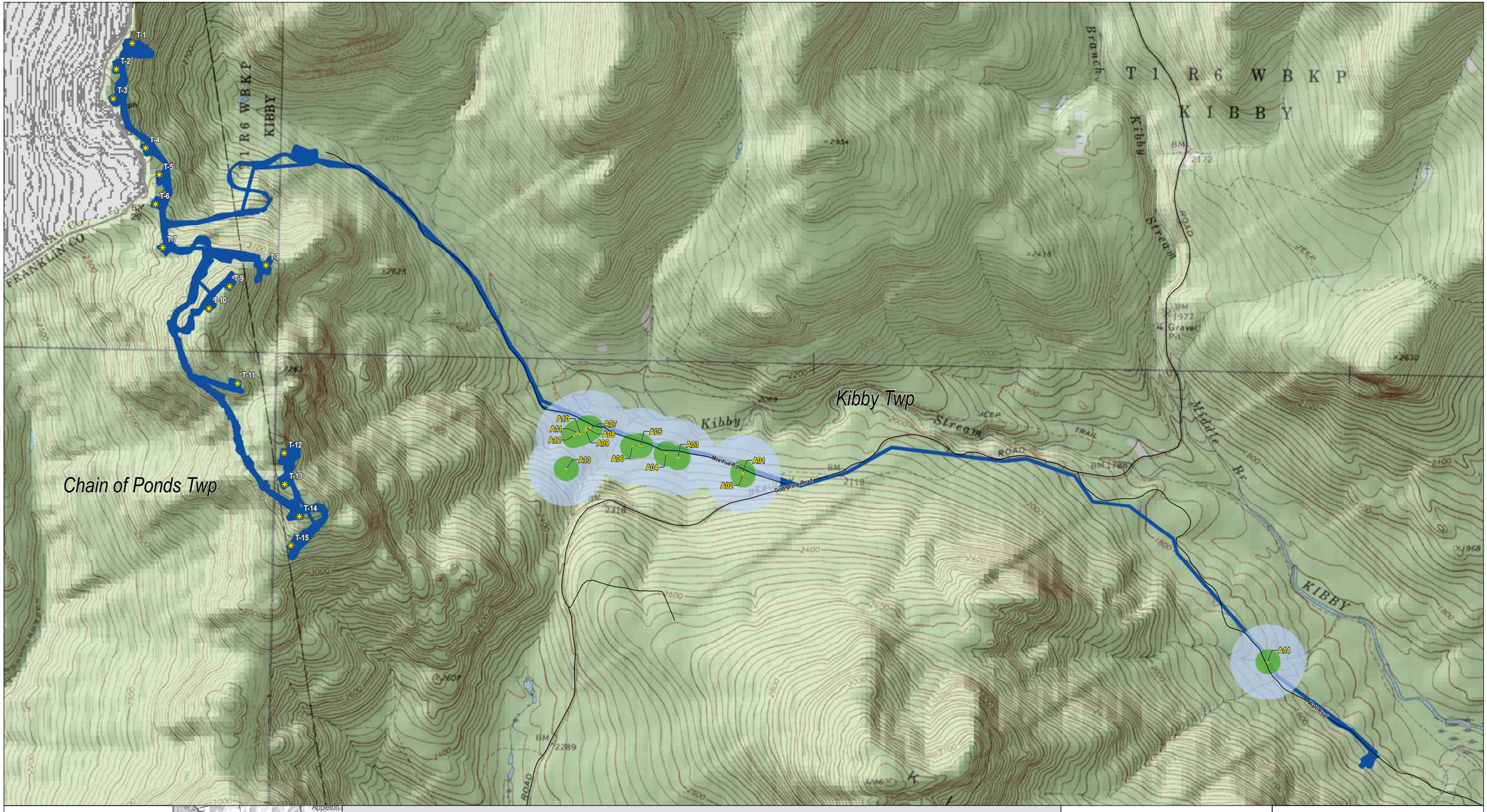
The Army Corps is interested in the impacts that may occur within 750 feet of pools and the area of that buffer and as a result, that information is reflected in Table B.15-10. Through consultation, MDIFW indicated they would also interested in analysis of a 250 foot buffer around these pools and therefore that information is also presented in the table. The total impact area represents impacts from clearing and grading and also includes existing developed areas (i.e., existing gravel roads). A description of each pool is provided below in Table B.15-10. Each pool and its proximity to the proposed construction and project area is depicted in Figure B.15-6.

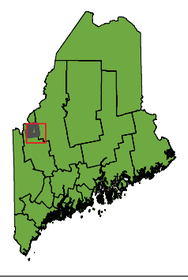
Potential Impacts

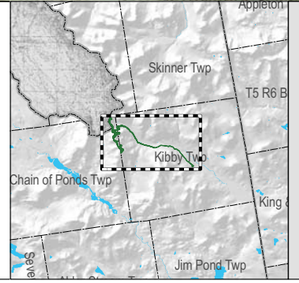
It is not anticipated that the project will have any adverse impact to any of these man-made pools. General guidelines to avoid impacts to natural vernal pools include:

- No disturbance within the vernal pool depression;
- Maintain a minimum of 75% of the critical terrestrial habitat as unfragmented forest with at least a partly-closed canopy of overstory trees to provide shade, deep litter and woody debris.
- Maintain or restore forest corridors connecting wetlands and significant vernal pools;
- Minimize forest floor disturbance; and
- Maintain native understory vegetation and downed woody debris.

Even though none of the pools identified are natural in origin, these guidelines will be met during construction of the proposed project.







Pool Locations
250ft Pool Buffer
750ft Pool Buffer
Turbine Locations
Project Footprint
Road

Sources: Maine OGIS, USGS, TRC

N

miles
0 0.25 0.5

Kibby Expansion Wind Power Project

Figure B.15-6
Pool Habitat Overview Map

TRC
14 Gabriel Drive
Augusta, ME 04330

Created 12/21/2009

Description of Pools

Table B.15-10

ID[1]	Setting and Origin	Size (in feet)	Associated Wetland ID	Location of closest project element	750 foot buffer area (acres)	Total Impact to 750 foot buffer (%)[2]	250 foot buffer area (acres)	Total Impact to 250 foot buffer (%)[2]
A1	Wetland Complex, Man-made (skidder rut)	10'X4'	B-09-S-019	Mile 5 Road Access	40.6 acres	8.7%	4.6 acres	20.9%
A2	Wetland Complex, Man-made (skidder rut)	10'x3'	B-09-S-019	Mile 5 Road Access	40.5 acres	8.9%	4.5 acres	18.2%
A3	Wetland Complex, Man-made (skidder rut)	14'x9'	B-09-S-019	Mile 5 Road Access	40.6 acres	7.8%	4.6 acres	18.8%
A4	Wetland Complex, Man-made (skidder rut)	12'X4'	B-09-S-019	Mile 5 Road Access	40.6 acres	7.8%	4.6 acres	24.1%
A5	Wetland Complex, Man-made (skidder rut)	12'X4'	B-09-S-029	Mile 5 Road Access	40.6 acres	8.1%	4.6 acres	19.1%
A6	Wetland Complex, Man-made (water bar)	15'X10'	B-09-S-029	Mile 5 Road Access	40.6 acres	7.8%	4.6 acres	15.8%
A7	Wetland Complex, Man-made (skidder rut)	20'X7'	B-09-S-033	Mile 5 Road Access	40.6 acres	8.5%	4.6 acres	23.7%
A8	Isolated Upland, Man-made (skidder rut)	14' x 2'	N/A	Mile 5 Road Access	40.6 acres	8.5%	4.6 acres	21.8%
A9	Isolated Upland, Man-made (water bar)	15' x 3'	N/A	Mile 5 Road Access	40.6 acres	8.5%	4.6 acres	14.3%
A10	Isolated Upland, Man-made (skidder rut)	15' x 2'	N/A	Mile 5 Road Access	40.6 acres	8.0%	4.6 acres	0.6%
A11	Isolated Upland, Man-made (water bar)	20' x 4'	N/A	Mile 5 Road Access	40.6 acres	8.0%	4.6 acres	0.1%
A12	Isolated Upland, Man-made (skidder rut)	20' x 3'	N/A	Mile 5 Road Access	40.6 acres	7.6%	4.6 acres	0%
A13	Isolated Upland, Man-made (water bar)	25' x 20'	N/A	Mile 5 Road Access	40.6 acres	0%	4.6 acres	0%
A14	Wetland Complex, Man-made (road impounded)	10' x 5'	A-09-S-326	Wahl Road Access	40.6 acres	8%	4.6 acres	23%

[1]All vernal pools listed here only meet the Army Corps of Engineers definition.
[2]The total impact includes existing and proposed disturbed areas from gravel roads (existing and proposed) and collector lines (proposed).

Description of Pools

Man-made Pool A1

Pool A1 was first identified during the 2009 wetland surveys. The pool dimensions are 10' x 4' and water depth was 14" when observed. The pool is a skidder rut in a wetland clear cut setting. The habitat is open land with skidder ruts. The level of existing disturbance to the pool and surrounding habitat is high due to logging activity. Leaves make up 60% of the cover on the bottom of the pool and the remainder is exposed mud or soil.

Photo of pool A1 taken on October 21, 2009.

Man-made Pool A2

Pool A2 was first identified during the 2009 wetland surveys. The pool dimensions are 10' x 3' and water depth was 14" when observed. The pool is a skidder rut in a clear cut/wetland setting. The habitat is open land with skidder ruts. The level of existing disturbance to the pool and surrounding habitat is high due to logging activity. Leaves make up 95% of the cover on the bottom of the pool and the remainder is exposed mud or soil.

Photo of pool A2 taken on October 21, 2009.

Man-made Pool A3

Pool A3 was first identified during the 2009 wetland surveys. The pool dimensions are 14' x 9' and water depth was 14" when observed. The pool is a skidder rut in a clear cut/wetland setting. The habitat is open land with skidder ruts. The level of existing disturbance to the pool and surrounding habitat is high resulting from logging. Within the pool, cover is approximately 15% and is made up of emergent vegetation. The remainder of the pool bottom is exposed mud or soil.

Photo of pool A3 taken on October 21, 2009.

Man-made Pool A4

Pool A4 was first identified during the 2009 wetland surveys. The pool dimensions are 12' x 4' and water depth was 8" when observed. The pool is a skidder rut in a clear cut/wetland setting. The habitat is open land with skidder ruts. The level of existing disturbance to the pool and surrounding habitat is high resulting from logging. Within the pool, cover is 20% woody debris. Emergent vegetation made up 10% of the cover on the bottom of the pool, and the remainder is exposed mud or soil.

Photo of pool A4 taken on October 21, 2009.

Man-made Pool A5

Pool A5 was first identified during the 2009 wetland surveys. The pool dimensions are 12' x 4' and water depth was 10" when observed. The pool is a skidder rut in a wetland setting with 100% of the habitat around the pool open land due to clear cutting. The level of existing disturbance to the pool and surrounding habitat is high resulting from logging activity. Within the pool, cover is 30% woody debris. Emergent vegetation made up 10% of the cover on the bottom of the pool, and the remainder of is exposed mud or soil.

Photo of pool A5 taken on October 21, 2009.

Man-made Pool A6

Pool A6 was first identified during the 2009 wetland surveys. The pool dimensions are 15' x 10' and water depth was 10" when observed. The pool is a man-made water bar in a wetland setting with 100% of the habitat around the pool cutover. The level of existing disturbance to the pool and surrounding habitat is high resulting from logging activity. Within the pool, cover is 5% and is woody debris. Emergent vegetation make up 15% of the cover on the bottom of the pool, and the remainder of is exposed mud or soil.

Photo of pool A6 taken on October 21, 2009.

Man-made Pool A7

Pool A7 was first identified during the 2009 wetland surveys. The pool dimensions are 20' x 7' and water depth was 14" when observed. The pool is in a skidder rut in a wetland setting with 100% of the habitat around the pool cutover. The level of existing disturbance to the pool and surrounding habitat is high resulting from logging activity. Within the pool, plant cover is made up of 5% woody debris, 40% emergent vegetation, and 5% shrubs. The bottom of the pool is exposed mud or soil.

Photo of pool A7 taken on October 21, 2009.

Man-made Pool A8

Pool A8 was first identified during the 2009 wetland surveys. The pool dimensions are 14' x 2' and water depth was 8" when observed. The pool is a skidder rut in an upland setting with approximately 10% of the habitat around the pool being softwood shrub regeneration. The remaining habitat is open land with skidder ruts. The level of existing disturbance to the pool and surrounding habitat is high resulting from logging activity. Within the pool, plant cover is made up of 10% emergent vegetation and the remainder is exposed mud or soil.

Pool A8. Photo taken October 21, 2009.

Man-made Pool A9

Pool A9 was first identified during the 2009 wetland surveys. The pool dimensions are 15' x 3' and water depth was 6". The pool is a man made water bar and is part of an upland setting. The level of existing disturbance to the pool and surrounding habitat is high and is primarily from logging. Emergent vegetation made up 10% of the cover on the bottom of the pool, there are a few pieces of woody debris, and the remainder of the bottom of the pool was exposed mud or soil.

Pool A9. Photo taken October 21, 2009.

Man-made Pool A10

Pool A10 was first identified during the 2009 wetland surveys. The pool dimensions are 15' x 2' and water depth was 10". The pool is a skidder rut and is part of an upland setting. The level of existing disturbance to the pool and surrounding habitat is high and is primarily from logging. Emergent vegetation made up 5% of the cover on the bottom of the pool, and the remainder was exposed mud or soil.

Pool A10. Photo taken October 21, 2009.

Man-made Pool A11

Pool A11 was first identified during the 2009 wetland surveys. The pool dimensions are 20' x 4' and water depth was 6". The pool is a man made water bar created during logging activities and is part of an upland setting. This pit abuts a logging road which causes water to impound in the pit. The level of existing disturbance to the pool and surrounding habitat is high and is primarily from logging. Woody debris made up 10% of the cover on the bottom of the pool, emergent vegetation was less than 5%, and the remainder was exposed mud or soil.

Pool A11. Photo taken October 21, 2009.

Man-made Pool A12

Pool A12 was first identified during the 2009 wetland surveys. The pool dimensions are 20' x 3' and water depth was 8". The pool is a skidder rut and is in an upland setting. The level of existing disturbance to the pool and surrounding habitat is high and is primarily from logging. Emergent vegetation made up 10% of the cover on the bottom of the pool, and the remainder was exposed mud or soil.

Pool A12. Photo taken October 21, 2009.

Man-made Pool A13

Pool A13 was first identified during the 2009 wetland surveys. The pool dimensions are 25' x 20' and water depth was 8". The pool is a man made water bar and is part of an upland setting. The level of existing disturbance to the pool and surrounding habitat is high and is primarily from logging. Woody debris made up 5% of the cover on the bottom of the pool, emergent vegetation made up 40% of the cover, and the remainder was exposed mud or soil.

Pool A13. Photo taken October 21, 2009.

Man-made pool A14

Pool A14 was first identified during the 2009 wetland surveys. The pool dimensions are 10' x 5' and water depth was 12". The pool is an impounded drain from the abutting Wahl Road and is part of a wetland setting. The level of existing disturbance to the pool and surrounding habitat is high and is primarily from the road. Hardwood shrubs made up 40% of the cover on the bottom of the pool, emergent vegetation made up 20%, and the remainder of the bottom of the pool was exposed mud or soil.

Pool A14. Photo taken November 19, 2009.

B.15.7 Scenic Character

See Exhibit A.1

B.15.8 Shadow Flicker

See Exhibit A.2

B.15.9 Noise

See Exhibit A.4

B.15.10 Historic Features

For documentation of agency and tribal consultation see Attachment B.15-5. A search of the National Register of Historic Places database identified 42 resources in Franklin County. Among registered resources is the Arnold Trail. The Arnold Trail runs along the Kennebec River through Wyman Lake and along the Dead River through Flagstaff Lake and up the North Branch Dead River, through the Chain of Ponds and to the Quebec border in Coburn Gore. Portions of the trail that run through the Chain of Ponds Township traverse the Chain of Ponds, which is at the toe of Sisk Mountain's southern slope. Potential views of the project from the Arnold Trail are limited by intervening topography, such as the high southern ridges of Sisk Mountain, and tree cover. The Project will be visible from the trail from some areas on the water, but the Project is not expected to adversely affect the elements and setting that contribute to it's military significance or character-defining features. These views are addressed in the attached "Architectural Survey Report and Finding of Effects Report", Attachment B.15-3, and see also Exhibit A.1, Scenic Character Evaluation.

The next closest registered resources are located in Stratton, approximately 15 miles southeast of Sisk Mountain, and in Rangeley, Dallas Plantation and Madrid Township, approximately 20 miles to the south. All other listed resources are over 30 miles to the south of Sisk Mountain. The proposed project will not be visible from these resources.

The Architectural Survey Report and Findings of Effects Report also identified all historic structures more than 50 years old within an eight-mile radius of the Project to determine their potential eligibility for listing. None of the sixteen structures met the criteria for listing on the National Register of Historic Places.

The Kibby and Sisk Mountain areas have been surveyed for archaeological resources in connection with the Kenetech and Kibby Wind Power Projects. In consultation with MHPC, TRC has determined that there are no known archaeological sites that will be impacted by the

proposed project. See attached memo supporting that there are no known archaeological sites in the project area, Attachment B.15-4.

B.15.11 Surface Water Quality

There are no Project components that are located adjacent to waterbodies other than those locations where the access road to the ridge and collector line from the ridge to the substation cross small streams. Nevertheless, there is the potential for the discharge of sediment to streams in the area during construction and, to a lesser degree, from developed areas following construction. Adherence to the temporary erosion and sedimentation control measures during construction and implementation of the permanent stormwater management and site restoration measures will provide effective mitigation for potential waterbody sedimentation. These measures are discussed in Exhibit B.14 and presented in more detail in Attachments B.14-2 and B.13-1.

Similarly, implementation of the contractor's Spill Prevention, Control and Countermeasure ("SPCC") Plan, based on TransCanada's minimum SPCC Plan requirements found in Attachment B.13-2 to Exhibit B.13, will minimize the potential for the discharge of petroleum or other contaminants in use during construction. The operations SPCC Plan for the Kibby Project, currently under development for use during ongoing operations, will be implemented for operation of the Kibby Expansion Project.

All of these documents and pollution prevention measures utilize currently accepted and previously-approved best management practices for the control of the types of pollutants that could be discharged to waterbodies from Project activities. As a result, construction and operation of the Kibby Expansion Project is not expected to directly discharge water pollutants to a surface water body which would cause the surface waterbody to fail to meet its state classification (38 M.R.S.A. §464 et seq.), impart toxicity or cause a surface waterbody to be unsuitable for the existing and designated uses of the waterbody, result in a violation of state or federal water quality laws, or which otherwise would cause an undue adverse impact to surface water quality.

B.15.12 Groundwater Quality

There will be no intrusion into the groundwater table from the proposed Project other than what may potentially occur from the excavations necessary to install turbine and substation foundations, collector line pole structures, and the rock cuts necessary to construct the access roads along the ridge. These types of activities occur commonly throughout the state (and elsewhere) without resulting in degradation of groundwater quality. The potential for adverse impact to groundwater quality does exist from petroleum and other spills that may occur during

Project construction or operation. However, as mentioned above under the surface water discussion, implementation of the contractor's SPCC Plan during construction and the Kibby Project operations SPCC Plan following construction will provide effective mitigation for the threat of groundwater contamination from spills. Lastly, as also discussed in Exhibit B.10, the existing O&M Building septic system has been designed in accordance with the Maine Wastewater Rules and will continue to have excess design capacity for the expected number of employees utilizing that system once both the Kibby and Kibby Expansion Projects are in full operation.

As a result, it is not expected that the Project will cause the degradation of groundwater quality below its current condition. Further, the development is not expected to pose an unreasonable risk that a discharge of pollutants to a groundwater aquifer will occur.

B.15.13 Air Quality

There are no regulated sources of air pollutants associated with the Project. Nevertheless, TransCanada will comply with all applicable state and federal air quality laws and standards, if any.

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ATTACHMENT B.15-1

Botanical Resources Report

Sisk Mountain Botanical Resources

October 2009

INTRODUCTION

TransCanada, the developer of the Kibby Mountain Wind Power Project, proposes to develop additional wind resources at Sisk Mountain, which lies slightly to the west of Kibby Range, in the townships of Kibby and Chain of Ponds, Franklin County, Maine.

Under the federal Endangered Species Act (50 CFR 17.12), there are 3 protected plant species in Maine, these being eastern prairie fringed orchis (*Platanthera leucophaea*), Furbish's lousewort (*Pedicularis furbishiae*) and small whorled pogonia (*Isotria medeoloides*). There are an additional nine plant species "of federal concern," defined as "formerly candidate species, or species under consideration for listing for which there is insufficient information to support listing[1]," in Maine. However, no populations of any of these species are known in the Sisk Mountain region nor were they observed during field surveys for the expansion project.

Pursuant to Maine statute (Title 12 Chapter 201 §544), the Maine Natural Areas Program (MNAP) maintains a list of some 351 rare plant species, including 172 that are protected as Threatened or Endangered under Maine statute, and 109 that are of Special Concern. MNAP additionally lists 70 species that are known only historically in Maine and that would, if found, be considered rare. Of this list, several are known in the townships of Kibby and Chain of Ponds:

Boreal bedstraw	(*Galium kamtschaticum*)
Giant rattlesnake-plantain	(*Goodyera oblongifolia*)
Auricled twayblade	(*Listera auriculata*)
Lesser wintergreen	(*Pyrola minor*)
Smooth woodsia fern	(*Woodsia glabella*)

In particular, boreal bedstraw and lesser wintergreen had been observed at nearby Kibby Mountain during plant surveys there in 2005 and 2006.

MNAP also has a responsibility for maintaining an inventory of the state's ecologically significant natural communities and for advising regulatory bodies in regard to same. Currently, the list contains some 98 natural community types, of which one, "fir – heart-leaved paper birch subalpine forest" is known in the project vicinity.

Gilman & Briggs was retained to search for any rare, threatened, or endangered (RTE) plants that might be present, and to map the natural communities of the project area and determine their level of significance.

[1] These are Orono sedge, Variable sedge, Robinson's hawkweed, Northern blazing-star, square-stemmed monkeyflower, Alga-like pondweed, Long's bulrush, and Gaspé arrow-grass.

METHODS

The project envelope was defined as the location of possible wind turbine generator (WTG) strings and access roads, and adjacent lands to approximately 375' on either side of potential WTG sites and roads, an area of approximately 884 acres. The area was inspected in July and August 2009. Seventeen of 19 potential tower sites identified at that time were visited, as were all access roads, and several foot-trails to the summit ridge of Sisk Mountain from various access points. Habitats encountered were assessed for the likelihood of any RTE and, if considered to be of moderate or high potential, were closely searched. Because of the rugged nature of the terrain and often extremely dense vegetation, it was not feasible to closely inspect the entirety of the project envelope. However, any uninspected areas are considered to have a low potential for any RTE populations.

Populations of RTE species that were located were flagged and mapped using GPS technology as points or as polygons. Other TRC personnel working on the project were trained to identify boreal bedstraw and lesser pyrola, and were requested to map any plants encountered in the course of wetlands delineation work. TRC personnel were also requested to report any other rare species that they encountered during their resource mapping efforts.

Natural communities were assessed through a combination of field work and interpretation of aerial photography. To determine the extent of the fir – heart-leaved birch community, notes regarding vegetation were taken at each of 17 potential tower sites that were visited as well as at intervening sites and other various locations on Sisk Mountain. These notes were combined with topographical data (elevation, aspect), and soils data (provided by Statewide Surveys) for each potential tower site. MNAP Natural Community Survey Forms were completed for several representative sites. Utilizing the known locations of these points, their vegetation signatures on the orthophotography taken for the project, photographs and data collected during wetland delineations, and extensive data on tree species, density, and size classes that were taken by consultants working on the breeding bird surveys using standard forest mensuration methods, a polygon was drawn on recent aerial photography representing the limits of the fir – heart-leaved birch community.

RESULTS

Rare plant species.

None of the three federally protected species or nine species of federal concern in Maine were observed on Sisk Mountain and, considering the range of habitats of these species and the habitats present, none are likely to occur.

Of the MNAP list of rare plants, two were found on Sisk Mountain. These were boreal bedstraw and lesser wintergreen. Both species had also been identified at Kibby Mountain, and were also previously known by MNAP from the Gold Brook and Kibby Stream drainage areas near Sisk Mountain.

Auricled twayblade should also be mentioned here only because it is known on the transmission line from Kibby Mountain to Bigelow Substation, at sites on the North Branch of the Dead River and Tim Pond Stream. None was observed within the Sisk Mountain area, and since the project will not require any upgrade to this transmission line, no impacts are anticipated.

Boreal bedstraw

Boreal bedstraw was found in numerous areas at Sisk Mountain. Approximately 190 observations were taken of this species, typically of a small patch covering 1-5 square meters, with 25-50 flowering stems, but occasionally a larger patch or group of patches covering a slightly larger area, 5-50 sq. m. with 100 or more flowering stems. While most of the populations were at mid-elevations (ca. 2600' – 2900') on the slopes of the mountain, a few were on the summit (highest elevation ca. 3180', near Tower 15), and some were at relatively low elevations, e.g. near Kibby Stream at ca. 2120'. Populations were also found in cleared forests below 2700' as well as in uncut areas at all elevations.

The preferred habitat of boreal bedstraw as observed at Sisk Mountain is in sloping, seepy areas where there is sufficient groundwater discharge to prevent build-up of organic acids. Thus, most populations are found near the top margins of seeps. Typically the habitat is a small patch at the upper end of a narrow, elongate seep that is bordered by deciduous northern hardwood trees (e.g., sugar maple, paper birch, or yellow birch) that provide dappled shade. This is consistent with the "canopy gap" habitat described by Potash (2004) in western North America. A very few populations occur in non-wetland conditions.

Although populations are numerous in the vicinity of the proposed project, the number of individuals in each is difficult to estimate because the stems are fragile and recline one over the other in loose mats. Each stem is weakly attached to a subterrean rhizome and it is not possible to equate number of stems with numbers of plants. In many areas, there are approximately 20-30 stems, although a few of the more extensive patches were estimated to have 100 or more stems.

Boreal bedstraw is a circumboreal species, known in the US from the northern New England states, New York, Michigan, Washington, and Alaska. It also occurs in Canada and Eurasia. In Maine, boreal bedstraw is known from approximately 8 or 9 towns in Oxford, Franklin, Somerset and Piscatauis Counties, all in mountainous areas. It is ranked by MNAP as S2, defined as "imperiled in Maine because of rarity 6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline." Judging solely from the number of occurrences we have documented on Kibby Range, the south end of Kibby Mountain, and Sisk Mountain, it seems likely that it would occur extensively on other local mountains.

Lesser or Snowline Wintergreen

Lesser wintergreen was found in several locations, both on the upper reach of Gold Brook and on minor tributaries to Kibby Stream. As observed at Kibby and Sisk Mountains, it grows along the margins of small perennial streams, especially in the zone immediately above the mean water

level, where annual flooding (ordinary high water) removes leaf litter and other debris. This zone is typically mossy, with gravelly, rather hard-packed soil. Lesser wintergreen is found only in association with coniferous trees, because it forms an obligate heteromycotrophic association with them; i.e., it obtains nutrients from them via a particular fungus connection.

Colonies are almost always small and scattered in linear fashion along the streams. Individual groups were observed to vary from 3-5 to 15-20 rosettes. The largest group encountered, on a tributary to Kibby Stream near the so-called "5-Mile Road" contained approximately 200 rosettes and 14 flowering stems.

Lesser pyrola is a circumboreal plant; known in the US from the northern tier of states, the montane west, and Alaska; it is also in all Canadian provinces as well as in Eurasia. It is ranked as S2 ("imperiled") in Maine, with approximately 7 known populations, in Aroostook, Franklin, Somerset, and Piscataquis Counties.

Natural Communities

A patch of fir – heart-leaved birch subalpine forest was identified on the central summit of Sisk Mountain, generally at an elevation above 3250'. Its identity was confirmed by reference to the MNAP (2009) description as well as other regional literature (Hudson et al. 1983; Thompson and Sorenson 2000; Sperduto and Nichols 2004; NatureServe 2009), and its limits determined as outlined above. The area covered is approximately 150 acres, as shown on the accompanying map.

On Sisk Mountain, this forest is characterized by a dominance of balsam fir, with a minor admixture of heart-leaved birch. Except for a few black spruce, and one tamarack observed in an area of young regeneration following wind-throw of a stand of fir, no other tree species are present. The forest is chaotic and patchy, due mostly to wind-throw disturbances. The summit of Sisk Mountain is well below the usual elevation at which the particular pattern of habitat patchiness called "fir waves," develops, but the beginning of some fir wave development is evident. There are numerous standing dead firs, and others with dead ("flagged") tops. The shrub and sapling layers, and the ground layer of vegetation is sparse, and composed of very few species.

This community is ranked S3 by MNAP. It is described (Gawler in NatureServe 2009) as usually a "large patch," i.e., occupying 50 – 100 acres, but it "approaches a matrix forest," covering areas of more than 100 acres, above 4000'. As a community, the Sisk community is a relatively small patch compared to other examples in the Northeast and in Maine (Hudson et al. 1986).

Further downslope, in more protected areas, the disturbance and patchiness of the forest is not evident as trees reach greater ages and sizes, and species such as yellow birch and red spruce are mixed in, making a "spruce – fir – wood sorrel – feathermoss forest." This forest type is ranked S4 by MNAP. At lower elevations within the project envelope, the forest comprises northern deciduous hardwood and mixed softwood-hardwood communities. Below 2700', much of the

area along the proposed access roads has been cut over in recent years. These forests are typical for the region and represent the matrix community in most of Maine.

No other significant natural communities were observed in the project envelope. Other communities that were observed included a small area of small-block talus, forested wetlands, small emergent wetlands within the forest matrix, and forest seeps, all very common communities in Maine. An alder shrub thicket lies just at the edge of the study envelope in the basin on the northeast end of Sisk Mountain; this community is ranked S4.

A complete list of all (vascular) plants observed is appended.

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Sisk Mountain Plant Species
14 September 2009

Scientific Name	Common Name	Comment
Trees & Shrubs		
Abies balsamea	Fir	Abundant, all zones
Acer pensylvanicum	Striped maple	Common, esp. lower elevations
Acer saccharum	Sugar maple	Common
Acer rubrum	Red maple	Frequent
Acer spicatum	Mountain maple	Occasional, slopes
Alnus incana ssp. rugosa	Speckled alder	Occasional; swamps
Amelanchier cf. arborea	Tree shadbush	Few, forest
Amelanchier bartramiana	Bartram's shadbush	Frequent, forest and openings
Betula alleghaniensis	Yellow birch	Common; large trees
Betula papyrifera var. cordifolia	Heart-leaved paper birch	Common
Cornus alternifolia	Alternate-leaved dogwood	Few, scattered in forest, 2900'
Corylus cornuta	Beaked hazel	Occasional, lower elevations
Diervilla lonicera	Bush-honeysuckle	Occasional
Fraxinus americana	White ash	Common
Ilex mucronata	Mountain-holly	Common, esp. wetlands
Larix laricina	Larch, tamarack	Rare, summit opening
Lonicera canadensis	Fly-honeysuckle	Common
Picea glauca	White spruce	Common
Picea mariana	Black spruce	Occasional, localized
Picea rubens	Red spruce	Common; some large (16")
Pinus strobus	White pine	Very few; one at 2800'
Populus balsamifera	Balsam poplar	Few, lower range
Populus grandidentata	Large-toothed aspen	Occasional
Populus tremuloides	Quaking aspen	Occasional
Prunus pensylvanica	Fire or pin cherry	Few, along logging roads
Prunus virginiana	Choke-cherry	Scattered, upper elevations e.g. 2900'
Rhododendron canadense	Rhodora	Few, along trail
Ribes glandulosum	Skunk currant	Occasional, scattered, at summit
Ribes hirtellum	Currant	Occasional
Ribes lacustre	Bristly or swamp currant	Common
Ribes triste	Wild red currant	Common
Rubus canadensis	Canada blackberry	Few, scattered, lower elevations
Rubus idaeus	Red raspberry	Common
Salix bebbiana	Bebb's willow	Common, open areas
Salix discolor	Pussy-willow	Occasional, lower areas

Salix eriocephala	Rigid willow	Few, along logging road
Salix pyrifolia	Pear-leaved willow	Common, open areas
Sambucus pubens	Red elder	Common
Sorbus americana	American mountain-ash	Common, lower forest
Sorbus decora	Pretty mountain-ash	Occasional, upper forest
Vaccinium angustifolium	Low sweet blueberry	Uncommon; boundary strip
Vaccinium myrtilloides	Velvet-leaved blueberry	Uncommon; boundary strip, summit openings
Viburnum alnifolium	Hobblebush	Abundant, most areas
Viburnum edule	Squashberry	Scattered, sideslopes
Viburnum nudum var. cassinoides	Wild raisin	Wetlands, all elevations
Ferns & Fern Allies		
Athyrium filix-femina	Lady fern	Common
Dryopteris campyloptera	Mountain woodfern	Abundant, upper elevations
Dryopteris cristata	Crested woodfern	Occasional, wetlands
Dryopteris intermedia	Intermediate woodfern	Common; lower in elevation
Equisetum arvense	Field horsetail	Common, ditches etc.
Equisetum fluviatile	Water horsetail	Few, ditches
Equisetum sylvaticum	Woodland horsetail	Common, wetlands
Equisetum variegatum	Variegated horsetail	Few, ditch of logging road
Gymnocarpium dryopteris	Oak fern	Frequent, esp. wet areas
Huperzia lucidula	Shining clubmoss	Occasional, scatterd
Lycopodiella inundata	Bog clubmoss	Few, wet areas in logging roads; fen-like area in NW basin
Lycopodium clavatum	Running clubmoss	Few, dry open areas
Onoclea sensibilis	Sensitive fern	Occasional, wetlands, lower
Osmundastrum cinnamomeum	Cinnamon fern	Common, wetlands; fens
Osmunda claytoniana	Interrupted fern	Common, wetlands
Phegopteris connectilis	Long beech fern	Common, wet areas
Polypodium appalachianum	Appalachian rock polypody	Few, on scattered boulders
Polystichum braunii	Braun's holly-fern	Few, scattered in rich forest
Thelypteris noveboracensis	New York fern	Common, lower elevations, in protected wetland at summit
Grasses, Sedges, & Rushes		
Agrostis capillaris	Brown bent	Common, lower elevation, non-native
Agrostis scabra	Tickle-grass	Common, lower elevations
Anthoxanthum odoratum	Sweet vernal-grass	Occasional, disturbed soil, non-native
Brachyelytrum aristosum	Short-husk grass	Occasional, lower elevations
Bromus ciliatus	Fringed brome grass	Common, throughout

Calamagrostis canadensis	Canada blue-joint grass	Common, throughout
Carex bebbii	Bebb's sedge	Few, along trail/logging road
Carex cf. blanda	Bland sedge	Few, lower elevations
Carex brunnescens	Brownish sedge	Common, forest, outcrops
Carex crinita	Fringed sedge	Occasional, wetlands
Carex echinata	Star sedge	Occasional; open wetlands;fen-like area in NW basin
Carex intumescens	Swollen sedge	Occasional
Carex lurida	Yellowish sedge	Common, ditches
Carex cf. normalis	Normal sedge	Few, clearcut
Carex scabrata	Scabrate sedge	Abundant, forest seeps
Carex scoparia	Broom sedge	Occasional, disturbed soil
Carex stipata	Stipitate sedge	Occasional, wetlands
Carex cf. tenera	Drooping sedge	Few, lower elevations
Carex trisperma	Three-seeded sedge	Abundant, seeps; fens
Carex vesicaria var. *jejuna*	Bladder-sedge	Common in fen-like area in NW basin
Cinna latifolia	Wood-reed	Common, throughout
Danthonia spicata	Poverty-grass	Common, logging roads, cldearcuts
Deschampsia flexuosa	Wire-grass	Common, dry knolls
Eleocharis obtusa	Spike-rush	Ditch of logging road
Festuca pratensis	Meadow fescue	Few, logging road, planted? Non-native
Festuca rubra	Red fescue	Few, logging road, non-native
Glyceria canadensis	Rattlesnake-grass	Occasional, wet soils
Glyceria melicaria	Spring manna-grass	Common; dominant in seeps
Glyceria canadensis var. laxa?	Manna-grass	Few, along logging road
Glyceria striata	Manna-grass	Common, wetlands,lower
Juncus brevicaudatus	Short-tailed rush	Common, disturbed soils
Juncus bufonius	Toad rush	Muddy area of logging road
Juncus effusus	Soft rush	Common, disturbed soils
Juncus tenuis	Path rush	Occasional, disturbed areas
Lolium perenne	Perennial rye	Rare; logging road, planted? Non-native
Luzula multiflora	Wood-rush	Occasional, openings, clearcuts
Luzula parviflora var. melanocarpa	Few-flowered wood-rush	Occasional, scattered throughout
Milium effusum	Wild millet	Few, one site, rich wetland
Phleum pratense	Timothy	Few, logging road, non-native
Poa palustris	Fowl-meadow-grass	Occasional, openings
Poa pratensis	Kentucky bluegrass	Occasional, disturbed soils,

		non-native
Scirpus atrocinctus	Black-banded bulrush	Common, wetlands
Scirpus hattorianus	Blackish bulrush	Few, wet disturbed soils
Scirpus microcarpus	Barber-pole bulrush	Occasional, rich wetlands
Scirpus pedicellatus	Pedicelled bulrush	Occasional, clearings
Typha latifolia	Broad-leaved cat-tail	Few, ditches
Herbs		
Actaea rubra	Red baneberry	Occasional, rich forests
Ageratina altissima	White snakeroot	Occasional, seepy wetlands
Anaphallis margaritacea	Pearly everlasting	Common, clearcuts
Aralia nudicaulis	False sarsaparilla	Common, throughout
Chelone glabra	Turtlehead	Few, wetlands and stream margins (3180')
Chrysosplenium americanum	Golden-saxifrage	Occasional, seeps and streams
Circaea alpina	Dwarf enchanter's-nightshade	Common, wetlands
Cirsium muticum	Swamp thistle	Occasional, wetlands
Cirsium vulgare	Bull thistle	Few, logging roads, nonnative
Clintonia borealis	Bluebead-lily	Common, upland forest
Coptis trifolia	Goldthread	Common, throughout
Cornus canadensis	Bunchberry	Common, upland forest
Cypripedium acaule	Mocassin-flower	Few, upland forest
Doellingeria umbellata	Tall white aster	Common, lower elevations, to 3000'
Drosera rotundifolia	Sundew	Ditches of logging road
Epilobium coloratum	Willow-herb	Common, wetlands
Epilobium strictum	Willow-herb	Few, wet disturbed areas
Epipactis helleborine	Hellebore orchid	Few, non-native; forests
Eurybia macrophylla	Large-leaved aster[2]	Common, esp. lower areas
Euthamia graminifolia	Grass-leaved goldenrod	Occasional, lower elevations
Eutrochium maculatum	Joe-Pye weed	Occasional, rich woods
Fragaria virginiana	Wild strawberry	Frequent, clearcuts
Galium asprellum	Cleavers	Occasional, wetlands, lower
Galium palustre	Marsh bedstraw	Few, wetland near Kibby Stream
Galium kamtschaticum	Boreal bedstraw	Occasional, localized, seeps
Gaultheria hispidula	Creeping snowberry	Common, spruce-fir forests
Geum rivale	Water avens	Few, rich seepy areas
Gnaphalium uliginosum	Cudweed	Occasional, logging roads
Gratiola neglecta	Hedge-hyssop	Few, ditch
Heracleum maximum	Cow-parsnip	Few, lower forest
Hieracium lachenalii	Tall hawkweed	Few, along logging road

[2] Large-leaved aster is common at Sisk Mtn., but not common in the fir-birch forest at the summit, contrary to the MNAP description of the community

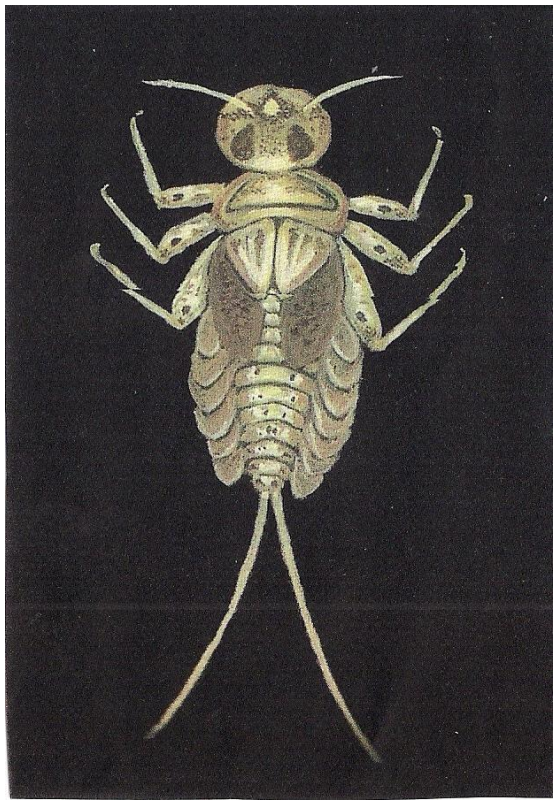
Hydrocotyle americana	Water penny-wort	Common, seeps
Hypericum canadense	Canada St. John's-wort	Few, wetland near Kibby Stream
Hypericum mutilum	St. John's-wort	Few, wetland near Kibby Stream
Impatiens capensis	Jewelweed	Common, wetlands and seeps
Lactuca biennis	Wild lettuce	Common, disturbed soils
Leontodon autumnale	Fall dandelion	Common, logging roads, non-native
Leucanthemum vulgare	Ox-eye daisy	Common, logging roads, non-native
Listera cordata	Heart-leaved twayblade	Few, very shaded seeps
Lysimachia terrestris	Swamp-candles	One large group, clearcut
Medeola virginica	Indian cucumber-root	Few, rich woods
Maianthemum canadense	False lily-of-the-valley	Frequent
Mitella nuda	Bishop's-cap	Common, damp forest
Monotropa uniflora	Indian-pipes	Occasional
Nabalus altissima	Tall white lettuce	Frequent, all areas
Oclemena acuminata	Whorled wood-aster	Common, all open areas
Omalotheca sylvatica	Wood cudweed	Occasional, clearcuts
Orthilia secunda	One-sided pyrola	Frequent
Osmorhiza berteroi	Western Sweet-Cicely	Few, rich forest
Oxalis montana	Mountain wood-sorrel	Common, spruce forest
Packera schweinitziana	Robbins's ragwort	Common, seeps
Pilosella aurantiaca	Devil's paint-brush hawkweed	Common, dry, disturbed soils
Pilosella officinalis	Mouse-ear hawkweed	Common, disturbed soils
Pilosella pilloselloides	King-devil hawkweed	Common, disturbed soils
Plantago major	Plantain	Occasional, logging roads, non-native
Plantago rugellii	Rugell's plantain	Occasional, logging roads, non-native
Platanthera clavellata	Club-spur rein-orchis	Frequent, disturbed wet soils
Platanthera dilatata	Tall white orchis; bog-candle	Common; seeps
Platanthera fimbriata	Large purple fringed-orchis	Few, openings, lower elevations
Potentilla norvegica	Rough-leaved cinquefoil	Common, logging roads
Prunella vulgaris	Heal-all	Common, along streams
Pyrola elliptica	Shin-leaf	Occasional, forest
Pyrola minor	Least pyrola	Rare, streamsides
Ranunculus abortivus	Kidney-leaved buttercup	Few, streamsides, lower elevations
Rubus triflorus	Dwarf raspberry	Common, wetlands
Sanicula marilandica	Sanicle	Occasional, rich forest
Solidago canadensis	Canada goldenrod	Common, clearcuts
Solidago flexicaulis	Zig-zag goldenrod	Occasional, lower elevations

Solidago macrophylla	Mountain goldenrod	Common, throughout
Solidago rugosa	Rough-leaved goldenrod	Common, esp. lower elevations
Streptopus amplexicaulis	White mandarin	Occasional, forests
Streptopus roseus	Rosy twisted-stalk	Occasional, upland forests
Symphyotrichum lanceolatum	Lance-leaved aster	Common, disturbed areas
Symphyotrichum puniceum	Red-stemmed aster	Common, forest glades
Taraxacum officinale	Dandelion	Few, logging road
Thalictrum pubescens	Tall meadow-rue	Common, wetlands
Tiarella cordifolia	Foamflower	Few, wetlands and ditches
Trientalis borealis	Starflower	Common, throughout
Trifolium aureum	Yellow hop-clover	Along logging roads, non-native
Trifolium repens	White clover	Occasional, disturbed soil
Trillium erectum	Red trillium	Frequent, forest
Trillium undulatum	Painted trillium	Frequent, upper forest
Tussilago farfara	Colt's-foot	Common, along logging roads, non-native
Veratrum viride	False hellebore	Common, throughout
Veronica serpyllifolia	Creeping speedwell	Few, logging road
Veratrum viride	False hellebore	Common, wetlands and uplands
Viola cucullata	Blue violet	Common, wetlands
Viola mcloskeyi	Creeping white violet	Occasional, wetlands

ATTACHMENT B.15-2

Roaring Brook mayfly survey protocol

RECOMMENDED SURVEY PROTOCOL FOR THE ROARING BROOK MAYFLY (*Epeorus frisoni*)



by Marcia Siebenmann and Beth Swartz

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DRAFT **August 21, 2009**

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Front cover artwork by Mark McCollough.

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INTRODUCTION

The Roaring Brook Mayfly (*Epeorus frisoni*) is listed as an endangered species under the Maine Endangered Species Act. On-going statewide surveys by the Maine Department of Inland Fisheries and Wildlife (MDIFW) are designed to document the occurrence, distribution, life history, and habitat requirements of this globally rare insect. Data from these surveys are used by MDIFW to better assess the status and conservation needs of the Roaring Brook Mayfly in Maine, and inform habitat protection at sites where the mayfly is known to occur or could potentially be found.

The purpose of this document is to provide guidance to MDIFW staff, agency contractors, environmental consultants, project applicants, entomologists, and others who are undertaking surveys to document the presence/absence of *Epeorus frisoni*. It describes MDIFW's current recommendations for site selection, sampling methodology, collection protocol, data recording, specimen identification, and vouchering. This information may evolve as we continue to learn more about the life history and habitat use of the Roaring Brook Mayfly through further survey work.

BACKGROUND

Epeorus frisoni was first collected from "Roaring Brooks" on Mt. Katahdin in 1939. Until recently, our knowledge of this species was based solely on that single adult specimen. Nothing was known about its life history or habitat requirements and despite a long history of surveys for mayflies throughout Maine and North America, no other occurrences had ever been documented. This led to *E. frisoni* being listed as state-endangered in 1997.

In 2003, MDIFW in conjunction with officials governing Baxter State Park sampled Roaring Brook and two small tributary streams in an attempt to reconfirm the species' presence and gather information that could help direct surveys elsewhere in the State. As a result of that study (Swartz et al. 2004) *Epeorus frisoni* was verified as still extant on Katahdin and basic life history and habitat data were documented. Specimens collected during the surveys also allowed development of new species level keys for male imagos and larvae (Burian et al. 2008). This made it possible to reexamine previously collected material and, as a result, a specimen from Vermont originally reported to be *E. fragilis* was determined to be *E. frisoni*. Since then there have also been unpublished reports from the White Mountains of New Hampshire (S.K. Burian personal communication) and several new records documented by MDIFW in the mountains of western Maine (Figure 1).

Although our present understanding of the Roaring Brook Mayfly's life history is limited, this species appears to be restricted to undisturbed, high-elevation headwater streams along the northern Appalachian Mountain Range, and may be New England's only endemic mayfly (Burian et al. 2008). The greatest potential for documenting new occurrences of *E. frisoni* in Maine lies in the ridgelines and mountaintops of western and north central regions of the State. However, until further investigation refines our understanding of the species' range in Maine, any potentially suitable stream habitat encountered statewide should be considered for sampling.

SURVEY SITE SELECTION

All known occurrences of the Roaring Brook Mayfly are in small, clean, cold, unvegetated, high elevation, high gradient streams that remain watered year round – although water depths may be very shallow during low water times of year (Figure 2). Streambed substrate at these sites consists of rock/cobble/gravel/sand mixes with little to no organic substrate. Surrounding habitat is primarily undisturbed, mixed forest with a semi-open to closed stream canopy cover. Based on these habitat characteristics, MDIFW currently identifies potential survey sites for *Epeorus frisoni* using the following methodology and criteria:

1) USGS 7.5' topographic maps and GIS-generated maps highlighting elevation and hydrology are screened for the presence of **perennial headwater streams draining off a ridgeline at or above 1000 feet elevation**. [NOTE: At least one *E. frisoni* site is a stream too small to be depicted on a topographic map. These unmapped streams, which can often be inferred based on topographic contours and later verified in the field, should also be considered potential survey sites.]

2) Streams lacking sufficient elevation above 1000 feet are generally considered low priority or eliminated as potential survey sites. These sites typically do not have enough ground water or runoff supply to maintain flow year round, and are often dry by mid summer.

3) For surveys related solely to documenting statewide distribution and occurrence, access is usually considered in prioritizing or eliminating a potential survey site. For surveys related to evaluating or avoiding specific project impacts, all potentially suitable sites should be surveyed regardless of accessibility.

4) Potential survey sites identified by analysis of topographic maps should then be field-checked for presence of the following key habitat characteristics that have been observed at known sites:

- **relatively undisturbed mixed forest:** evidence of land use impact to the stream bed, riparian zone, and surrounding landscape is absent or of light intensity; hardwoods seem to be the slightly more dominant stand component
- **closed or only semi-open riparian canopy cover:** stream channel fairly narrow (average widths x-x feet), typically with heavy shading
- **high gradient stream with coarse substrates:** tumbling stream of moderate to fast flow with steps of small pools and riffles/runs; substrate composed primarily of medium to large-sized cobble, rocks and boulders, with gravel/sand mix in pools and slower flows
- **stream channel wetted year-round:** water present even in mid-late summer; depths vary between pools and riffles/runs, which can be very shallow during dry seasons
- **minimal aquatic vegetation:** aquatic vegetation is typically absent, but some aquatic moss may coat rocks
- **cold water temperatures:** water temperature remains consistently cold throughout summer

Figure 2. *Epeorus frisoni* habitat on Mount Katahdin, mid to late summer. [*photos by Baxter State Park (left) and MDIFW (right)*]

Survey sites are often accessed from trail or road crossings at lower elevations and then followed upstream to more suitable habitat above 1000 feet. Currently known *E. frisoni* occurrences fall between 1400 and 2210 feet elevation, but surveys should not exclude potentially suitable habitat either above or below these heights.

WHEN TO SURVEY

The appropriate season for conducting Roaring Brook Mayfly surveys is dictated by the insect's life-history characteristics. Sampling should occur when the majority of larvae are pre-emergent (i.e., at or near maturity): early instars generally lack the morphological features necessary for identification to species and may be difficult to collect because of their small size; and surveys for adults can not always be relied upon as a means of identifying natal streams. To date, pre-emergent *E. frisoni* larvae have been encountered between **August 1 and September 30**. Surveys should not be conducted earlier in the summer, and MDIFW recommends targeting the latter part of this period to increase success of finding late instar animals in the samples.

Water temperature is the primary physical factor directly influencing the rate of development of invertebrates and reproduction (Vannote and Sweeney, 1980). Depending upon local factors that influence temperature, such as elevation and canopy, a species in a warmer downstream reach

typically matures earlier than does an upstream population of the same species. Thus, the timing of sample collection must take water temperature into consideration.

Sampling during normal low- and stable-flow periods is the preferred time for Roaring Brook mayfly sampling. Sampling during low flow increases accessibility to the stream and increases confidence that all parts of the wetted channel have been continuously part of the aquatic habitat. (Do not sample following heavy rain events when water levels are abnormally high and conditions not conducive to effective sampling.)

SAMPLING METHODOLOGY

2.1 Type of Sample Collected

Sampling focuses on a qualitative characterization of the sampling site to locate as many *E. frisoni* microhabitats as possible. These include areas of moderate to fast flow with coarse substrate and/or the presence of leaf packs. As much as possible, equivalent effort (time spent sampling or area sampled) is put into sampling each microhabitat at a site. However, time spent sampling at different sites may vary greatly depending on the number of appropriate microhabitats present at each site.

Its dorso-ventrally flattened body shape is an adaptation that allows it to inhabit rapidly flowing waters by clinging to rocks and other firmly anchored substrates in the rapidly flowing water of the headwater streams where it lives.

poor swimmers, they live in rapidly flowing water where they attach themselves to rocks or other firmly anchored material. They feed on fine detritus and algae and are often found among leaf packs that are lodged between rocks and under boulders (S.K.Burian personal communication). Once larval development is complete, the nymph rises to the surface where the subadult (subimago) escapes from the turbulent water. This is followed by a final molt, usually within 24-48 hours, to the imago or sexually mature adult.

It seems to begin its adult emergence in mid to late July and continues into early fall, further suggesting a life cycle adapted to higher latitudes

2.2 Selecting Sampling Sites and Habitat Types

Sample site selection involves two elements: (1) locating the basic site; (2) identifying and selecting specific locations of microhabitats within the sampling area from which invertebrate samples are taken.

The location of each site should be related to a durable reference point such as a road crossing or bridge or some other landmark that is used to permanently define the location. When bridges are in the immediate area, the sampling area should extend upstream from the bridge or road crossing.

1. Areas downstream and upstream of the designated site are sampled as conditions warrant.
2. Leaf packs may also be present between or under rocks and boulders.

3. METHOD FOR COLLECTING *EPEORUS* SPECIES LARVAE

The following sections establish guidelines for collecting *Epeorus* larvae. The objective is to collect as complete a representation of the species of *Epeorus* present at a sampling site as is possible in the time available. *Epeorus* larvae are easily recognized as the only dorso-ventrally flattened mayfly with two caudal ("tail") filaments

3.1 Sample Collection

The most common gear type used to collect aquatic insects in a wadeable stream is a 30-cm-wide D-frame kick net equipped with a 500-µm mesh bag (Feldman et al. 2006, Hayslip et al. 2007), although a kick screen can also be used. Sampling is conducted downstream to upstream.

Samples should be taken using a kick net sampling technique. This SOP slightly modifies the methodology RBP single habitat approach (Barbour et al. 1999).

1. Face downstream and place the D-frame net securely on the stream bottom and perpendicular to the downstream flow with the opening facing upstream.
2. Collect benthic macroinvertebrates from an area up to $1m^2$ immediately upstream of the net.
3. Pick up and rub large rocks (fist size or larger) directly in front of the net to remove attached invertebrates. Quickly inspect each stone to make sure you have dislodged everything and replace to original position.
4. For large boulders or embedded rocks, brush the submerged side gently by hand to dislodge organisms into the net.
5. Keeping the sampler securely in position, gently disturb (turn/lift) the substrate within the sampling area so as to dislodge invertebrates that the current will carry into the net/screen. Continue for about 30 seconds or until the substrate is adequately disturbed.
6. Leaf litter that is lodged between or underneath rocks and boulders should be dislodged into the aquatic net.
7. Pull the net up out of the water. Immerse it in the stream several times or splash the sides of the net with stream water to remove fine sediments and to concentrate organisms at the end of the net.

4. SAMPLE PROCESSING AND LABELING

4.1 Sample Processing

Field processing begins with the removal of large rocks and organic debris (leaves and twigs) from the net. These materials are discarded after checking to ensure that all attached mature/pre-

emergent *Epeorus* larvae have been removed. When present, gently remove these organisms with forceps and place in an appropriately labeled vial filled with 70% ethanol. All organisms that are picked from the sample are added to this vial.

The sample material remaining in the net is then rinsed into a white pan half-filled with water and the contents visually examined. Let the substrate settle. The insects will move around and be easier to spot. Visual inspections are usually easier and faster if only small amounts of the sample are examined at a time. Collect any mature/pre-emergent *Epeorus* larvae and place them in the labeled vial. Inspect the net for any remaining organisms and rinse well with stream water. Empty the contents of the pan back into the stream.

Repeat the above procedure at the remaining microhabitats until the area has been adequately searched placing all collected *Epeorus* larvae in the labeled vial. Searches may last from one-half to two hours, depending on the availability of microhabitats. This may mean walking some distance both upstream and downstream checking for appropriate *Epeorus* larvae habitat.

4.2 Labeling

An internal sample label is completed using a pencil or a pen containing alcohol-resistant ink and placed in the sample vial. Label information should include the following: state, county, town, collection date, site name, UTMs, and collector. The date of collection is entered in two-digit format as month, day, and year.

5. FIELD DATA SHEETS

Information about the habitat and circumstances in which specimens were found is basic to the usefulness of specimens. These data contribute greatly to what must be learned of the distribution and biology of *Epeorus frisoni*.

5.1 Field Data

Site-specific field data, recorded in a field notebook or data sheet, which will be included in the report to MDIFW shall include:

5.1.1 Site information
- a. Sampling date
  - i. In double-digit numeric format for month, day, and year (for example, November 9, 2009 is entered as 11/09/09).
- b. State, county and town
- c. Site name (name of water body)
- d. Access – directions to site
- e. GPS coordinates (UTMs)
- f. Precise locations
  - i. Stated in such a way that it can be relocated (e.g., by reference to a specific road, road crossings, bridge, etc.)
- g. Name(s) of collector(s)

5.1.2 General habitat description

a. Water temperature
b. Weather conditions
    i. Relative intensity, temperature range, duration of precipitation
c. Description of upland
d. Canopy cover (closed, semi-open, open)
e. Substrate (boulders, cobble, gravel, sand)

5.1.3 Sampling information
a. Start and end times
b. Site notes
    i. i.Other fauna present
    ii. ii.Unusual or unique site conditions, problems encountered, etc.
c. Photograph notes (if applicable)

6. SPECIMEN IDENTIFICATION

As directed by MDIFW, outside expertise will be required for species level identification and determination for all sample collections that include the species of *Epeorus*.

7. FIELD SAMPLING EQUIPMENT, SUPPLIES

7.1 Sampling equipment

a. D-frame kick net with 500- µm mesh net and 4 ft. handle or kick screen
b. White plastic or enamel pan or tub
c. Magnifying hand lens
d. 3 or 4-dram vials with screw caps or stoppers
e. Forceps (preferably fine tipped)
f. 70% ethanol

7.2 Clothing and gloves (optional depending on stream conditions)

a. Hip boots or waders
b. Heavy duty rubber gloves

7.3 Record keeping materials

a. GPS unit
b. Camera (optional)
c. Field sheets or notebook (preferably water-resistant)
d. Labeling paper
e. Pencils or alcohol resistant pens

8. REFERENCES CITED

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DUNKIN
DONUTS

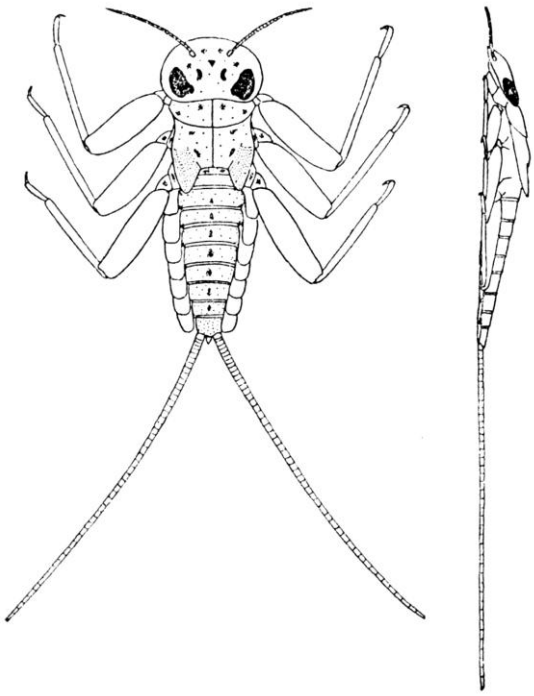

Figure 3. *Epeorus spp.* larvae are easy to distinguish from other mayfly larvae. They are distinctly dorso-ventrally flattened and have only two caudal filaments. [*drawing from Hynes 1970*]

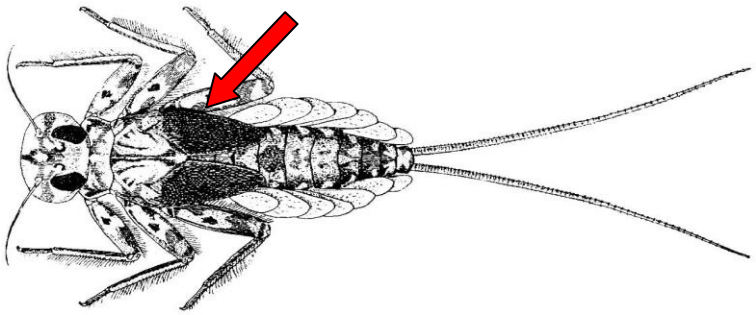

Figure 4. Final instar larvae are easily recognizable by the presence of well-developed, darkened wing pads. At this stage, the wings are maturing and emergence will occur within 1-3 days. [*drawing of Epeorus namatus from Burks 1946*]

In-stream rearing container, courtesy of *Dunkin Donuts*. Most of the container's lower third, and a hole at the top, have been cut away and replaced with screen mesh to allow water and air to flow freely through. [*photo by Beth Swartz*]

ATTACHMENT B.15-3

Historic Structures Report

ARCHITECTURAL SURVEY REPORT
AND
FINDING OF EFFECTS REPORT

KIBBY EXPANSION WIND POWER PROJECT

TOWNS OF COBURN GORE, CHAIN OF PONDS, KIBBY, JIM POND, AND ALDER STREAM, FRANKLIN COUNTY, MAINE

Submitted to:

Maine Historic Preservation Commission
55 Capitol Street
Augusta, Maine 04333-0065

Submitted by:

TRC
14 Gabriel Drive
Augusta, Maine 03340

TRC Project Number: 165796

November 25, 2009

EXECUTIVE SUMMARY

TransCanada Maine Wind Development Inc. (TransCanada) is proposing the construction of the Kibby Expansion Wind Power Project (the Kibby Expansion Project), a 45-megawatt expansion to the adjacent Kibby Wind Power Project in Franklin County, Maine. The Kibby Expansion Project would be located in Kibby and Chain of Ponds Townships, and would consist of 15 wind turbines along the Sisk Mountain ridgeline, identical to those used for the Kibby Project. Associated elements of the Project include constructing approximately 7 miles of new or improved roadways and approximately 8.7 miles of 34.5 kilovolt (kV) interconnecting power lines to a new electric substation. The power generated by the Kibby Expansion Project would connect via a short 115 kV electric transmission tap line to the existing Kibby Project 115 kV electric transmission line.

In November 2009, TRC conducted a survey of architectural resources 50 years or older within an eight- (8-) mile Area of Potential Effect (APE) for the Kibby Expansion Project. Background research and fieldwork identified a total of 16 resources 50 years or older located in the Project APE. Of this number, the Benedict Arnold Trail to Quebec (Benedict Arnold Trail)(NRHP# 69000018) is listed in the National Register of Historic Places (NRHP). An approximately 18.7 mile section of the 194-mile long Benedict Arnold Trail lies within the Project APE. The previously surveyed Megantic Fish & Game Club House (MHPC # 530-0001) in Chain of Ponds Township is also within the APE. The MHPC has not evaluated the Megantic Fish and Game Club House for NRHP-eligibility.

TRC identified 14 additional architectural resources, with the majority of these located within one of two historic sporting camps: the Chain of Ponds Camp on Long Pond, Chain of Ponds Township and the Arnold Pond Fish & Game Club on Arnold Pond in Coburn Gore Township. TRC does not recommend any of the 14 newly surveyed resources or one previously surveyed resource as eligible for individual NRHP listing, primarily due to lack of integrity and/or historic significance. TRC also evaluated the significance and integrity of the Chain of Ponds Camp and the Arnold Pond Fish & Game Club as sporting camp complexes and recommends they are ineligible for NRHP listing.

TRC applied the Criteria of Effect and Criteria of Adverse Effects as set forth in 36 CFR, Part 800 from the proposed Kibby Expansion Project to the NRHP-listed Benedict Arnold Trail. There will be no direct effect to the Benedict Arnold Trail from the Project. The introduction of wind turbines approximately 2 miles away from the Benedict Arnold Trail will not affect the integrity of setting and the historic military significance for which it is listed in the NRHP. There will be No Adverse Effect to the Benedict Arnold Trail from the Project.

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FIGURES

APPENDICES

1.0 SURVEY REPORT—KIBBY EXPANSION PROJECT

1.1 Sponsoring Agency or Entity:

TransCanada Maine Wind Development Inc (TransCanada).

1.2 Dates of Survey:

November 2-6, 2009.

1.3 Survey Level:

Reconnaissance Level.

1.4 Project Description/Scope of Work

TransCanada is proposing to construct the Kibby Expansion Project, a 45 MW expansion to the adjacent Kibby Project in Franklin County, Maine. The Kibby Expansion Project would be located in Kibby and Chain of Ponds Townships, and would consist of 15 three MW wind turbines along the Sisk Mountain ridgeline, identical to those used for the Kibby Project. The wind turbines measure approximately 270 feet from the base to the nacelle/rotor hub. The rotors are approximately 140 feet in diameter for a total ground to tip of rotor height of approximately 410 feet. Associated elements of the Project include constructing approximately 7.1 miles of new or improved roadways and approximately 8.9 miles of 34.5 kV interconnecting power lines to a new electric substation. The power generated by the Kibby Expansion Project would connect via a short 115 kV electric transmission tap line to the existing Kibby Project 115 kV electric transmission line that currently extends to the Bigelow Substation in Carabassett Valley, Maine. The Project footprint has been optimized for environmental, engineering and wind resource conditions. Figure 1 shows the location of the Kibby Expansion Project.

The Kibby Expansion Project would provide 45 MW of installed capacity in addition to the 132 MW of installed capacity at the Kibby Project. Currently, 66 MW of the Kibby Project are in commercial operation on the “A Ridge” of Kibby Mountain, with the remaining 66 MW currently under construction on the Kibby Range “B Ridge” and expected to be in-service in September 2010.

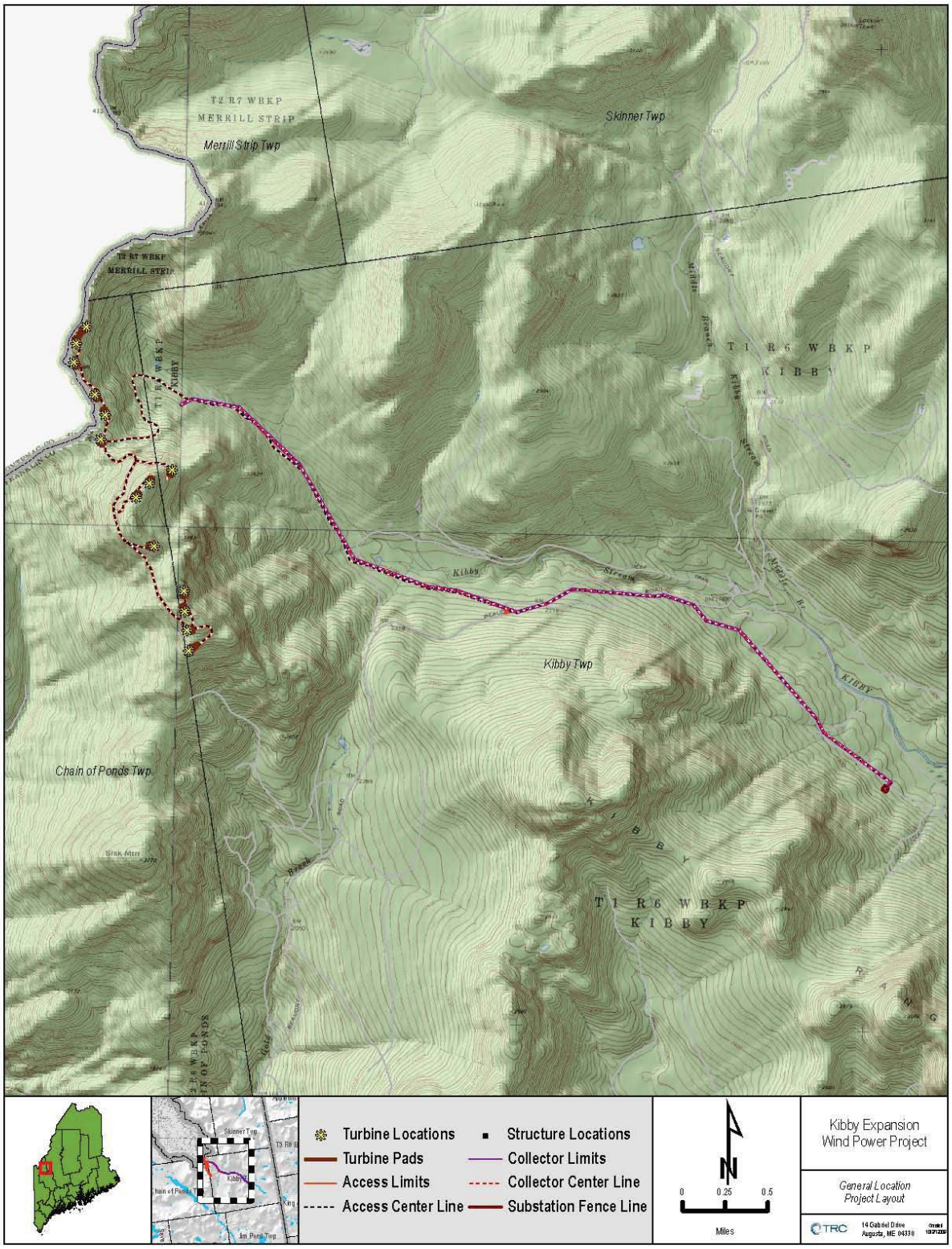


Figure 1. Kibby Expansion Project, Franklin County, Maine.

1.5 Area of Potential Effect

On behalf of TransCanada, TRC has consulted with the Maine Historic Preservation Commission (MHPC) on the project's Area of Potential Effect (APE), defined as the "geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist." For assessment of direct effects, the APE is defined as the area of construction of the turbines and clearing for additional rights-of-way only. For indirect effects, such as noise or visual effects, the Project APE was defined by the MHPC as any area within 8 miles of the Project. According to the MHPC, the APE would be greater in the case where additional lands are acquired and/or cleared as a part of the Project, and could also include any areas within the viewshed of the proposed Project (and outside of the 8-mile limit) where the Project could reasonably be expected to be seen because of topography or lack of tree cover.

1.6 APE/Survey Area Boundary:

The architectural survey conducted by TRC recorded properties located in Maine within 8 miles of the proposed Kibby Expansion Project. The APE/Survey area is shown on the USGS Quadrangle maps included in Chapter 3 of this report.

1.7 Acreage Surveyed:

Survey coverage was approximately 129,241 acres within the 8-mile Project APE.

1.8 Survey Methodology:

The survey's objective was to identify historic resources listed in or eligible for listing in the NRHP; to provide evaluations of NRHP eligibility for the surveyed resources based on historic significance and integrity; and to provide assessments of direct and indirect (primarily visual) effects to historic resources from the proposed Project. The survey followed all applicable federal and state guidelines, including those contained in *Guidelines for Identification: Architecture and Cultural Landscapes—Section 106 Specific* (Maine Historic Preservation Commission: February 2006).

TRC conducted background research on previously identified historic architectural resources within the Project APE at the MHPC archives in Augusta and at the National Register archives in Washington, D.C. Nomination reports for historic resources and districts listed in the NRHP were copied, along with MHPC survey forms and reports for all previously surveyed resources in the Kibby Expansion Project APE. As a result of this background research, TRC identified one NRHP-listed resource—the Benedict Arnold Trail to Quebec (Benedict Arnold Trail) (NRHP# 69000018), with an approximately 18-mile section of the 194-mile-long trail lying within the Project APE—and one previously surveyed property—Megantic Fish and Game Club House (MHPC # 530-0001) on Long Pond in Chain of Ponds Township, Franklin County. The MHPC has not evaluated the

Megantic Fish and Game Club House for NRHP-eligibility. TRC also consulted the *Flagstaff Region Management Plan* (Maine Department of Conservation, Bureau of Parks and Lands: 2007) for further information on the NRHP-listed Benedict Arnold Trail.

TRC consulted historic county maps and USGS Quad maps of the Project area from 1935 and 1969 (Figures 2 and 3) to identify the locations of buildings to be surveyed, as well as the *Maine Sporting Camp Survey* (Cole 1995) archived at the MHPC. Historic site-specific research on surveyed resources was also carried out at the Franklin County courthouse and the Franklin County Library in Farmington.

TRC conducted the field survey within the APE of the Kibby Expansion Project between November 3 and 4, 2009. All areas along a passable road or driveway were surveyed. Portions of the Chain of Ponds Camp accessible only by water were also surveyed. The fieldwork included examination of any above-ground resources listed in the NRHP; all previously identified architectural resources and districts; and all resources 50 years or over not previously identified, including cemeteries, potential historic districts, and potential rural historic landscapes.

Fieldwork included recording architectural characteristics at the reconnaissance level on the relevant MHPC structure survey forms. Digital and black-and-white film photographic documentation of the resources included one or more views of the surveyed individual resources, and representative views of buildings and landscapes within any historic districts in the Project APE. TRC assigned field numbers (KW)-1, KW-2, KW-3, and etc. to resources not previously surveyed, and mapped the locations of all surveyed resources on sections of relevant USGS quadrangle maps.

1.9 Number of Buildings/Structures Recorded:

TRC identified 16 resources 50 years or older located within the Kibby Expansion Project APE. Of this number, the NRHP-listed Benedict Arnold Trail is essentially an archaeological resource, with no above-ground resources within the Project APE, the Megantic Fish and Game Club House was previously surveyed (although it has not been evaluated for NRHP eligibility by the MHPC), and 14 architectural resources were newly identified by TRC.

1.10 Property Types Surveyed

The 8-mile APE takes in numerous townships in Franklin and Somerset Counties, as well as a portion of Quebec, Canada. Due to the sparsely populated and heavily forested nature of the APE and the few passable roads, surveyed structures were only found in Chain of Ponds, Coburn Gore, Jim Pond, and Alder Stream Townships in Franklin County. These structures are located in close proximity to Route 27 which runs northeast from the southern part of the APE to its terminus at Coburn Gore at the Canadian border. The topography is mountainous, with numerous large lakes and ponds in Chain of Ponds, Jim Pond, and Coburn Gore Townships. (Figure 4)

The 15 architectural resources surveyed within the Kibby Expansion Project APE are primarily modest residences (no commercial or religious buildings were identified) and date from the mid 1890s through the 1940s. On both sides of Long Pond in Chain of Ponds Township there are nearly a dozen small log and/or frame Rustic-style seasonal cabins dating from the mid 1890s. (Figure 5) Access for survey was denied to a portion of this camp. The previously surveyed Megantic Fish and Game Club House is located on the west side of Long Pond (Figure 6) and there is a small isolated cottage on the west side of Bag Pond.

There is also a small cluster of seasonal cabins along Arnold Pond in Coburn Gore Township, built in the early 1900s as part of the Arnold Pond Fish and Game Club development. Access was denied for survey of the Arnold Pond Fish & Game Club development.

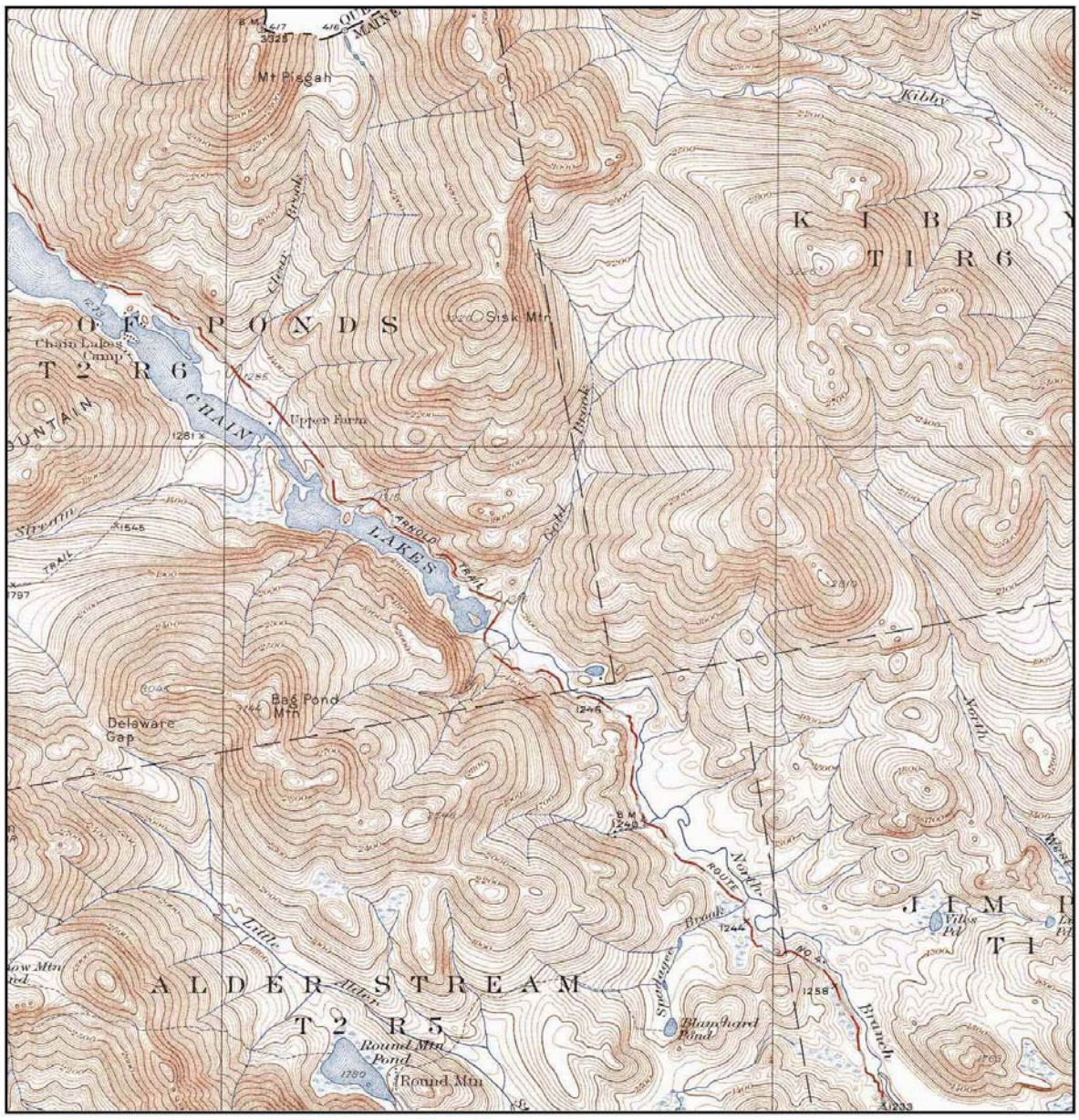


Figure 2. A portion of the 1935 USGS Chain Lakes Quad Map showing areas surveyed as part of the 2009 Kibby Expansion Project architectural survey.

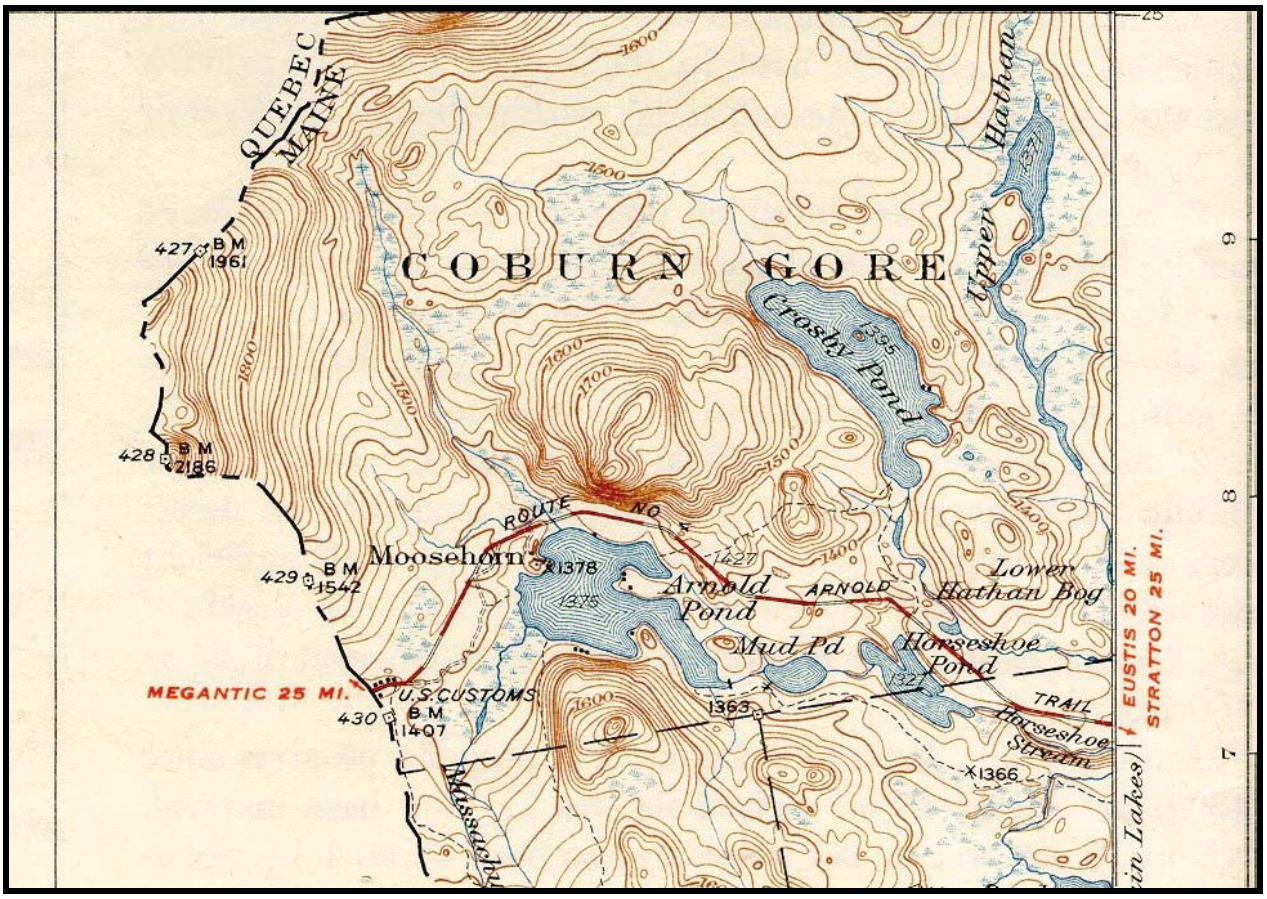


Figure 3. A portion of the 1935 USGS Arnold Pond Quad Map showing areas surveyed as part of the 2009 Kibby Expansion Project architectural survey.

Figure 4. View looking northeast from the Megantic Fish and Game Club House across Long Pond, Chain of Ponds Township in the Project APE.

Figure 5. A typical Rustic-style log house (KW-1) on the west side of Long Pond, part of the Chain of Ponds Camp, looking southwest.

Figure 6. The previously surveyed Megantic Fish and Game Club House (MHPC #530-0001) located on the west side of Long Pond.

2.0 SURVEY FINDINGS

2.1 National Register-Listed Resources in the APE

An approximately 18-mile section of the NRHP-listed *Benedict Arnold Trail to Quebec* (Benedict Arnold Trail) (NRHP# 69000018) lies within the Kibby Expansion Project APE. According to the 1969 NRHP Inventory Nomination Form, the Benedict Arnold Trail "is 194 miles long and stretches from Fort Popham at the mouth of the Kennebec River to the Canadian border at Coburn Gore." (Halstrom 1969: 3) This trail follows the Kennebec River north from south of Augusta, through Wyman Lake along the path of the "Great Carrying Place," crosses overland south of Caratunk to the Dead River (now submerged under Flagstaff Lake), then continues up the Dead River generally parallel to Route 27 from Stratton and through the Chain of Ponds in Franklin County before terminating at the Canadian border in Coburn Gore. Figure 7 is a reproduction of a map and guide to the Benedict Arnold Trail entitled "Arnold's Wilderness March," prepared for the Arnold Expedition Historical Society by the Center for Community GIS in Farmington, Maine using funds donated by TransCanada.

The Benedict Arnold Trail is listed in the NRHP for its military significance and its association with the northward march in the fall of 1775 by colonial soldiers under the command of Benedict Arnold in an attempt to capture Quebec during the Revolutionary War. The section of the Benedict Arnold Trail within the Project APE primarily follows a water route and there are no standing structures associated with the Benedict Arnold Trail within the Project APE.

2.2 Recommendations of National Register Eligibility

TRC evaluated the previously surveyed Megantic Fish and Game Club House and the other 14 newly surveyed resources within the Project APE for individual NRHP-eligibility according to the four NRHP Criteria contained in *National Park Service Bulletin 15*. None of these buildings is eligible for individual listing in the NRHP due to a lack of historic significance and/or integrity.

TRC also evaluated the two turn-of-the-twentieth-century sporting camp complexes of which most of the surveyed buildings are a part as NRHP-eligible historic districts: Chain of Ponds Camp (KW-1 through KW-5 through, and MHPC #530-0001) on Long Pond and the Arnold Pond Fish & Game Club (KW-9) on Arnold Pond.

2.2.1 Chain of Ponds Camp

The Chain of Ponds Camp consists of two houses located on the east side of Long Pond, three relatively isolated houses and their outbuildings on the west side of Long Pond, and a small complex of buildings located on a peninsula jutting from the west bank of Long Pond. (Access was denied to this complex by the landowner). The houses date from the 1890s and are of log construction, built in the then-popular Rustic Style.

Based on TRC's title research, the Chain of Ponds Camp stands on a 1,000-acre tract sold in 1895 by Milton G. Shaw to the Megantic Fish & Game Corporation. (Franklin County Deed Book 130, page 245). The Megantic Fish & Game Corporation, incorporated in Maine in February 1887, was one of the largest and best known sporting associations in northern New England, and included leading members of New York and Boston society of the period. The deed mentions that the peninsula "now has a number of camps located thereon" suggesting that the camp buildings may have been built by a previous camp association, perhaps the Chain of Ponds Improvement Company mentioned as a grantee in another unrelated deed from Shaw in 1896. (Franklin County Deed Book 133, page 283). No plat or map was found that depicted the original layout or design of the Chain of Ponds Camp.

In 1967, the Megantic Fish & Game Corporation sold to the Brown Company all of the lots (known as parcels C, D, and E) on both sides of Long Pond south of Natanis Pond, with the exception of the peninsula complex. (Deed Book 402, page 377) The accompanying plat map clearly shows the location of buildings on the peninsula. By 1989, the house lots in both the peninsula complex and along Long Pond were individually owned. (Deed Book 1104, page 303)

The observed buildings of the Chain of Ponds Camp vary widely in their condition and architectural integrity. The house (KW-1) on the east side of Long Pond is in generally unaltered condition. One house (KW-5) has replaced clapboard siding on the facade, altered windows, and a non-historic deck while the previously surveyed Megantic Fish and Game Club House has a non-historic metal roof with skylight, solar panel, and metal chimney. The Chain of Ponds Camp complex lacks integrity of design, materials, workmanship, and association (the lots and cabins are now individually owned and maintained), lacks historic significance, and is not eligible for listing in the NRHP.

2.2.2 Arnold Pond Fish & Game Club

According to aerial map and deed research, the Arnold Pond Fish & Game Club camp consists of approximately 13 houses located on the northwest and northeast shores of Arnold Pond, south of Route 27 in Coburn Gore Township. (Access was denied to the development and only two buildings clearly visible from Route 27 were surveyed). The exact construction dates are not known, but based on field observations, the Rustic-style houses may date from the 1900-1910 period. The observed houses appear to be of frame construction, with log siding. There is a small log-sided gatehouse/caretaker's house at the entrance to the development on Route 27. A low stone wall and a metal gate with the name Arnold Pond Fish & Game Club marks the entrance. Four large apparently non-historic houses are prominently sited at the south end of the small peninsula on the northwest shore.

Due to the construction of four large and prominently sited non-historic houses within the complex, the Arnold Pond Fish & Game Club development lacks integrity of setting, design, and feeling, lacks historic significance, and is not eligible for listing in the NRHP.

2.3 Survey Materials

The results of the fieldwork and NRHP eligibility evaluation of architectural resources within the APE of the Kibby Expansion Project are reported in the survey matrix in Appendix A. This table lists each resource by field survey number/name/address and includes an assessment of the resource's integrity based on observed alterations to the building and its setting; and TRC's evaluation on whether the building is eligible for listing in the NRHP based on the NRHP criteria and integrity standards. Sections of the relevant USGS quadrangle maps showing the location of surveyed architectural resources and the 8-mile APE are contained in Chapter 3. A photo negative index is in Appendix B. The MHPC survey forms for the architectural resources associated with the survey of the Kibby Expansion Project are in Appendix C at the rear of this report.

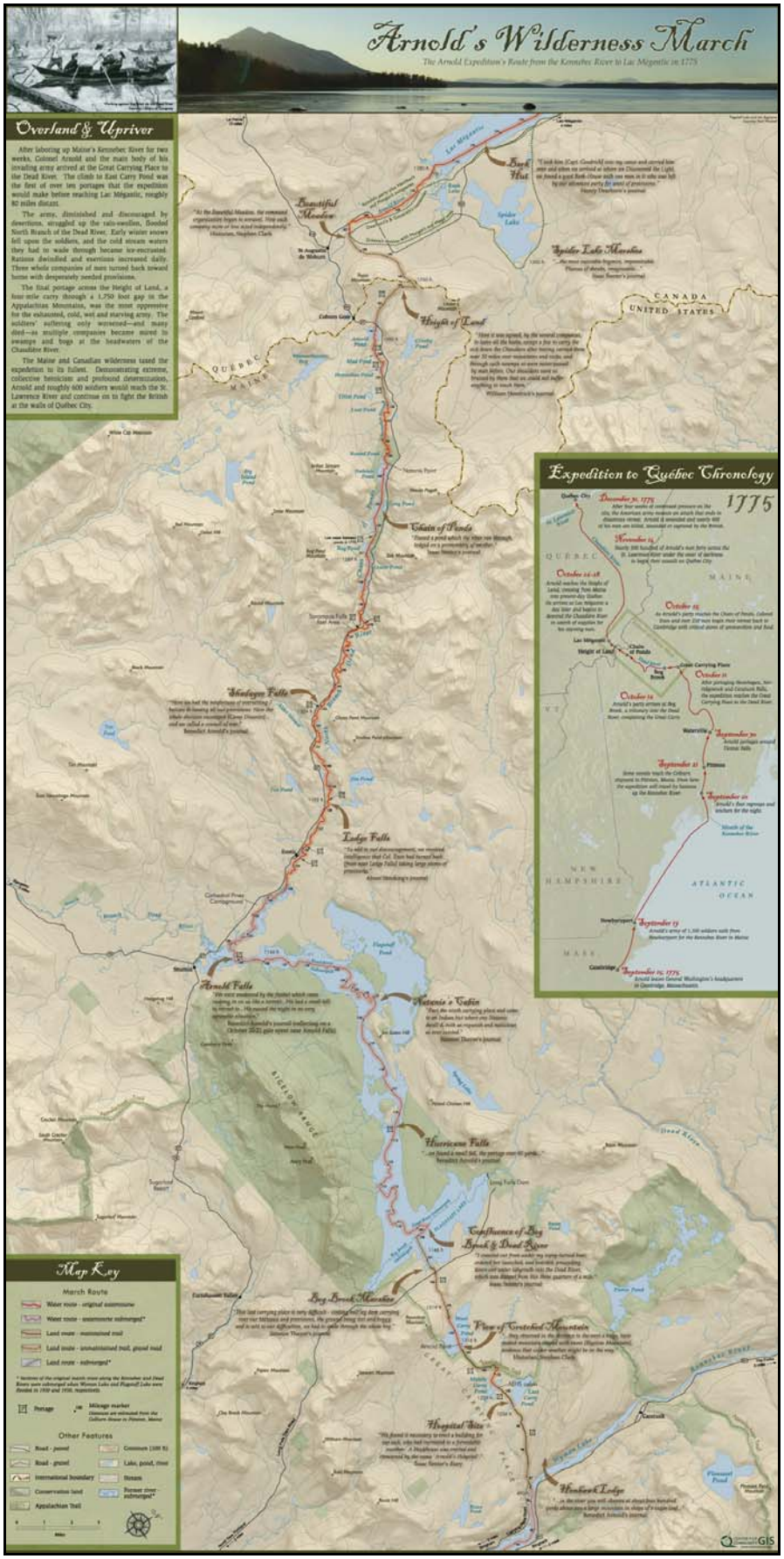


Figure 7. Arnold Trail Map and Guide (Source: Center for Community GIS in Farmington, Maine using funds donated by TransCanada)

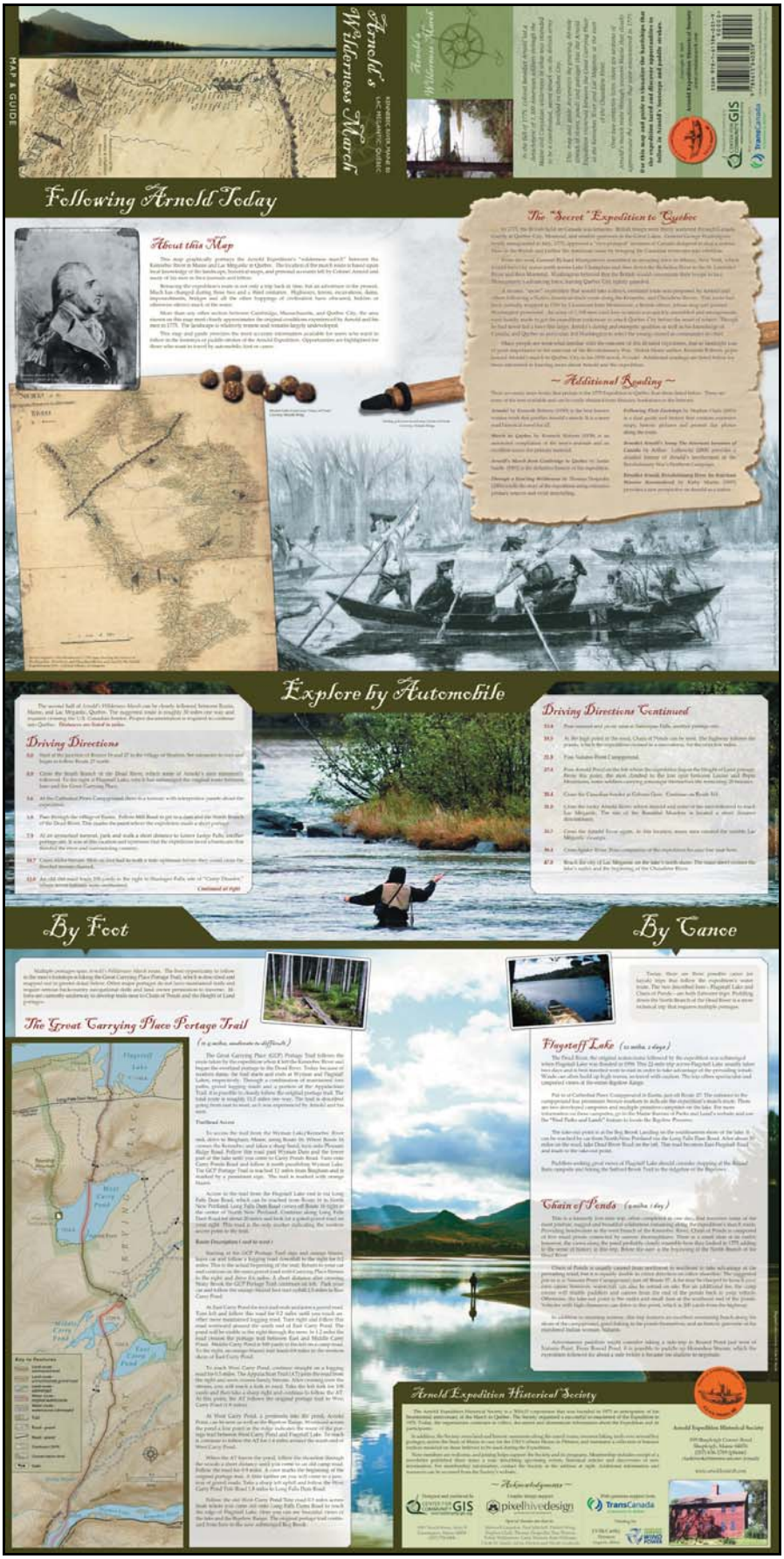
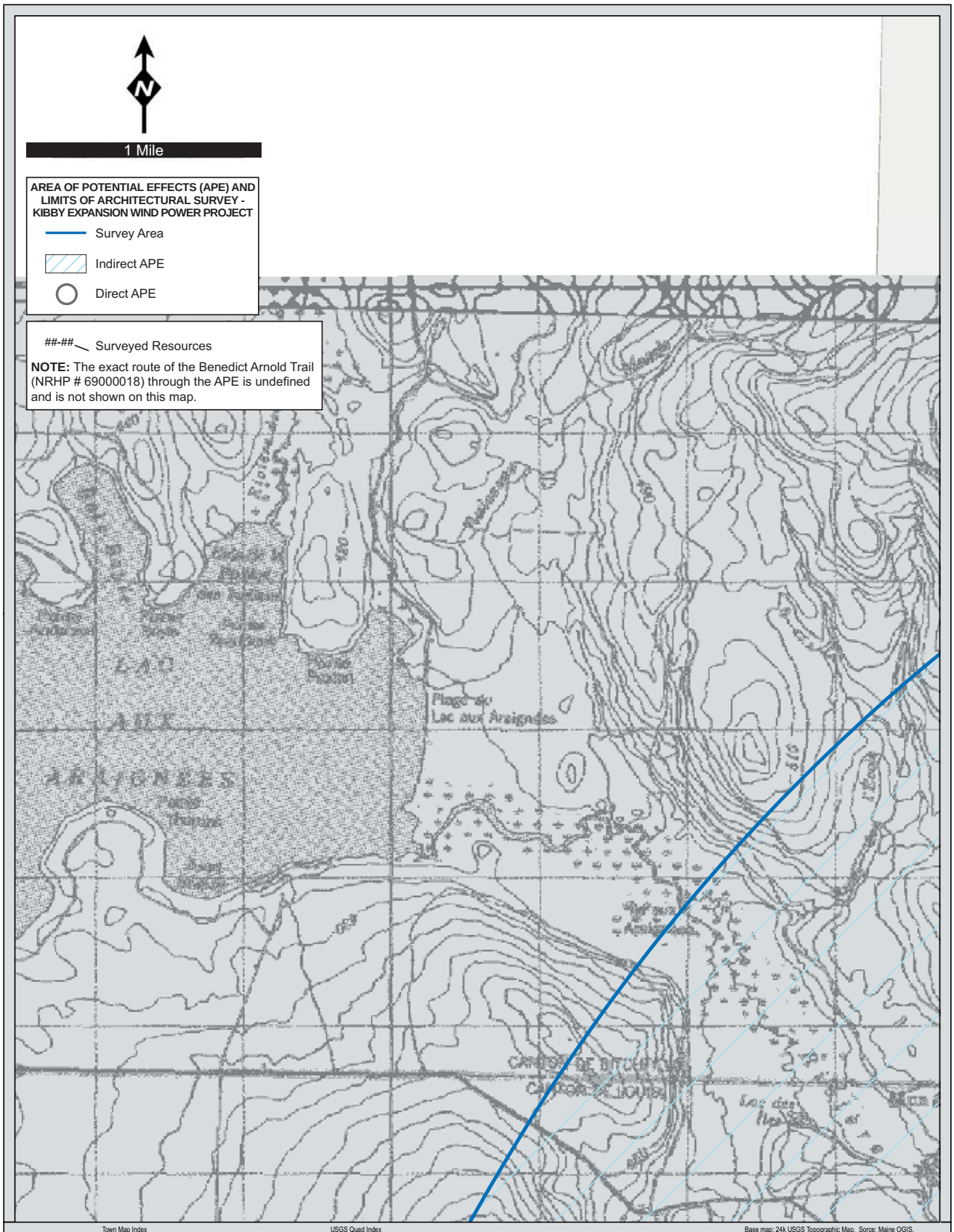
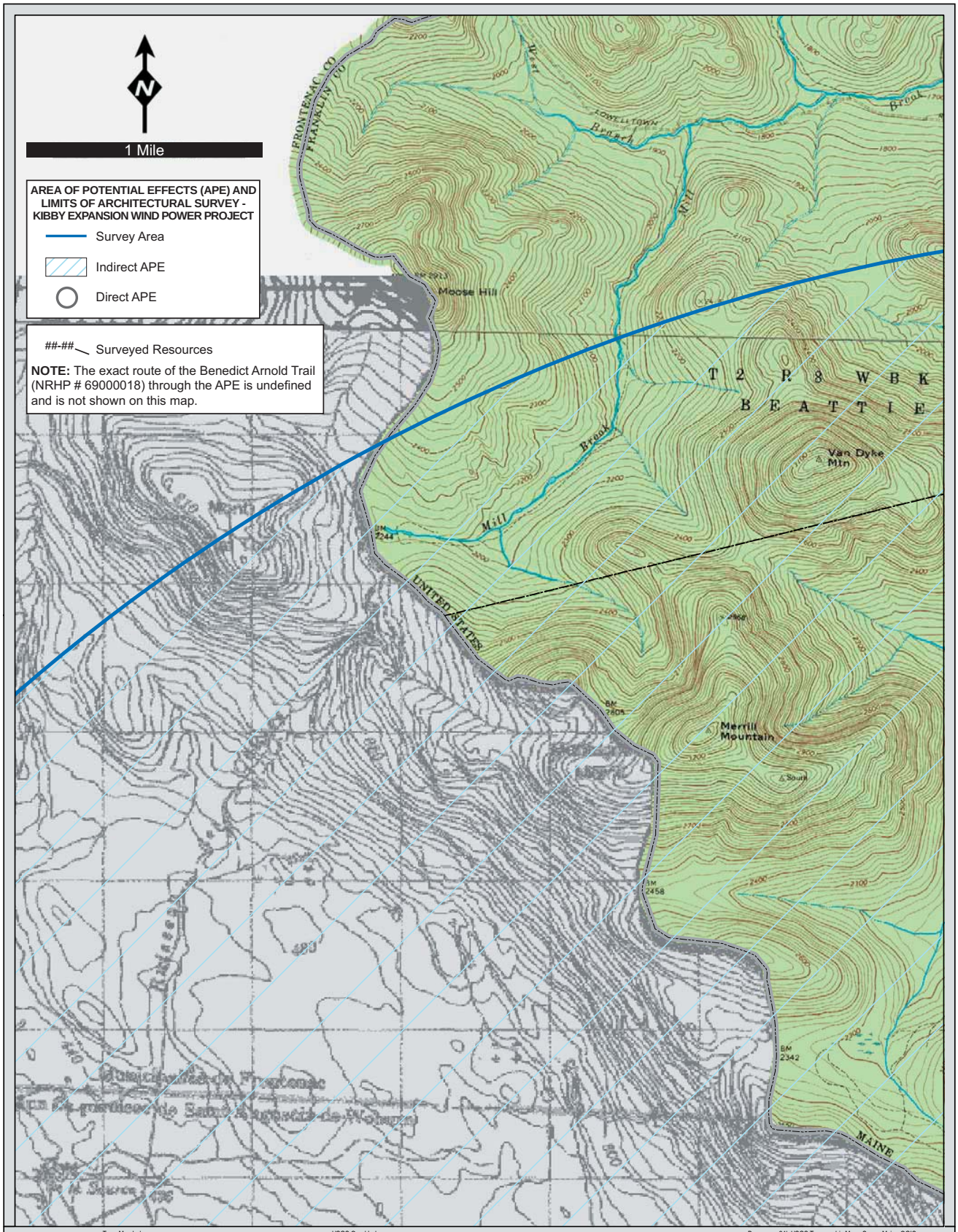
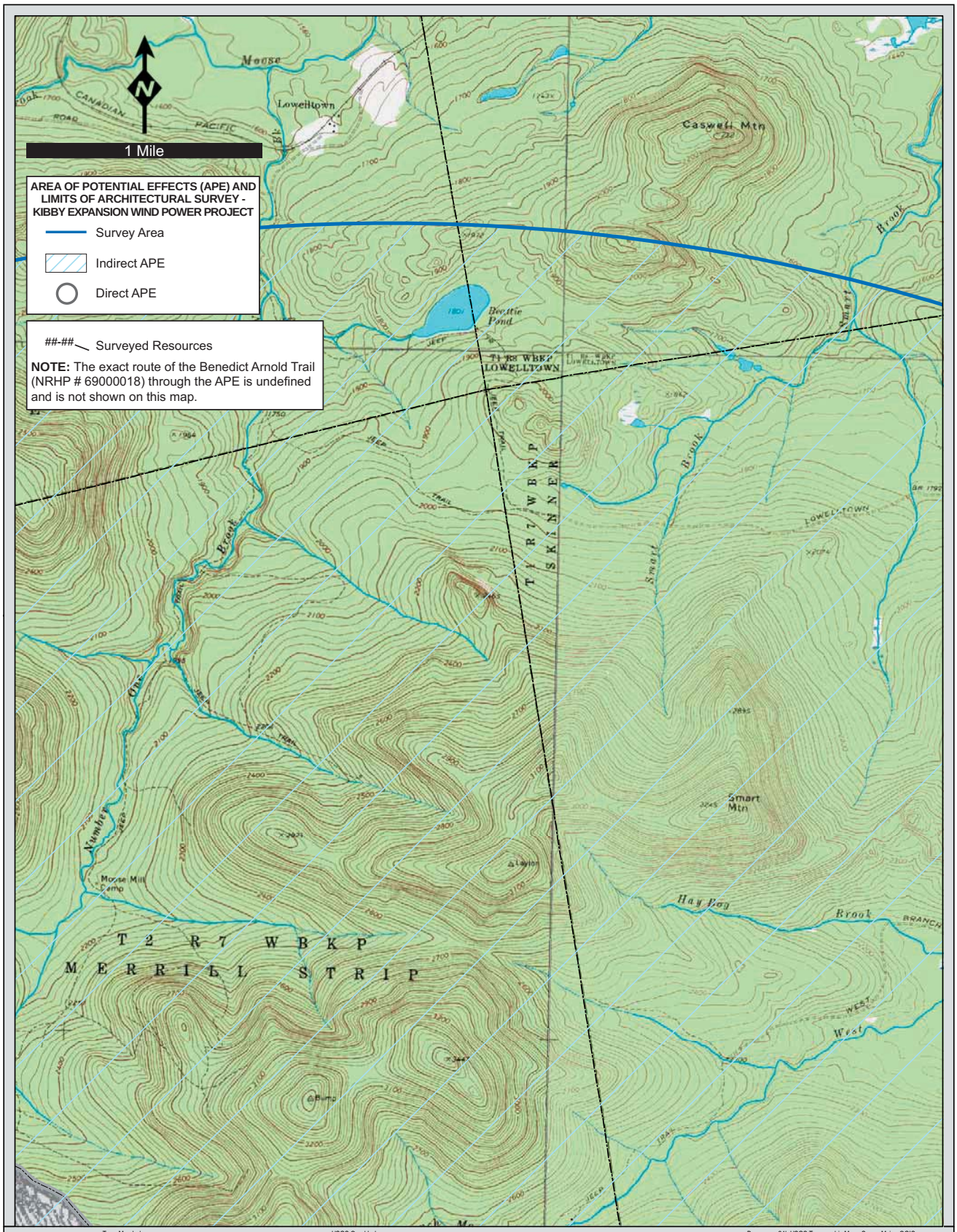


Figure 7. Arnold Trail Map and Guide (Source: Center for Community GIS in Farmington, Maine using funds donated by TransCanada)

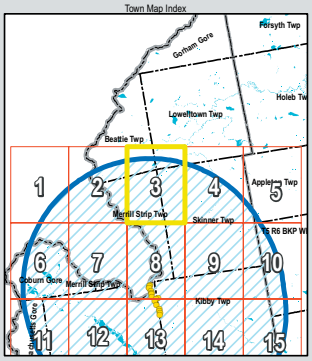
3.0 USGS QUADRANGLE MAPS WITH LOCATIONS OF SURVEYED ARCHITECTURAL RESOURCES


N
1 Mile
AREA OF POTENTIAL EFFECTS (APE) AND LIMITS OF ARCHITECTURAL SURVEY - KIBBY EXPANSION WIND POWER PROJECT
Survey Area
Indirect APE
Direct APE
##-## Surveyed Resources
NOTE: The exact route of the Benedict Arnold Trail (NRHP # 69000018) through the APE is undefined and is not shown on this map.
Plage du Lac aux Arsignes
ARSIGNES
Town Map Index
USGS Quad Index
Boundary Pond
Louise Mtn
Merrill Mtn
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.
Legend
Turbine Layout
8 mile Buffer of Turbine Locations
State Boundary
County Boundary
Town Boundary
Kibby Expansion Wind Power Project
Architectural Survey
Area of Potential Effect (APE)
Map 1 of 20
TRC
14 Gabriel Drive
Augusta, ME 04330

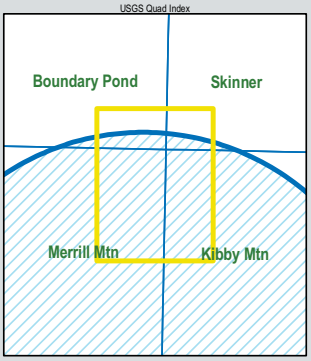

N
1 Mile
AREA OF POTENTIAL EFFECTS (APE) AND LIMITS OF ARCHITECTURAL SURVEY - KIBBY EXPANSION WIND POWER PROJECT
Survey Area
Indirect APE
Direct APE
##-## Surveyed Resources
NOTE: The exact route of the Benedict Arnold Trail (NRHP # 69000018) through the APE is undefined and is not shown on this map.
Moose Hill
T 2 R 8 W B K
B E A T T I E
Van Dyke Mtn
Merrill Mountain
UNITED STATES
MAINE
Town Map Index
USGS Quad Index
Boundary Pond
Skinner
Louise Mtn
Merrill Mtn
Kibby Mtn
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.
Legend
Turbine Layout
8 mile Buffer of Turbine Locations
State Boundary
County Boundary
Town Boundary
Kibby Expansion Wind Power Project
Architectural Survey
Area of Potential Effect (APE)
Map 2 of 20
TRC
14 Gabriel Drive
Augusta, ME 04330



Town Map Index



USGS Quad Index



Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

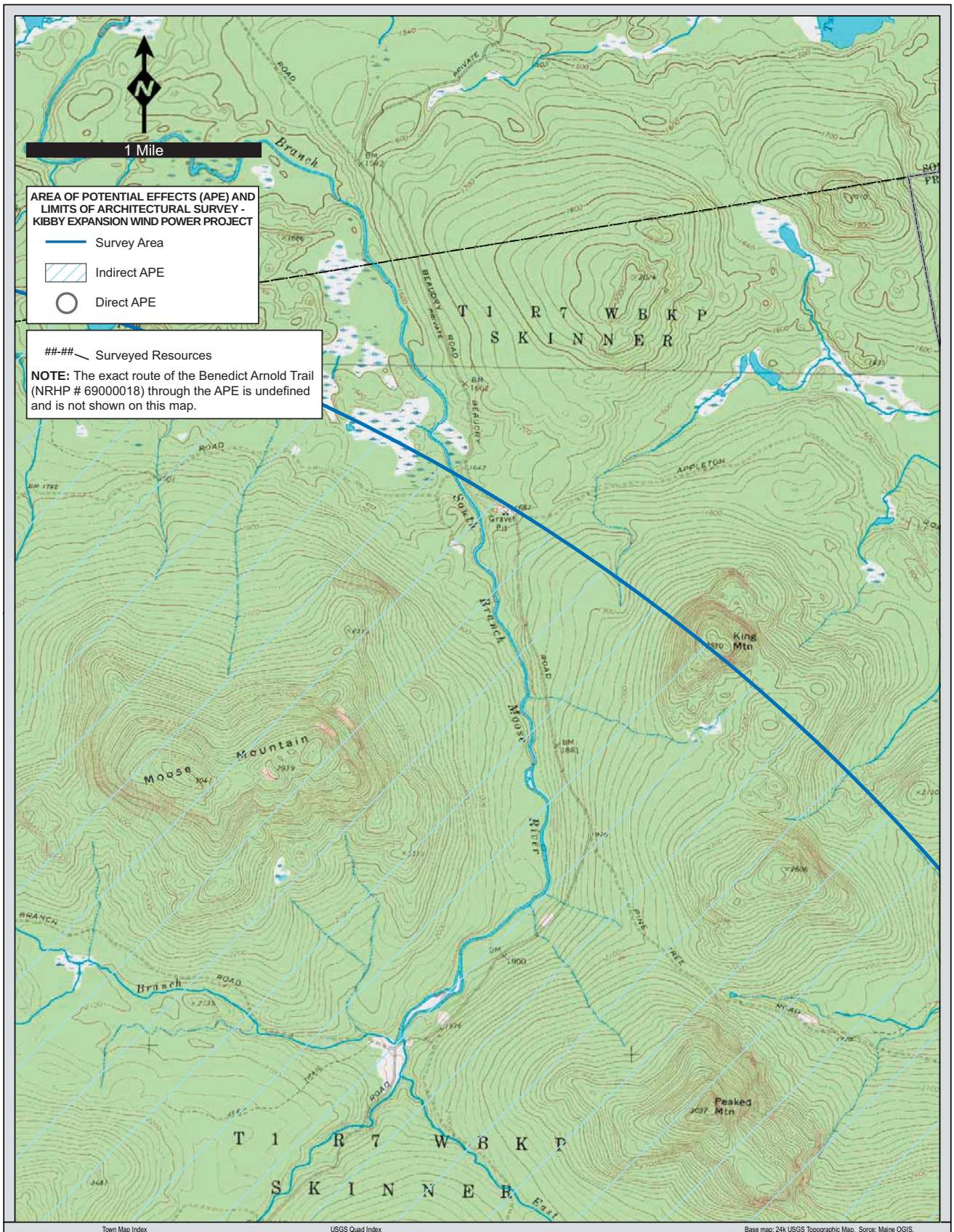
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

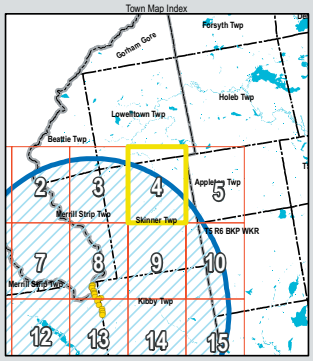
Architectural Survey
Area of Potential Effect (APE)

Map 3 of 20

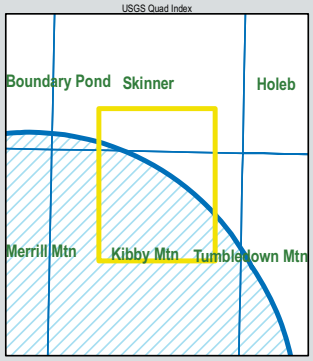
TRC
14 Gabriel Drive
Augusta, ME 04330



Town Map Index



USGS Quad Index



Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

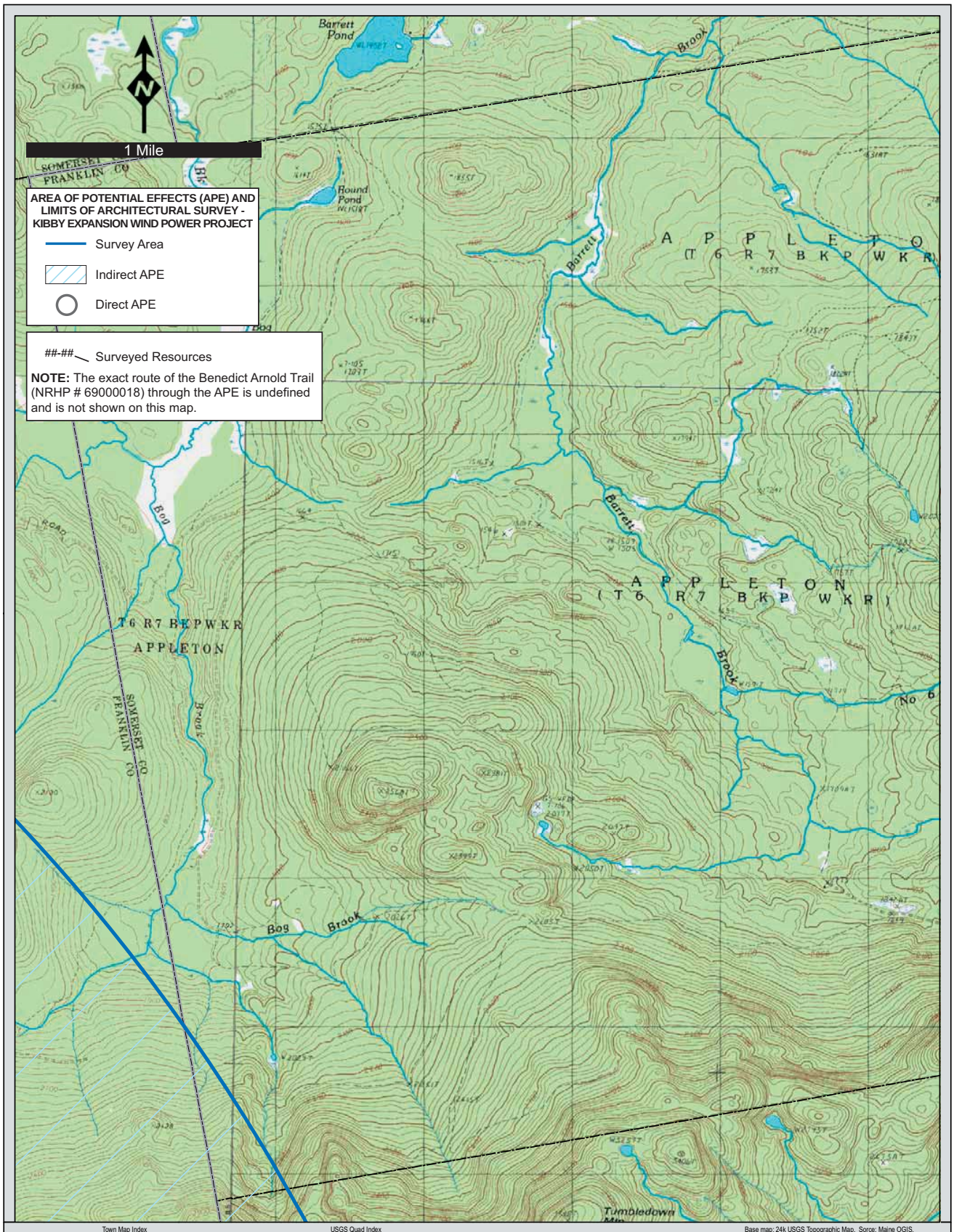
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

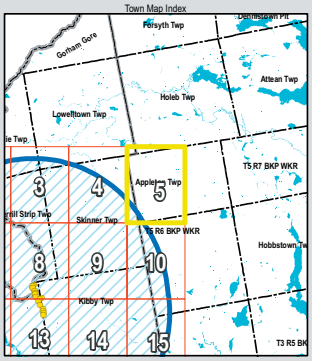
Architectural Survey
Area of Potential Effect (APE)

Map 4 of 20

TRC
14 Gabriel Drive
Augusta, ME 04330



Town Map Index



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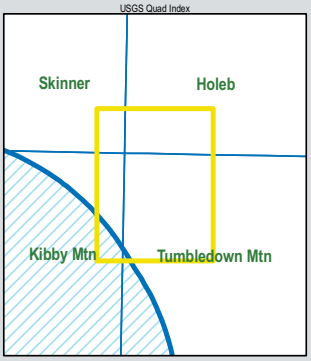


Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

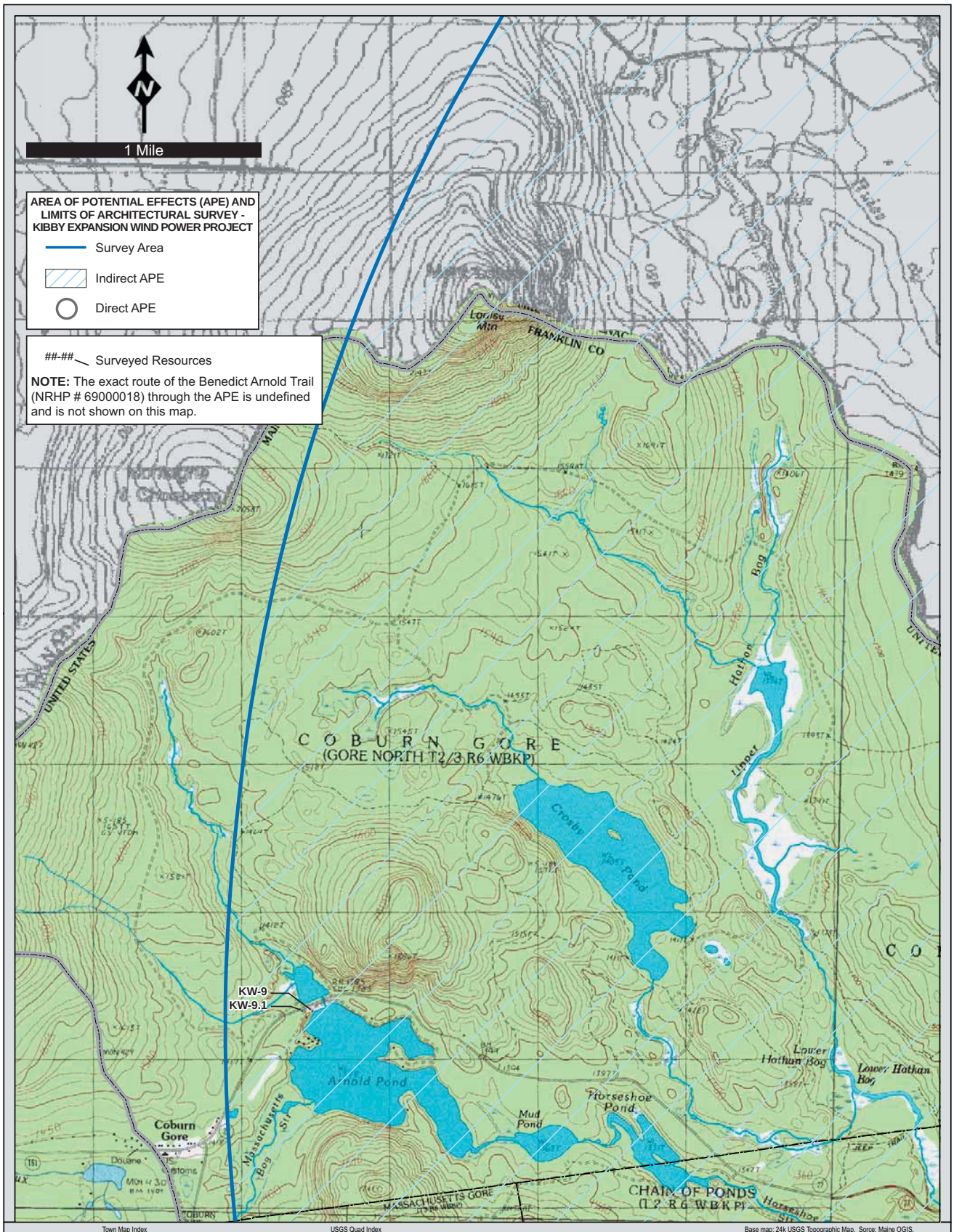
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

Architectural Survey
Area of Potential Effect (APE)

Map 5 of 20

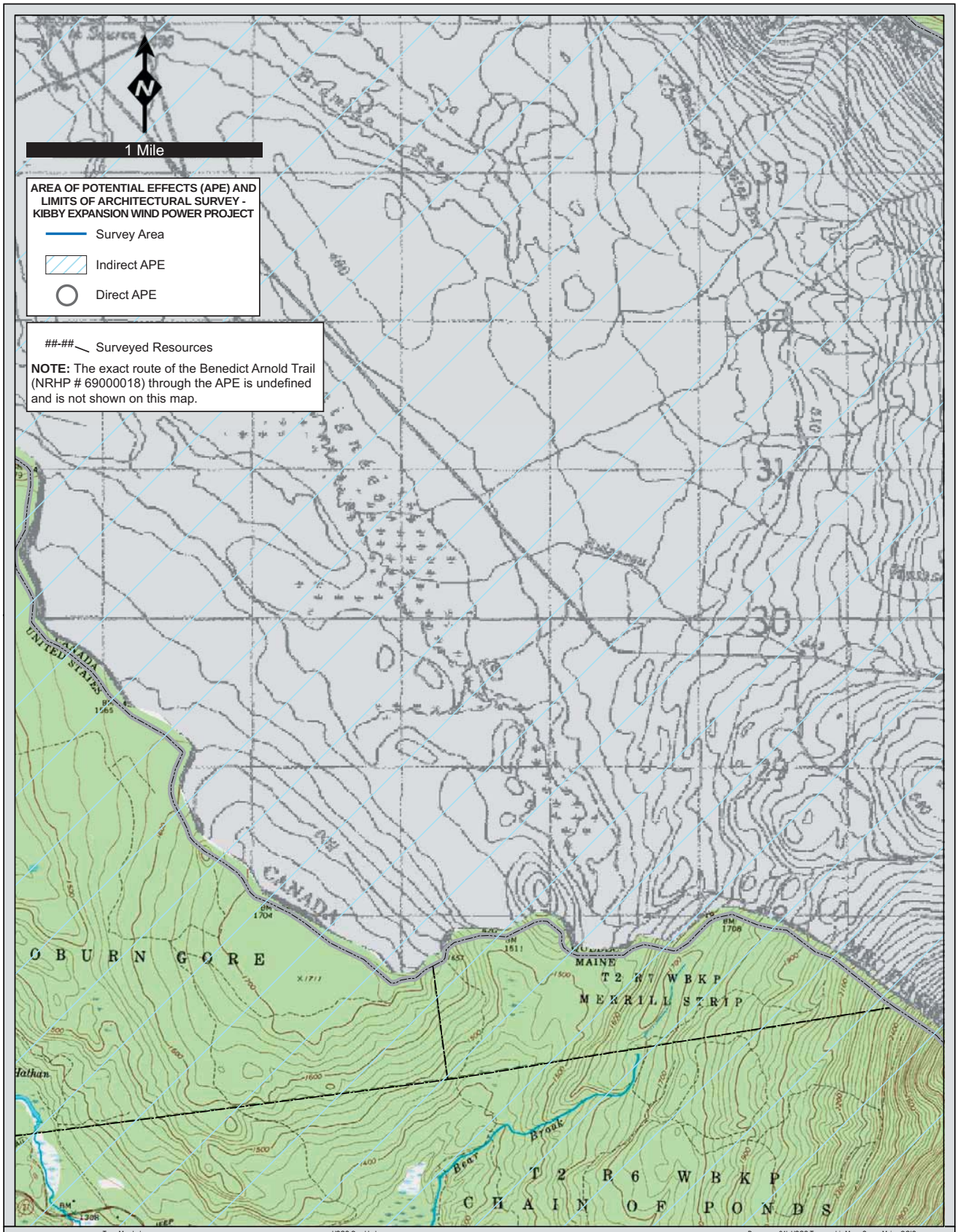
TRC
14 Gabriel Drive
Augusta, ME 04330

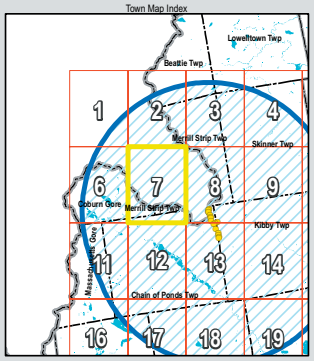


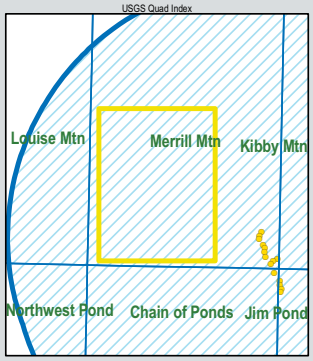
Town Map Index

USGS Quad Index

Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.







Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

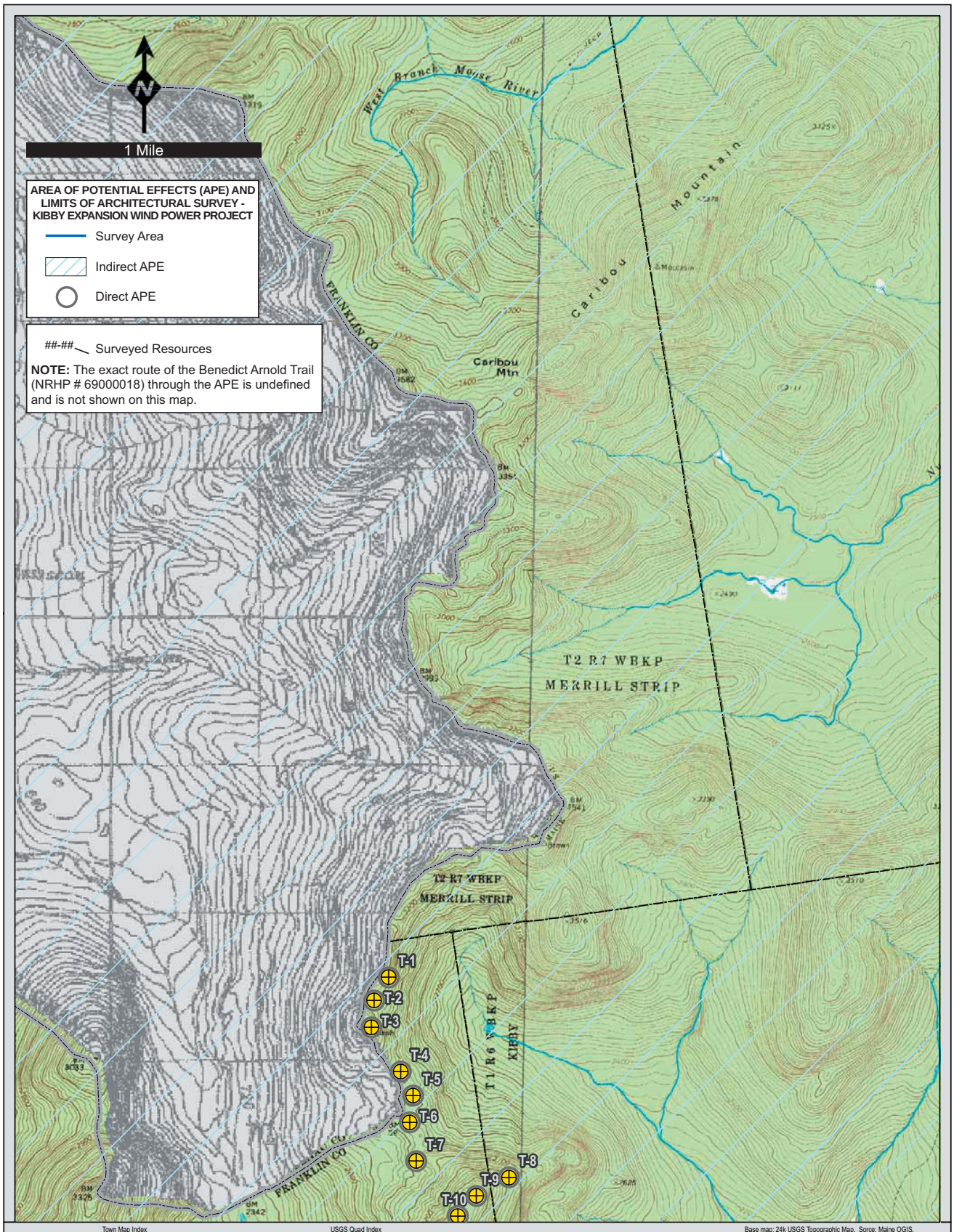
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

Architectural Survey
Area of Potential Effect (APE)

Map 7 of 20

TRC
14 Gabriel Drive
Augusta, ME 04330



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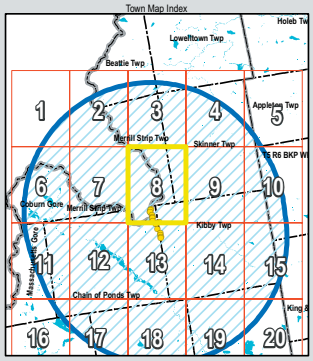
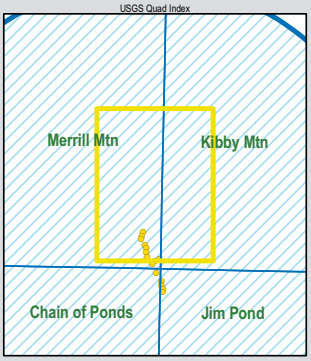


USGS Quad Index



Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

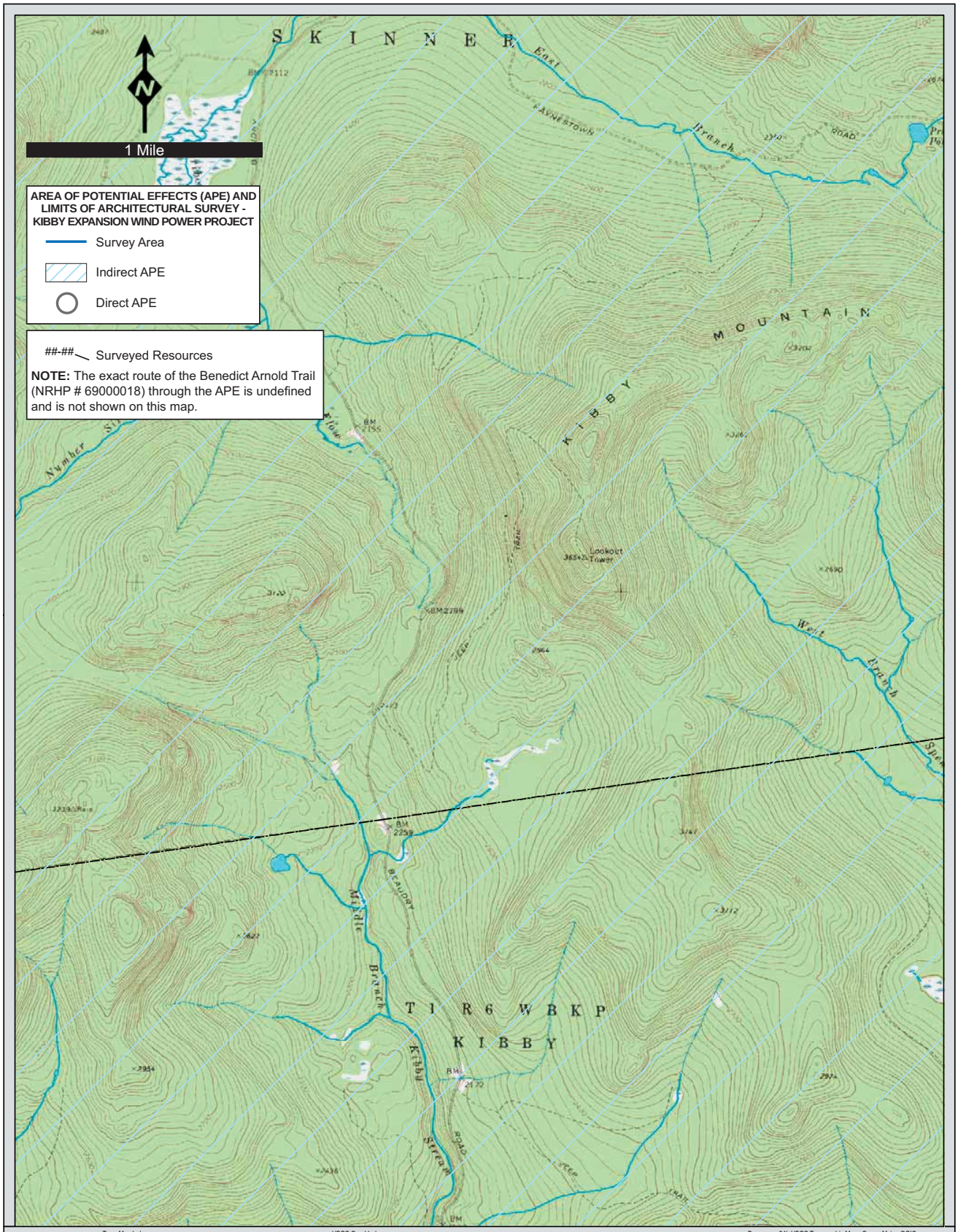
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

Architectural Survey
Area of Potential Effect (APE)

Map 8 of 20

TRC
14 Gabriel Drive
Augusta, ME 04330



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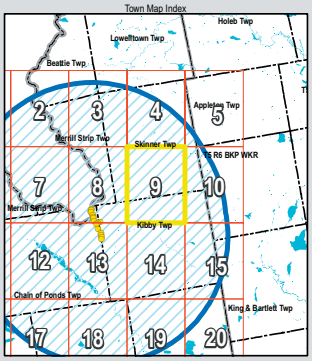

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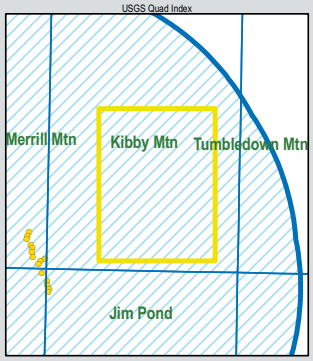


Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

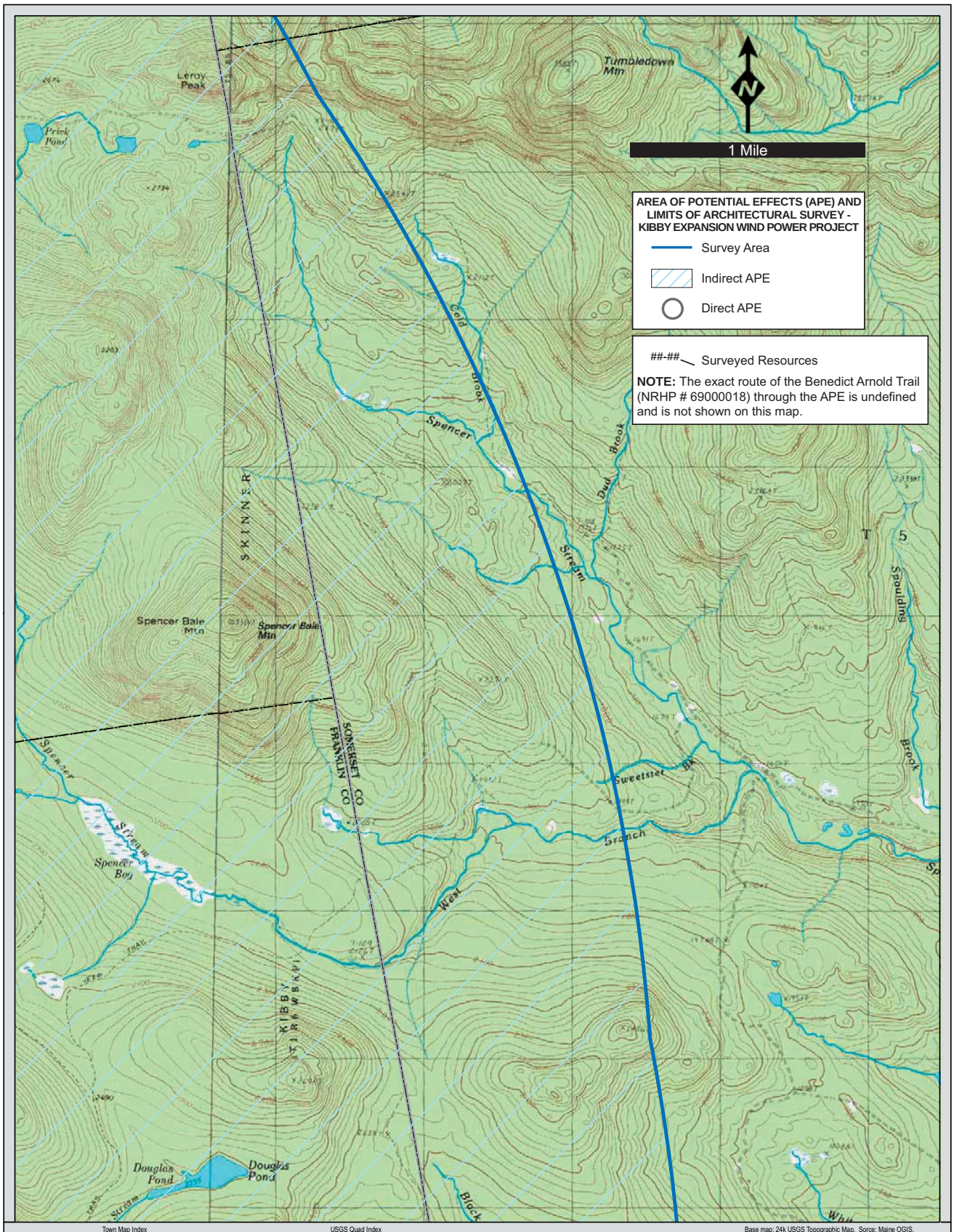
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

Architectural Survey
Area of Potential Effect (APE)

Map 9 of 20

TRC
14 Gabriel Drive
Augusta, ME 04330



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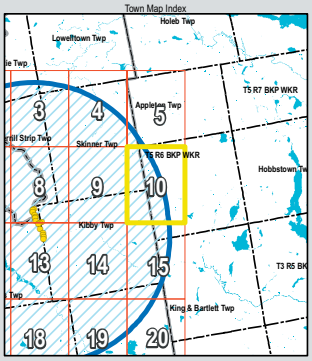

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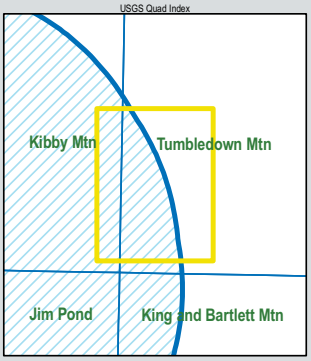


Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

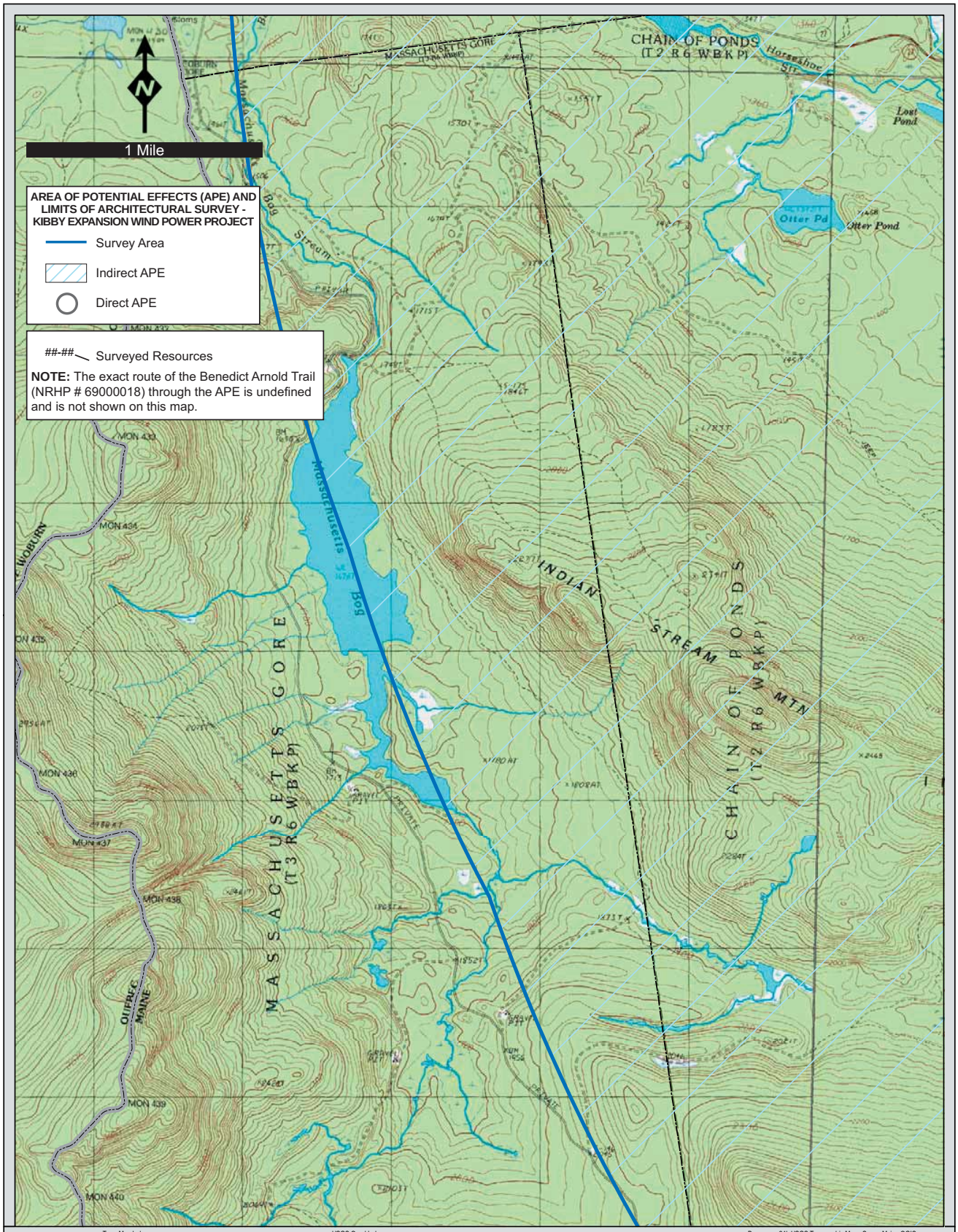
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

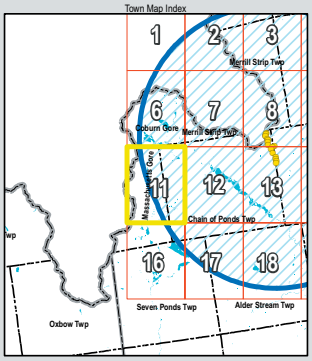
Architectural Survey
Area of Potential Effect (APE)

Map 10 of 20

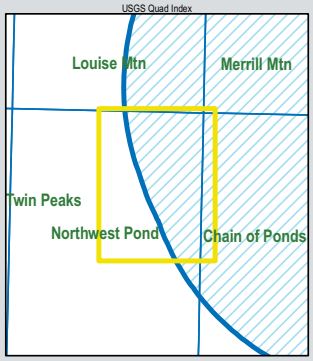
TRC
14 Gabriel Drive
Augusta, ME 04330



Town Map Index



USGS Quad Index



Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

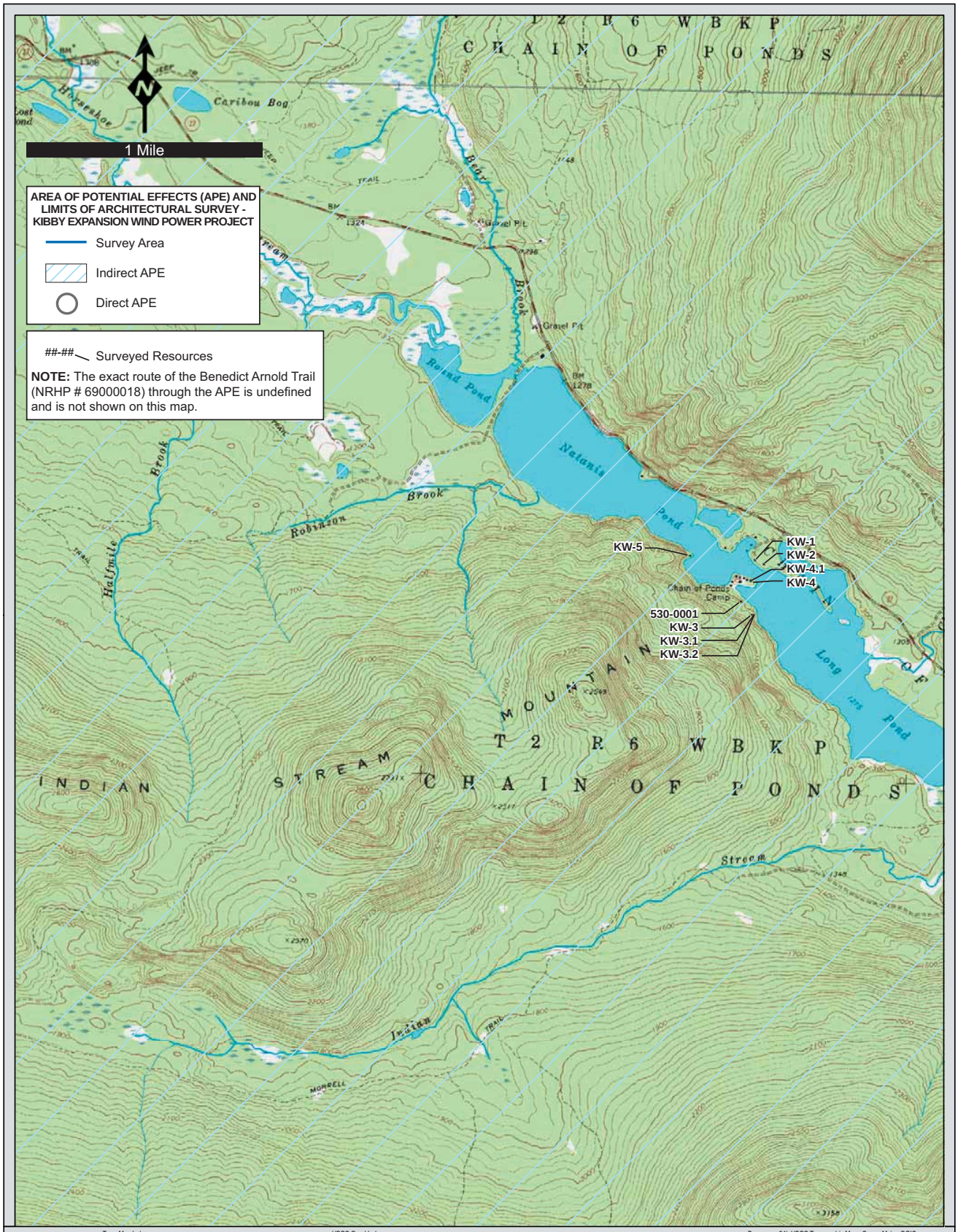
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

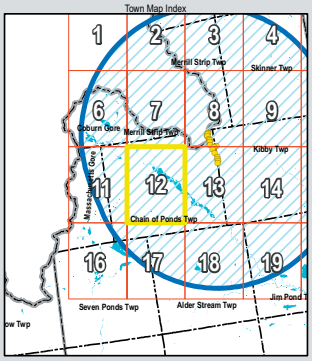
Architectural Survey
Area of Potential Effect (APE)

Map 11 of 20

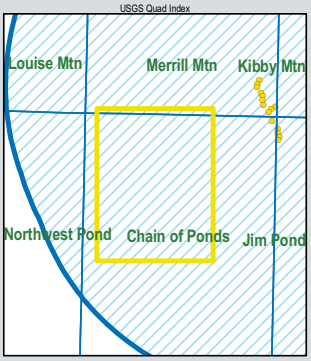
TRC
14 Gabriel Drive
Augusta, ME 04330



Town Map Index



USGS Quad Index



Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

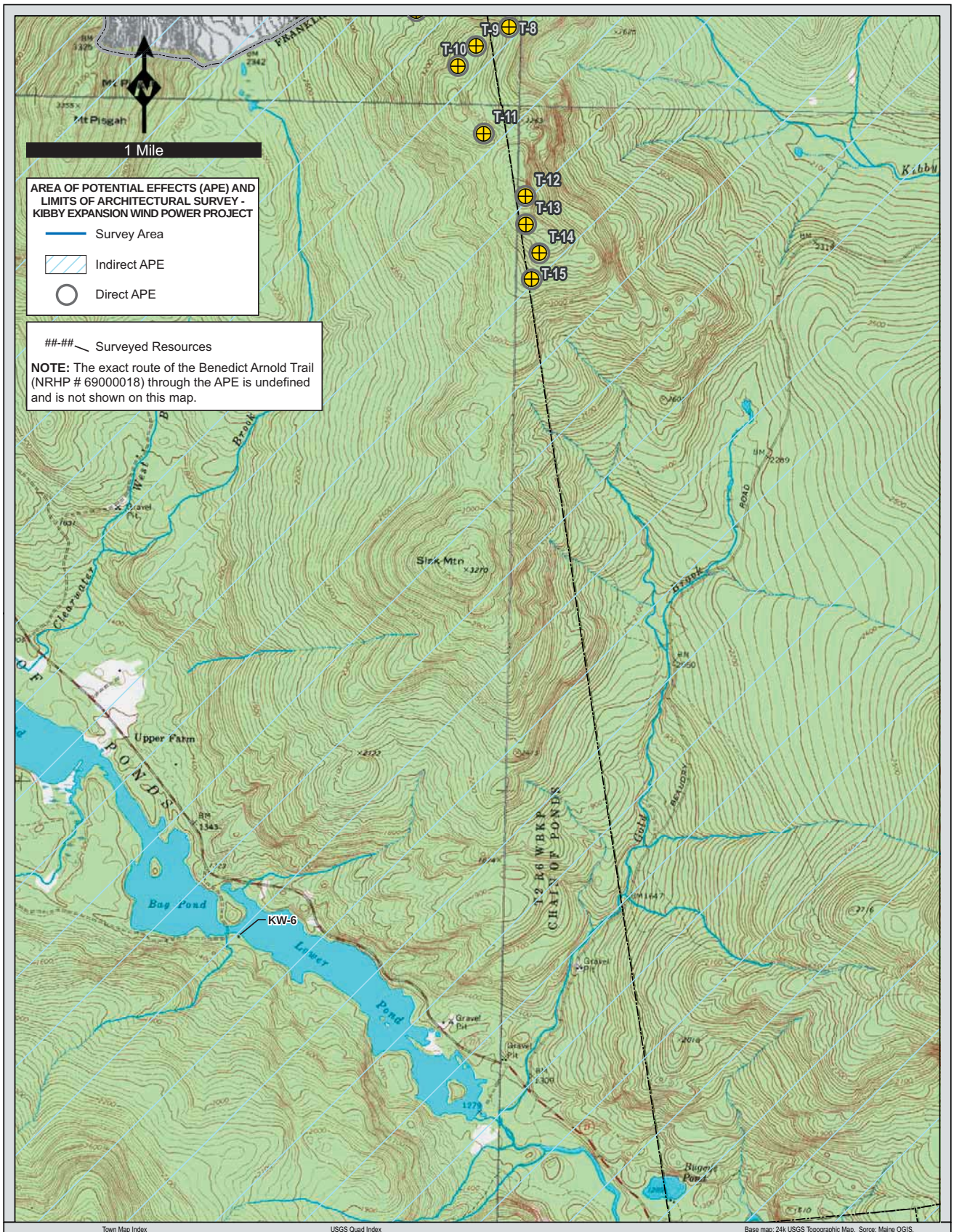
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

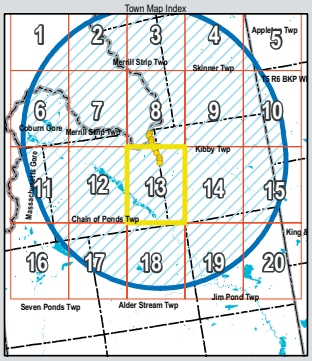
Architectural Survey
Area of Potential Effect (APE)

Map 12 of 20

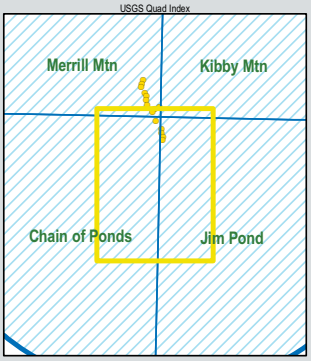
TRC
14 Gabriel Drive
Augusta, ME 04330



Town Map Index



USGS Quad Index



Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

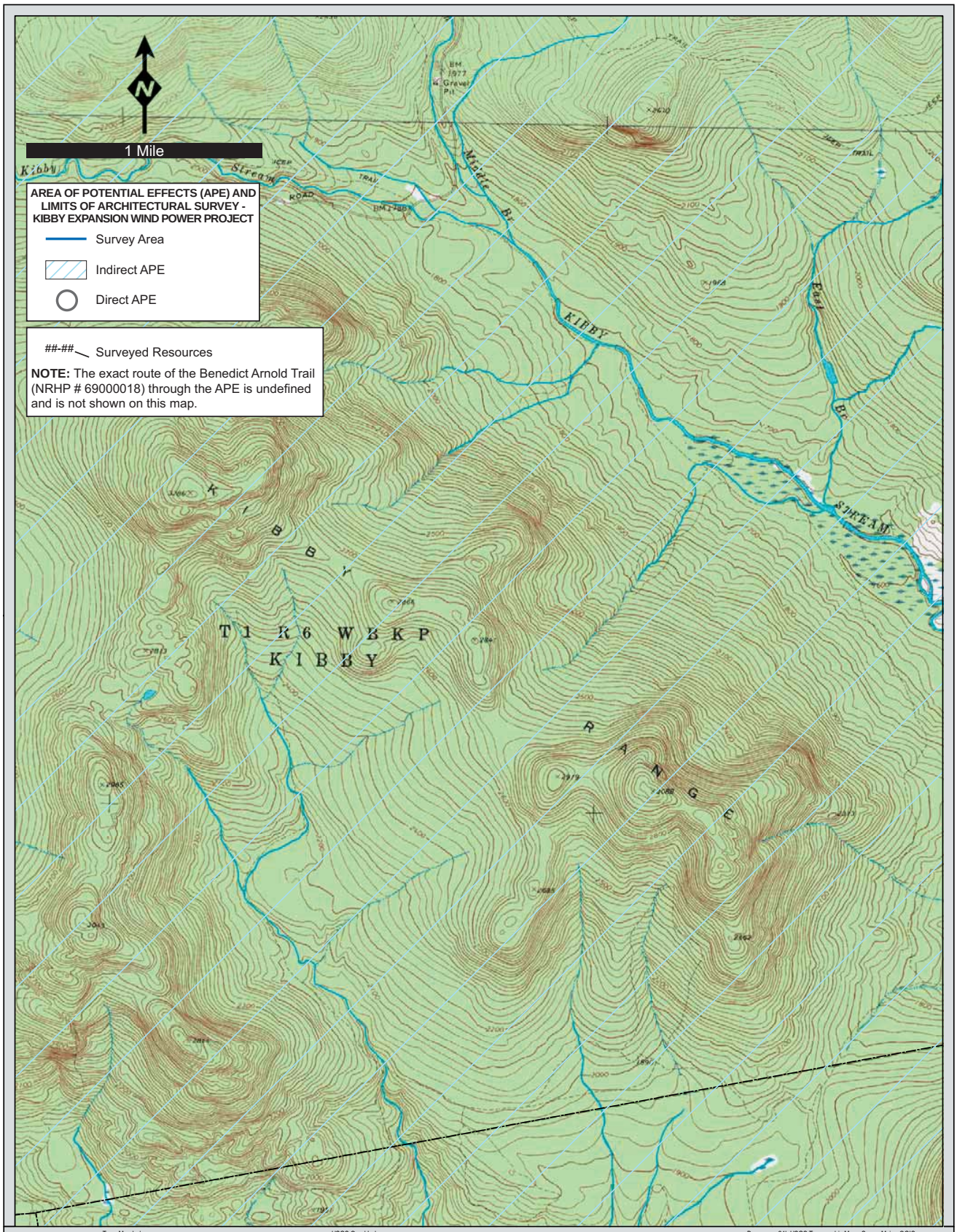
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

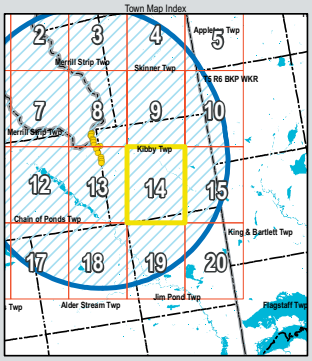
Architectural Survey
Area of Potential Effect (APE)

Map 13 of 20

TRC
14 Gabriel Drive
Augusta, ME 04330



Town Map Index



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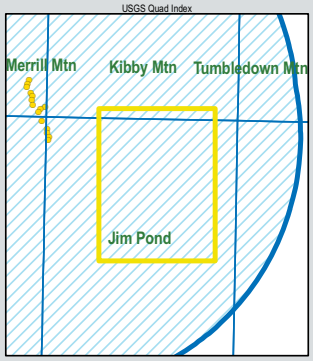


Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

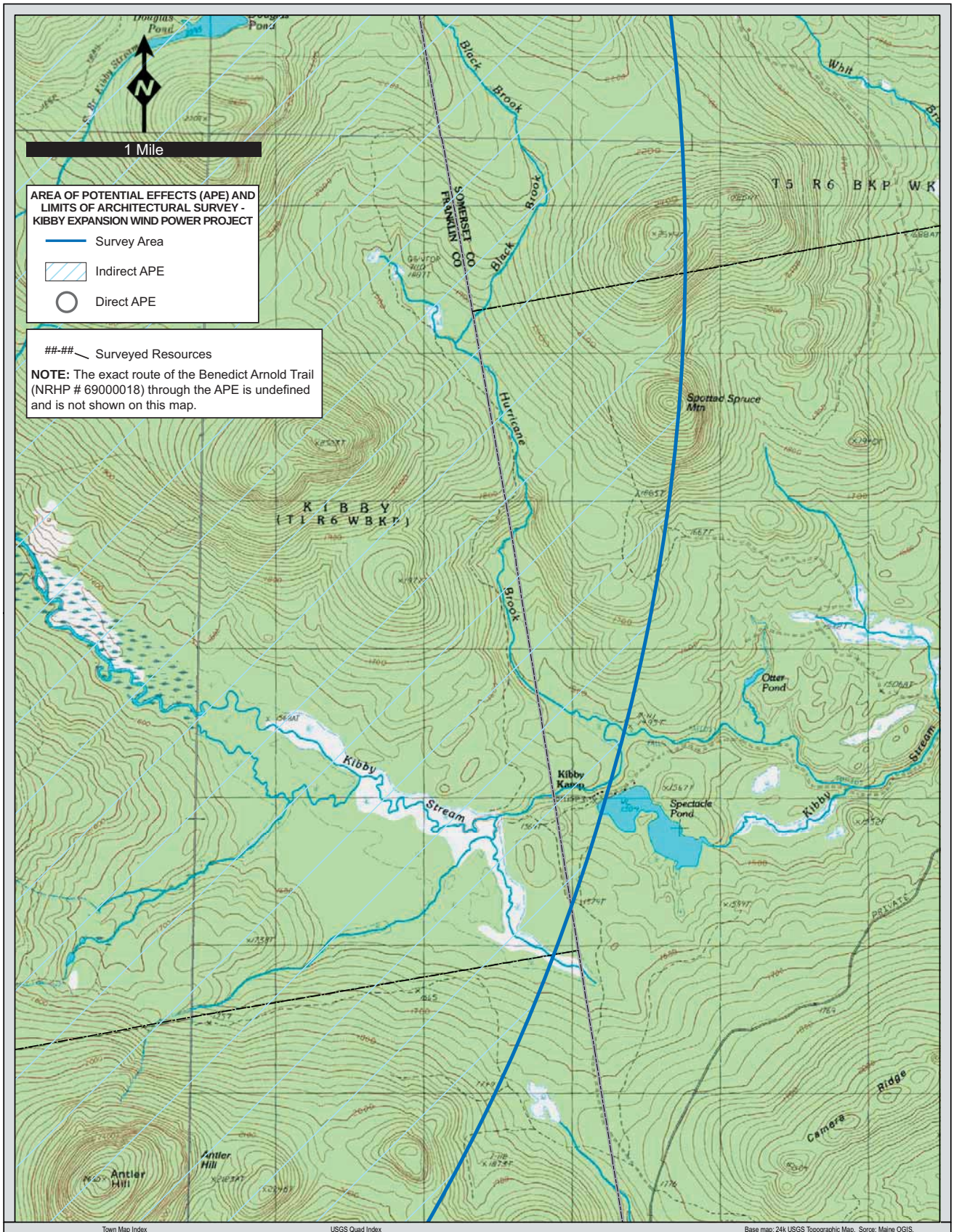
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

Architectural Survey
Area of Potential Effect (APE)

Map 14 of 20

TRC
14 Gabriel Drive
Augusta, ME 04330



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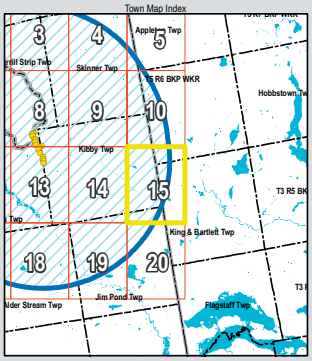

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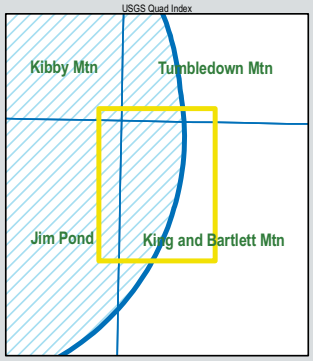


Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

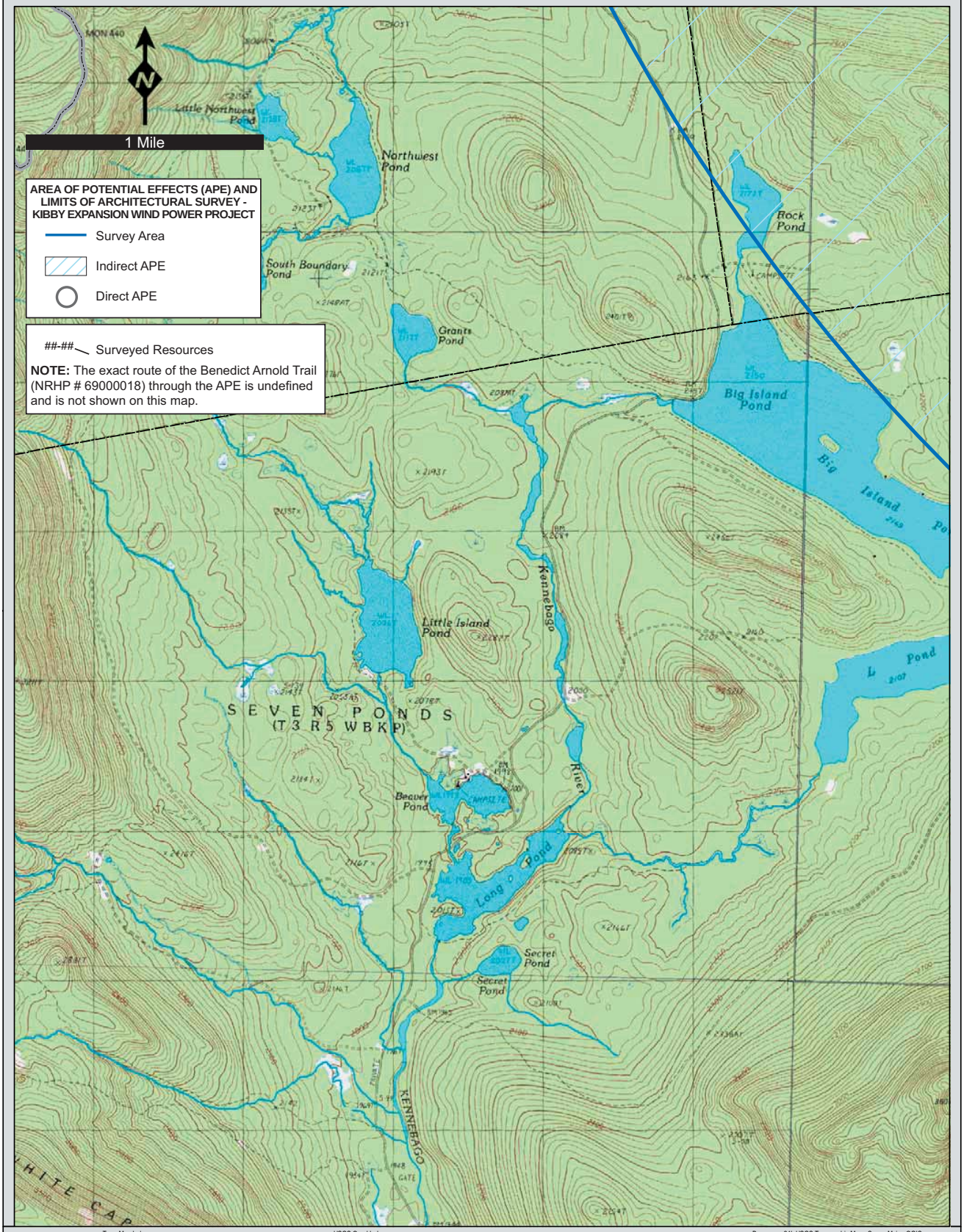
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

Architectural Survey
Area of Potential Effect (APE)

Map 15 of 20

TRC
14 Gabriel Drive
Augusta, ME 04330



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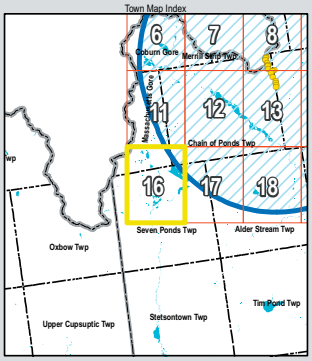

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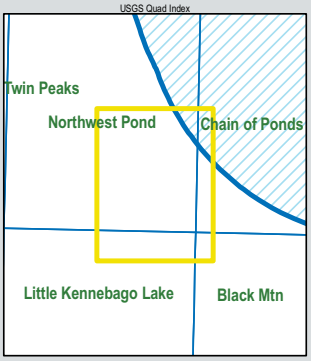


Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

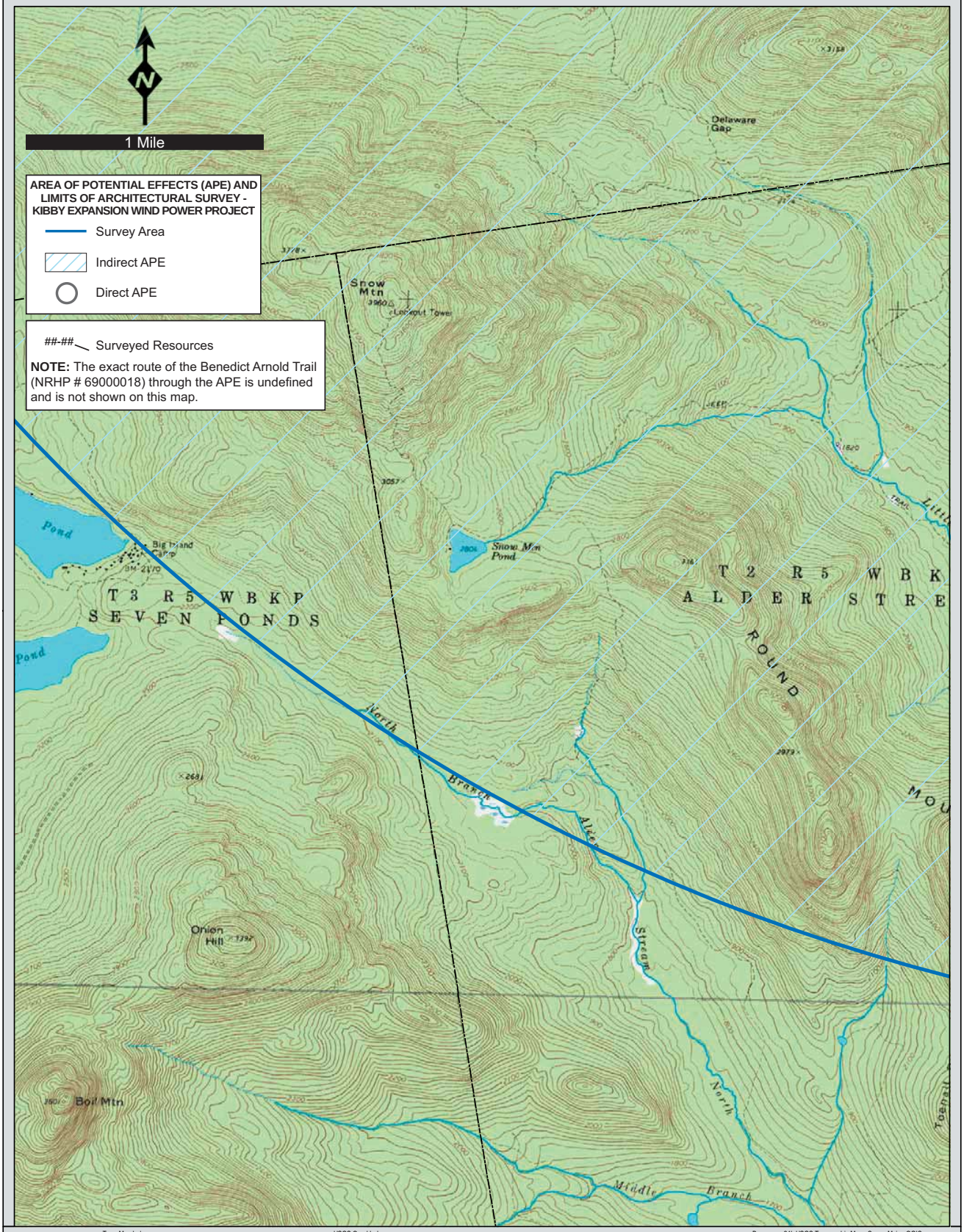
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

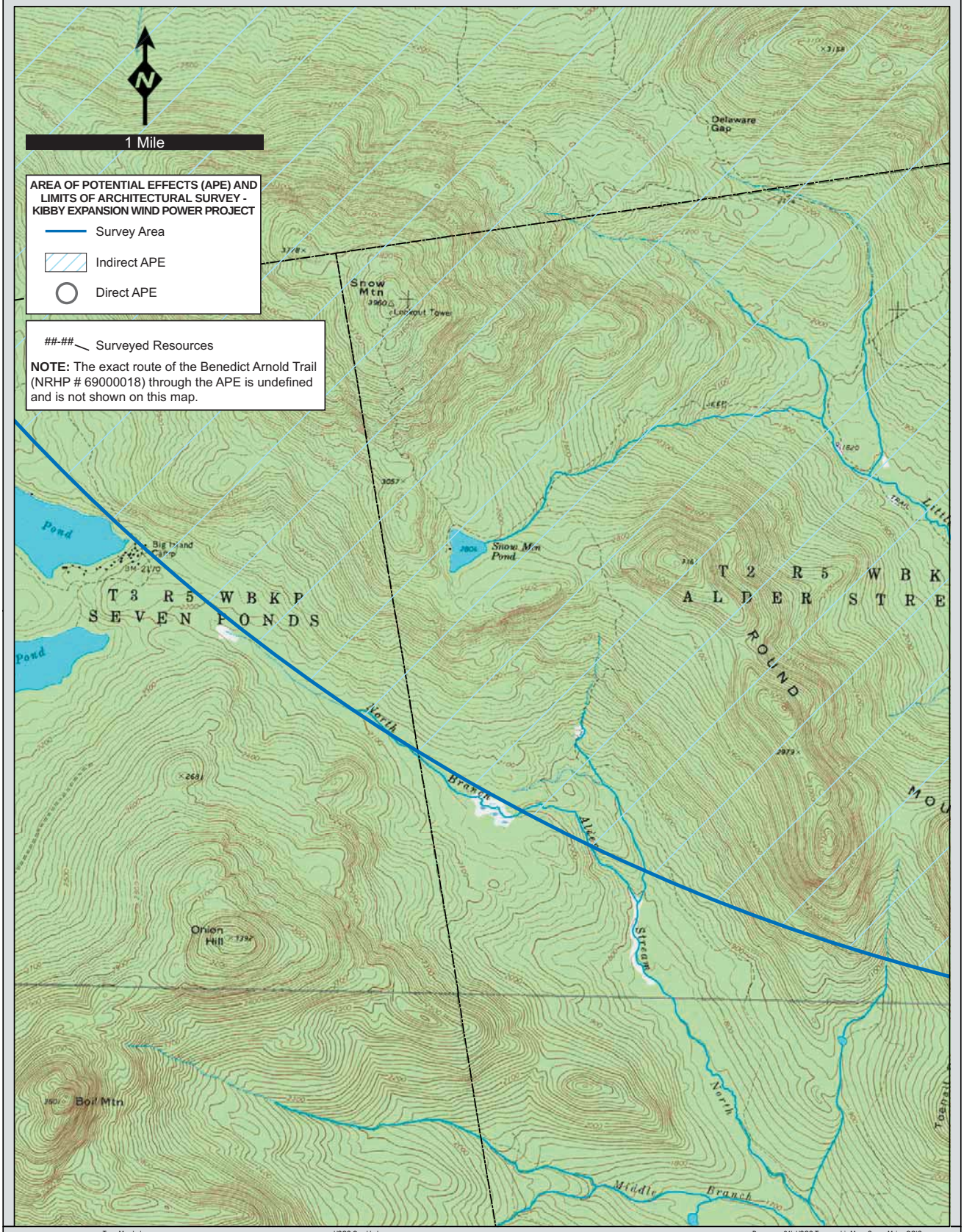
Kibby Expansion Wind Power Project

Architectural Survey
Area of Potential Effect (APE)

Map 16 of 20

TRC
14 Gabriel Drive
Augusta, ME 04330


N
1 Mile
AREA OF POTENTIAL EFFECTS (APE) AND LIMITS OF ARCHITECTURAL SURVEY - KIBBY EXPANSION WIND POWER PROJECT
Survey Area
Indirect APE
Direct APE
##-## Surveyed Resources
NOTE: The exact route of the Benedict Arnold Trail (NRHP # 69000018) through the APE is undefined and is not shown on this map.
Delaware Gap
Snow Mtn
Lookout Tower
Snow Mtn Pond
T 3 R 5 WBKP
SEVEN PONDS
T 2 R 5 WBK
ALDER STRE
ROUND
North Branch Alder Stream
Onion Hill
Bog Mtn
North Middle Branch
Town Map Index
USGS Quad Index
Northwest Pond
Chain of Ponds
Jim Pond
Black Mtn
Tim Mtn
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.
Legend
Turbine Layout
8 mile Buffer of Turbine Locations
State Boundary
County Boundary
Town Boundary
Kibby Expansion Wind Power Project
Architectural Survey
Area of Potential Effect (APE)
Map 17 of 20
TRC
14 Gabriel Drive
Augusta, ME 04330


N
1 Mile
AREA OF POTENTIAL EFFECTS (APE) AND LIMITS OF ARCHITECTURAL SURVEY - KIBBY EXPANSION WIND POWER PROJECT
Survey Area
Indirect APE
Direct APE
##-## Surveyed Resources
NOTE: The exact route of the Benedict Arnold Trail (NRHP # 69000018) through the APE is undefined and is not shown on this map.
Delaware Gap
Snow Mtn
Lookout Tower
Snow Mtn Pond
T 3 R 5 WBKP
SEVEN PONDS
T 2 R 5 WBK
ALDER STRE
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North Middle Branch
Town Map Index
USGS Quad Index
Northwest Pond
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Jim Pond
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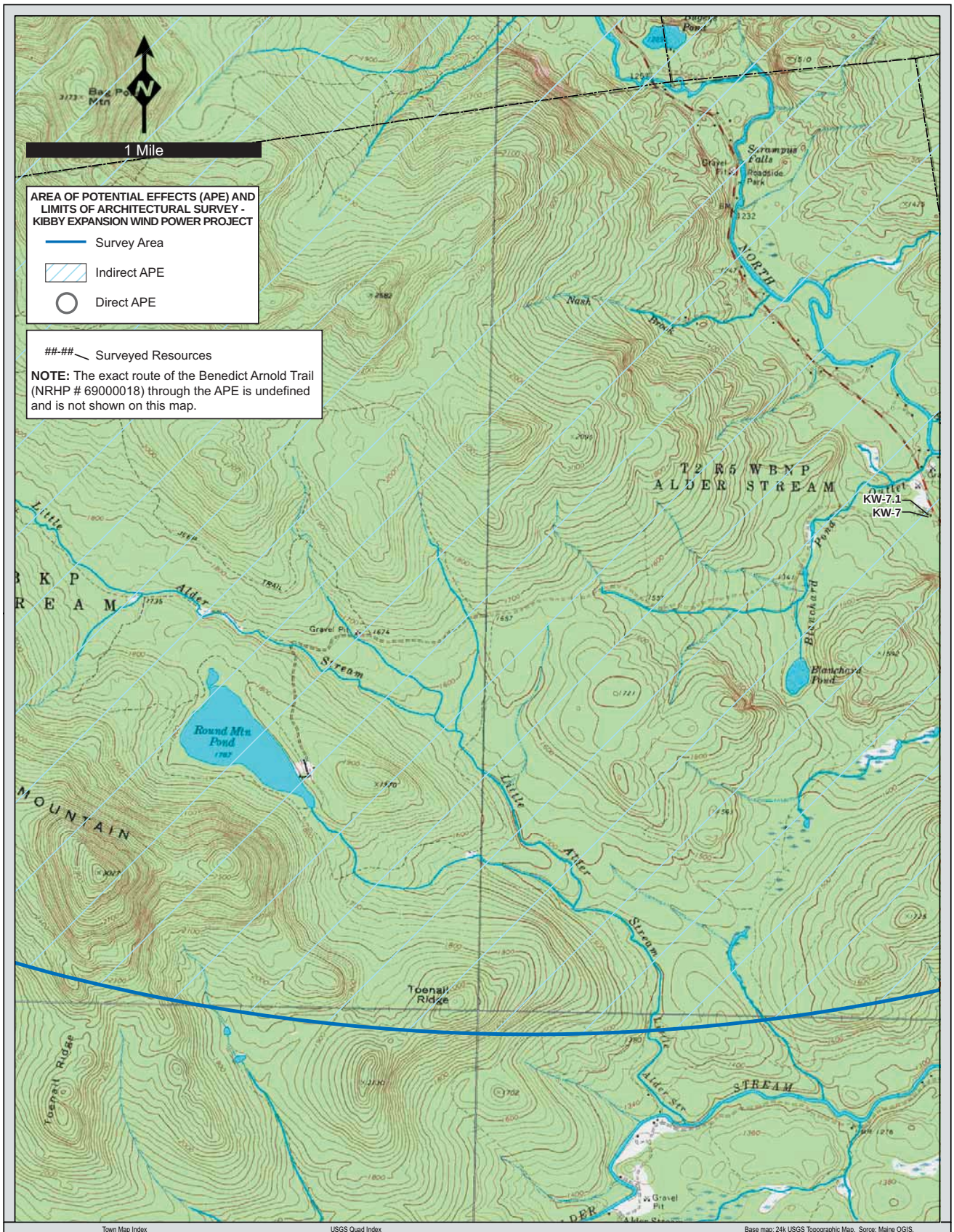
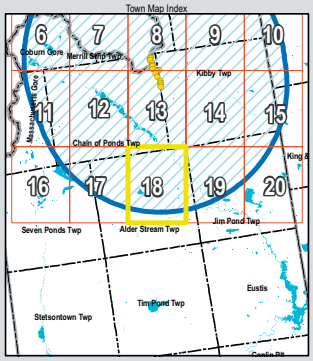
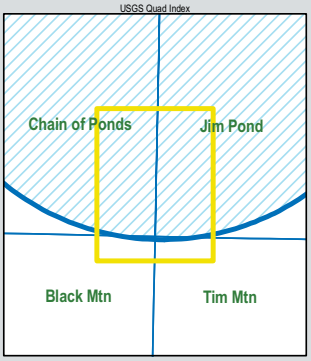
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.
Legend
Turbine Layout
8 mile Buffer of Turbine Locations
State Boundary
County Boundary
Town Boundary
Kibby Expansion Wind Power Project
Architectural Survey
Area of Potential Effect (APE)
Map 17 of 20
TRC
14 Gabriel Drive
Augusta, ME 04330



Town Map Index



USGS Quad Index



Legend

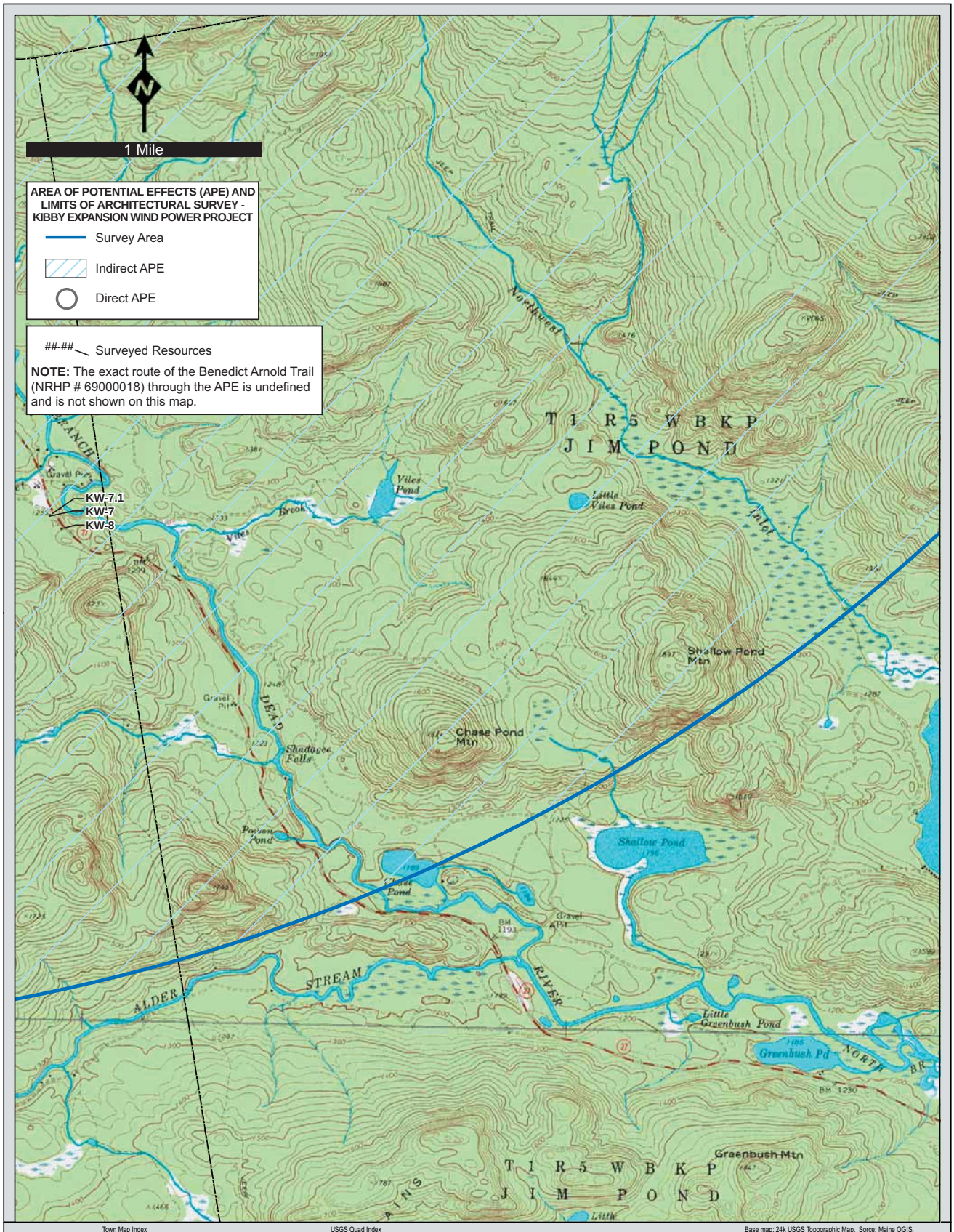
- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

Kibby Expansion Wind Power Project

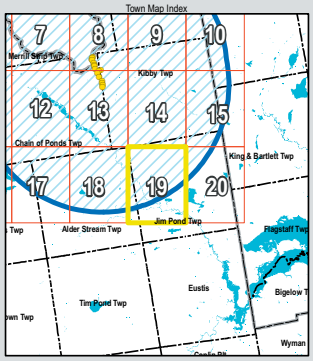
Architectural Survey
Area of Potential Effect (APE)

Map 18 of 20

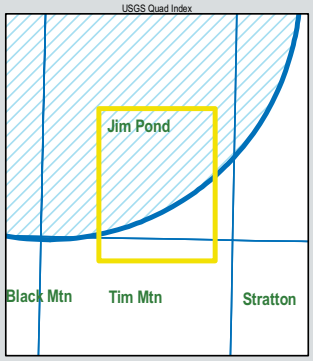
TRC
14 Gabriel Drive
Augusta, ME 04330



Town Map Index



USGS Quad Index



Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

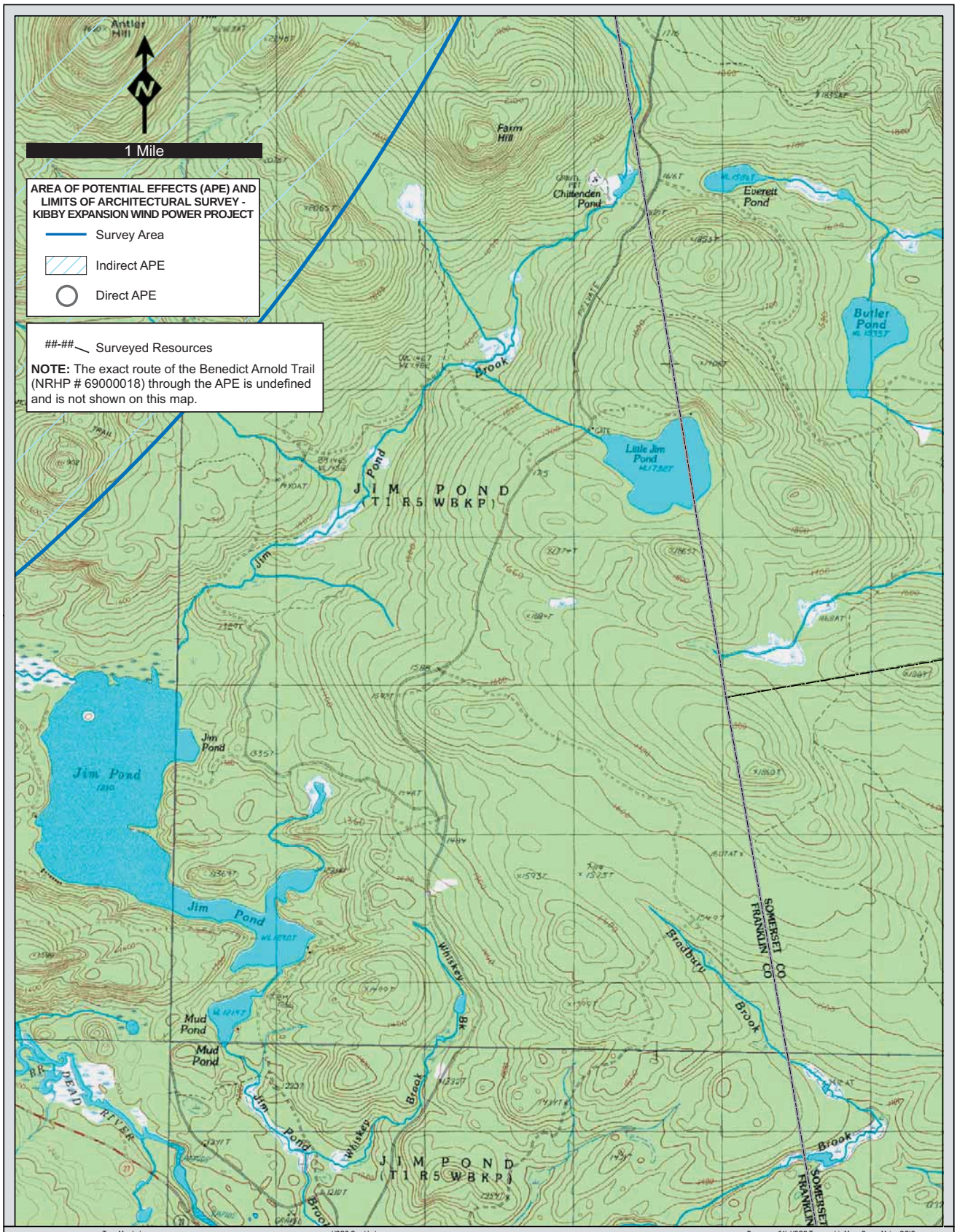
Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

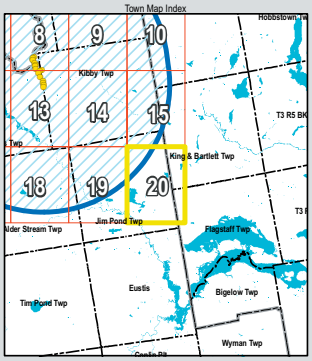
Architectural Survey
Area of Potential Effect (APE)

Map 19 of 20

TRC
14 Gabriel Drive
Augusta, ME 04330



Town Map Index



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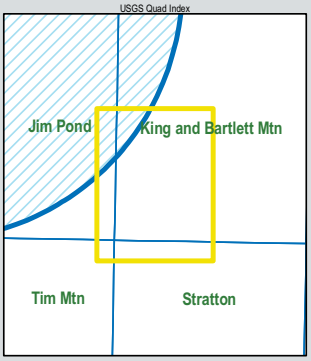

Legend

- Turbine Layout
- 8 mile Buffer of Turbine Locations
- State Boundary
- County Boundary
- Town Boundary

Base map: 24k USGS Topographic Map. Sorce: Maine OGIS.

Kibby Expansion Wind Power Project

Architectural Survey
Area of Potential Effect (APE)

Map 20 of 20

TRC
14 Gabriel Drive
Augusta, ME 04330

4.0 FINDING OF EFFECTS

4.1 Description of Existing and Proposed Conditions

The NRHP-listed Benedict Arnold Trail extends 194 miles from a point south of Augusta, north along the Kennebec River and through the Chain of Ponds, before terminating at the Canadian border at Coburn Gore. Approximately 18.7 miles of the trail lie within the Project APE. There are no standing structures associated with the Benedict Arnold Trail within the Kibby Expansion Project APE. Figure 8 is a visual simulation of the Kibby Expansion Project taken from the Chain of Ponds section of the Benedict Arnold Trail.

4.2 Effects from the Proposed Action

TRC conducted an assessment of potential effects from the Project on the NRHP-listed Benedict Arnold Trail in accordance with Section 106 of the National Historic Preservation Act of 1966. Guidelines for this evaluation are set forth in the Advisory Council on Historic Preservation (ACHP)'s regulations at 36 CFR, Part 800. According to 36 CFR 800 .5 (a)(1) an Adverse Effect occurs when an undertaking may directly or indirectly alter characteristics of a historic property that qualify it for inclusion in the NRHP. Reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative also need to be considered. Examples of adverse effects include, but are not limited to, physical destruction or damage; alteration not consistent with the *Secretary of the Interior's Standards*; relocation of a property; change of use or physical features of a property's setting; visual, atmospheric, or audible intrusions; neglect resulting in deterioration; or transfer, lease, or sale of a property out of Federal ownership or control without adequate protections. A finding of No Adverse Effect occurs when the undertaking's effects do not meet the criteria listed above. Where the effect is nonexistent or negligible, a No Effect finding occurs.

As part of this effects assessment, TRC conducted a field investigation to verify the nature of any visual effects to the NRHP-listed Benedict Arnold Trail from the Project. The field review was important in evaluating the degree of any visual impacts to the resource and its setting, the existence of tree cover and intervening buildings that might mitigate these impacts, and establishing sight lines from the historic resource to the Project.

TRC applied the Criteria of Effect and Criteria of Adverse Effects from the proposed Kibby Expansion Project to the NRHP-listed Benedict Arnold Trail. The Project may be visible from an approximately 1.6-mile section of the Benedict Arnold Trail within the Project APE, which represents less than 1 percent of the total Trail length. Views of the Project from this portion of the Trail constitute a visual effect, but the approximately 2-mile distance of visible Project components from the Trail and the very small percentage of the total resource affected will alter neither the resource's setting nor its character-defining features. There will be no adverse effect to the elements and setting that contribute to its historic military significance. According to the Criteria of Adverse Effect, there will be No Adverse Effect to the Benedict Arnold Trail from the Project.

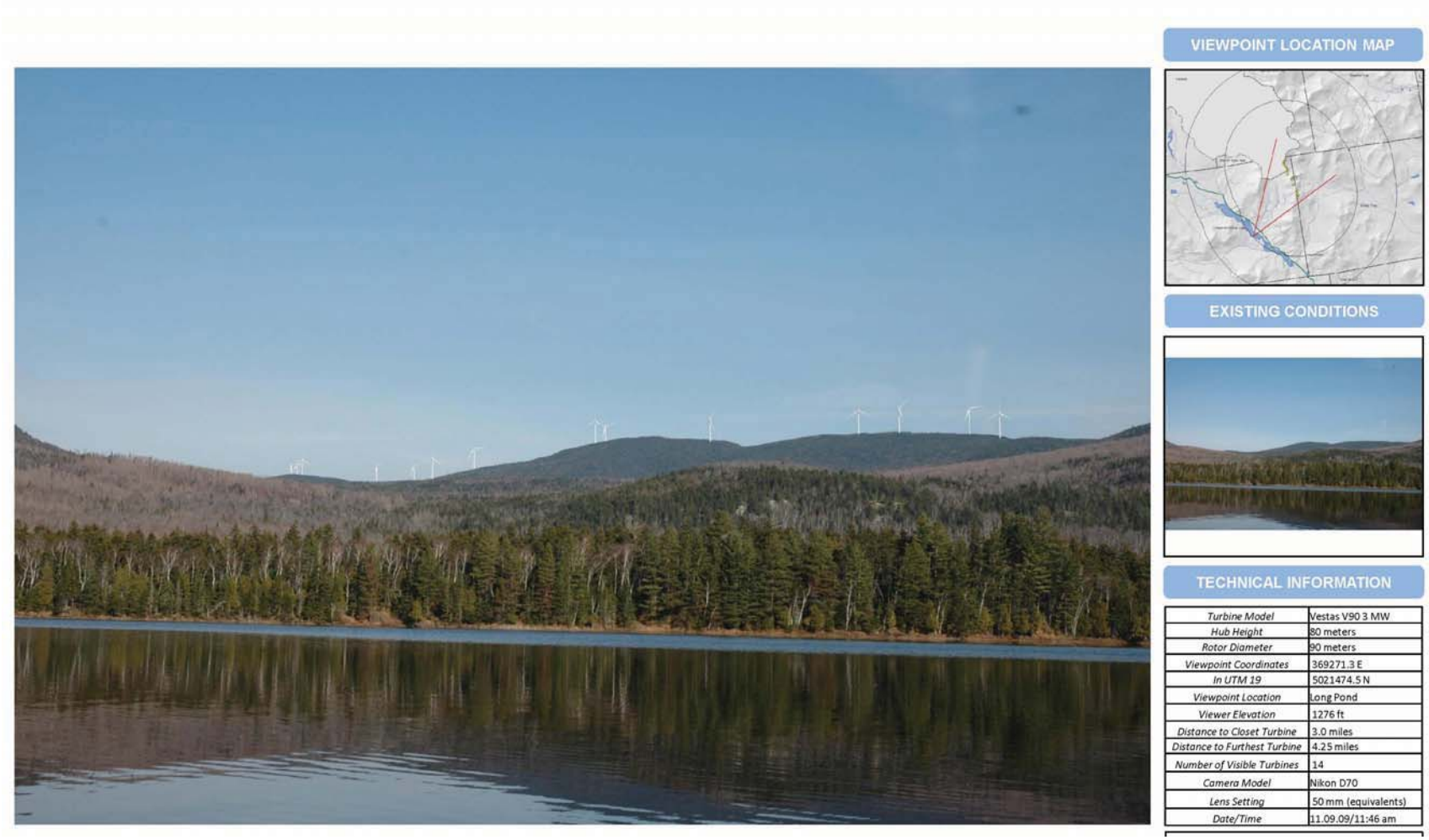

Figure 8. Visual simulation of the Kibby Expansion Project taken from a section of the NRHP-listed Benedict Arnold Trail to Quebec (NRHP# 69000018). (Source: Jean Vissering, Landscape Architect, Montpelier, Vermont)

5.0 SUMMARY AND CONCLUSIONS

5.1 Summary and Conclusions

TRC conducted a survey of architectural resources 50 years or older within the APE of the Kibby Expansion Project in November 2009. Background research and fieldwork conducted by TRC identified 16 resources in the Project APE. An approximately 18.7-mile section of the 194-mile long Benedict Arnold Trail lies within the Project APE. Project components may be visible from approximately 1.6 miles of the Trail within the Project APE; representing less than 1 percent of the total length of the Trail. The Megantic Fish and Game Club House (MHPC #530-0001) was previously surveyed by MHPC. The MHPC has not evaluated the Megantic Fish and Game Club House for NRHP-eligibility. TRC identified the remaining 14 architectural resources during the field survey. TRC recommends that the Megantic Fish and Game Club House and the other 14 newly surveyed resources are not NRHP-eligible due to lack of historic significance and/or integrity. TRC also evaluated the Chain of Ponds Camp and the Arnold Pond Fish & Game Club for NRHP-eligibility as historic sporting camps, but recommends that they lack the historic significance and architectural integrity necessary for listing in the NRHP.

TRC applied the Criteria of Effect and Criteria of Adverse Effects from the proposed Kibby Expansion Project to the NRHP-listed Benedict Arnold Trail. There will be no adverse effect to the elements and setting that contribute to its historic military significance. There will be No Adverse Effect to the Benedict Arnold Trail from the Project.

5.2 Recommendations

TRC on behalf of TransCanada is submitting this report and completed MHPC Historic Structures Survey Forms for the one previously surveyed and 14 newly surveyed resources for its review and concurrence with the NRHP recommendations and effects findings.

6.0 BIBLIOGRAPHY

Cole, Stephen
1995 *Maine Sporting Camps—A Phase 1 Survey.* Maine Historic Preservation Commission, Augusta, Maine.

Franklin County Deed and Tax Assessor Records, Franklin County Courthouse, Farmington, Maine.

Halstrom, Daniel
1969 *Arnold Trail to Quebec.* National Register of Historic Places Inventory Nomination From.

Maine Department of Conservation, Bureau of Parks and Lands
2007 *Flagstaff Lake Management Plan.*

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2006 *Guidelines for Identification: Architecture and Cultural Landscapes—Section 106 Specific.* Augusta, Maine.

APPENDIX A

SURVEY MATRIX

Architectural Survey—TransCanada Kibby Expansion Project
Prepared by TRC, 14 Gabriel Drive, Augusta, Maine, 04330 (TRC Project Number 165796)
Date: November 3-5, 2009
Surveyors: Geoffrey Henry and Ellen Jenkins

SURVEY MAP ID	ADDRESS	TOWN	RESOURCE TYPE	NRHP ELIGIBLE?	CRITERIA OF ELIGIBILITY	ASPECTS OF INTEGRITY	EFFECT?	ADVERSE EFFECT?
NRHP# 69000018	Along the Dead River and Chain of Ponds to Quebec Canada, Coburn Gore	Jim Pond, Alder Stream, Chain of Ponds, Coburn Gore	Trail	NRHP-listed	Criteria B (Col. Benedict Arnold) and C (Military)	N/A	Yes. Visual effect.	No Adverse Effect. Project will not diminish integrity of setting.
530-0001	West side of Long Pond at Chain of Ponds Camp	Chain of Ponds	Summer Camp	No	Lacks significance under Criteria A, B, and C.	The resource retains integrity of location, setting, association and feeling. The replacement roof material and metal chimney and skylight additions impacts the integrity of workmanship, design and materials.	N/A	N/A
KW-1	East side of Long Pond at Chain of Ponds Camp	Chain of Ponds	Summer Camp	No	Lacks significance under Criteria A, B, and C.	The resource retains integrity of location, setting, association, materials, workmanship, and feeling. The rear addition impacts the integrity of design.	N/A	N/A
KW-2	East side of Long Pond at Chain of Ponds Camp	Chain of Ponds	Summer Camp	No	Lacks significance under Criteria A, B, and C.	The resource retains integrity of location, setting, association, materials, workmanship, and feeling. The rear addition impacts the integrity of design.	N/A	N/A
KW-3	West side of Long Pond at Chain of Ponds Camp	Chain of Ponds	Summer Camp	No	Lacks significance under Criteria A, B, and C.	Resource retains all aspects of integrity.	N/A	N/A

Architectural Survey—TransCanada Kibby Expansion Project
Prepared by TRC, 14 Gabriel Drive, Augusta, Maine, 04330 (TRC Project Number 165796)
Date: November 3-5, 2009
Surveyors: Geoffrey Henry and Ellen Jenkins

SURVEY MAP ID	ADDRESS	TOWN	RESOURCE TYPE	NRHP ELIGIBLE?	CRITERIA OF ELIGIBILITY	ASPECTS OF INTEGRITY	EFFECT?	ADVERSE EFFECT?
KW-3.1	West side of Long Pond at Chain of Ponds Camp	Chain of Ponds	Cottage	No	Lacks significance under Criteria A, B, and C.	Resource retains all aspects of integrity.	N/A	N/A
KW-3.2	West side of Long Pond at Chain of Ponds Camp	Chain of Ponds	Boat House	No	Lacks significance under Criteria A, B, and C.	Resource retains all aspects of integrity.	N/A	N/A
KW-4	West side of Long Pond at Chain of Ponds Camp	Chain of Ponds	Summer Camp	No	Lacks significance under Criteria A, B, and C.	The resource retains the integrity of location, setting, association and feeling. The replacement windows, doors, and siding as well as the non-historic deck addition impact the integrity of workmanship, design and materials.	N/A	N/A
KW-4.1	West side of Long Pond at Chain of Ponds Camp	Chain of Ponds	Cottage	No	Lacks significance under Criteria A, B, and C.	Resource retains all aspects of integrity.	N/A	N/A
KW-5	West side of Long Pond at Chain of Ponds Camp	Chain of Ponds	Summer Camp	No	Lacks significance under Criteria A, B, and C.	The resource retains the integrity of location, setting, association and feeling. The replacement windows, doors, and siding as well as the non-historic deck addition impacts the integrity of workmanship, design and materials.	N/A	N/A

Architectural Survey—TransCanada Kibby Expansion Project
Prepared by TRC, 14 Gabriel Drive, Augusta, Maine, 04330 (TRC Project Number 165796)
Date: November 3-5, 2009
Surveyors: Geoffrey Henry and Ellen Jenkins

SURVEY MAP ID	ADDRESS	TOWN	RESOURCE TYPE	NRHP ELIGIBLE?	CRITERIA OF ELIGIBILITY	ASPECTS OF INTEGRITY	EFFECT?	ADVERSE EFFECT?
KW-6	West side of Bag Pond	Chain of Ponds	Summer Camp and Shed	No	Lacks significance under Criteria A, B, and C.	Resource retains all aspects of integrity.	N/A	N/A
KW-7	West side of Route 27 1.38 miles northwest of Shadagee Falls	Alder Stream	House and Wood Shed	No	Lacks significance under Criteria A, B, and C.	The resource retains the integrity of location, setting, association and feeling. The replacement roof, doors, and siding impacts the integrity of workmanship, design and materials.	N/A	N/A
KW-7.1	West side of Route 27 1.38 miles northwest of Shadagee Falls	Alder Stream	Wagon Shed	No	Lacks significance under Criteria A, B, and C.	Resource retains all aspects of integrity.	N/A	N/A
KW-8	West side of Route 27 1.3 miles northwest of Shadagee Falls	Alder Stream	House	No	Lacks significance under Criteria A, B, and C.	The resource retains the integrity of location, setting, association and feeling. The replacement windows, doors, and siding as well as the multiple rear additions impact the integrity of workmanship, design and materials.	N/A	N/A
KW-9	Arnold Pond Fish and Game Club, Route 27	Coburn Gore	Summer Camp	No	Lacks significance under Criteria A, B, and C.	The resource retains the integrity of location, setting, design, association and feeling. The replacement roof and metal chimney impacts the integrity of materials and workmanship.	N/A	N/A

Architectural Survey—TransCanada Kibby Expansion Project
Prepared by TRC, 14 Gabriel Drive, Augusta, Maine, 04330 (TRC Project Number 165796)
Date: November 3-5, 2009
Surveyors: Geoffrey Henry and Ellen Jenkins

SURVEY MAP ID	ADDRESS	TOWN	RESOURCE TYPE	NRHP ELIGIBLE?	CRITERIA OF ELIGIBILITY	ASPECTS OF INTEGRITY	EFFECT?	ADVERSE EFFECT?
KW-9.1	Arnold Pond Fish and Game Club, Route 27	Coburn Gore	Gate House	No	Lacks significance under Criteria A, B, and C.	The resource retains the integrity of location, setting, design, association and feeling. The replacement windows and doors impact the integrity of workmanship and materials.	N/A	N/A

APPENDIX B

NEGATIVE LIST

Architectural Survey—TransCanada Kibby Extension Project
Prepared by TRC, 14 Gabriel Drive, Augusta, Maine, 04330 (TRC Project Number 165796)
Date: November 3-5, 2009
Surveyors: Geoff Henry and Ellen Jenkins

SURVEY MAP NO.	ADDRESS	SURVEY MAP NAME	ROLL NO.	FRAME NO.	MHPC NO. (IF ASSIGNED)
530-0001	West side of Long Pong at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	28	
KW-1	East side of Long Pond at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	36	
KW-1	East side of Long Pond at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	35	
KW-1	East side of Long Pond at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	34	
KW-2	East side of Long Pond at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	33	
KW-3	West side of Long Pong at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	32	
KW-3	West side of Long Pong at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	30	
KW-3.1	West side of Long Pong at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	31	
KW-3.2	West side of Long Pong at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	29	
KW-4	West side of Long Pong at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	27	
KW-4.1	West side of Long Pong at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	26	
KW-5	West side of Long Pong at Chain of Ponds Camp, Chain of Ponds	Chain of Ponds	KW-1	16	
KW-6	West side of Bag Pond, Chain of Ponds	Chain of Ponds	KW-1	15	
KW-7	West side of Route 27 1.38 miles northwest of Shadagee Falls, Alder Stream	Jim Pond	KW-1	14	
KW-7	West side of Route 27 1.38 miles northwest of Shadagee Falls, Alder Stream	Jim Pond	KW-1	13	
KW-7.1	West side of Route 27 1.38 miles northwest of Shadagee Falls, Alder Stream	Jim Pond	KW-1	12	
KW-8	West side of Route 27 1.3 miles northwest of Shadagee Falls, Alder Stream	Jim Pond	KW-1	11	
KW-9	Arnold Pond Fish and Game Club, Coburn Gore	Louise Mountain	KW-1	10	
KW-9	Arnold Pond Fish and Game Club, Coburn Gore	Louise Mountain	KW-1	9	
KW-9.1	Arnold Pond Fish and Game Club, Coburn Gore	Louise Mountain	KW-1	8	

APPENDIX C
MAINE HISTORIC PRESERVATION COMMISSION
SURVEY FORMS

SURVEY MAP NO. 530-0001

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

530-0001

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Megantic Fish and Game Club

2. PROPERTY NAME (OTHER): ____

3. STREET ADDRESS: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

4. TOWN: Chain of Ponds

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: ____

ADDRESS: ____

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	_X_ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER ____

10. CONDITION: _X_ GOOD ___ FAIR ___ POOR ___ DESTROYED, DATE __/__/__

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER Rustic	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

13. HEIGHT:

___ 1 STORY	_X_ 1 1/2 STORY	___ 2 STORY	___ 2 1/2 STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

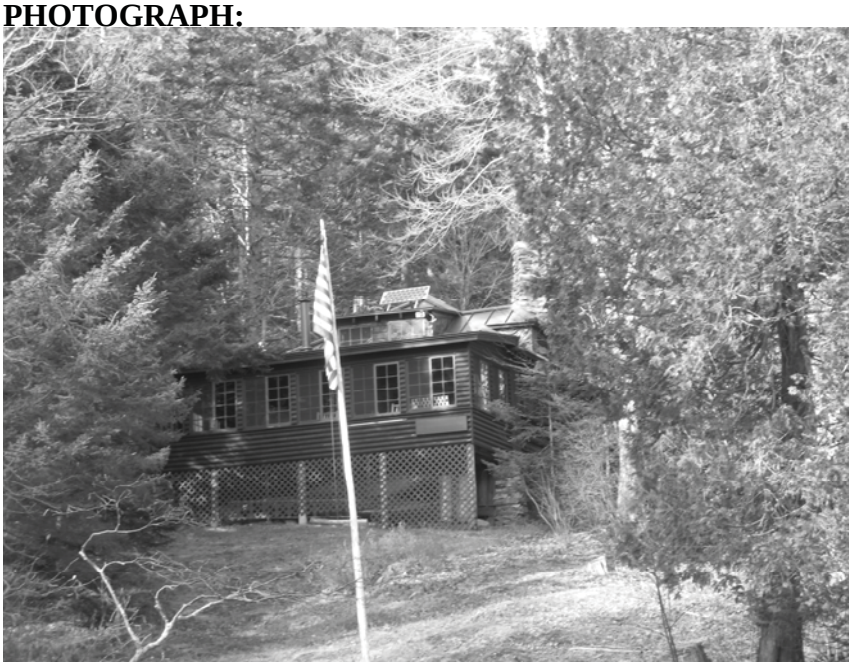
14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	___ 2 BAY	___ 3 BAY	___ 4 BAY	_X_ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

_X_ SIDE ELL	_X_ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
_X_ DORMERS	_X_ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:



16. PORCH:
_X_ ATTACHED ___ ENGAGED _X_ ONE STORY ___ MORE THAN ONE STORY
_X_ FULL WIDTH ___ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE ___ CENTRAL HALL ___ SIDE HALL
___ BACK HALL _X_ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE ___ BALLOON FRAME
___ CONCRETE ___ STEEL _X_ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
_X_ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
___ GABLE SIDE ___ GABLE FRONT _X_ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL _X_ TILE ____ SLATE ____ ASPHALT____ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
_X_ FIELDSTONE ___ BRICK ___ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE OTHER _____

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1894

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: _____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Chain of Ponds QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S E W NE NW (SE) SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. 530-0001

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

530-0001

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

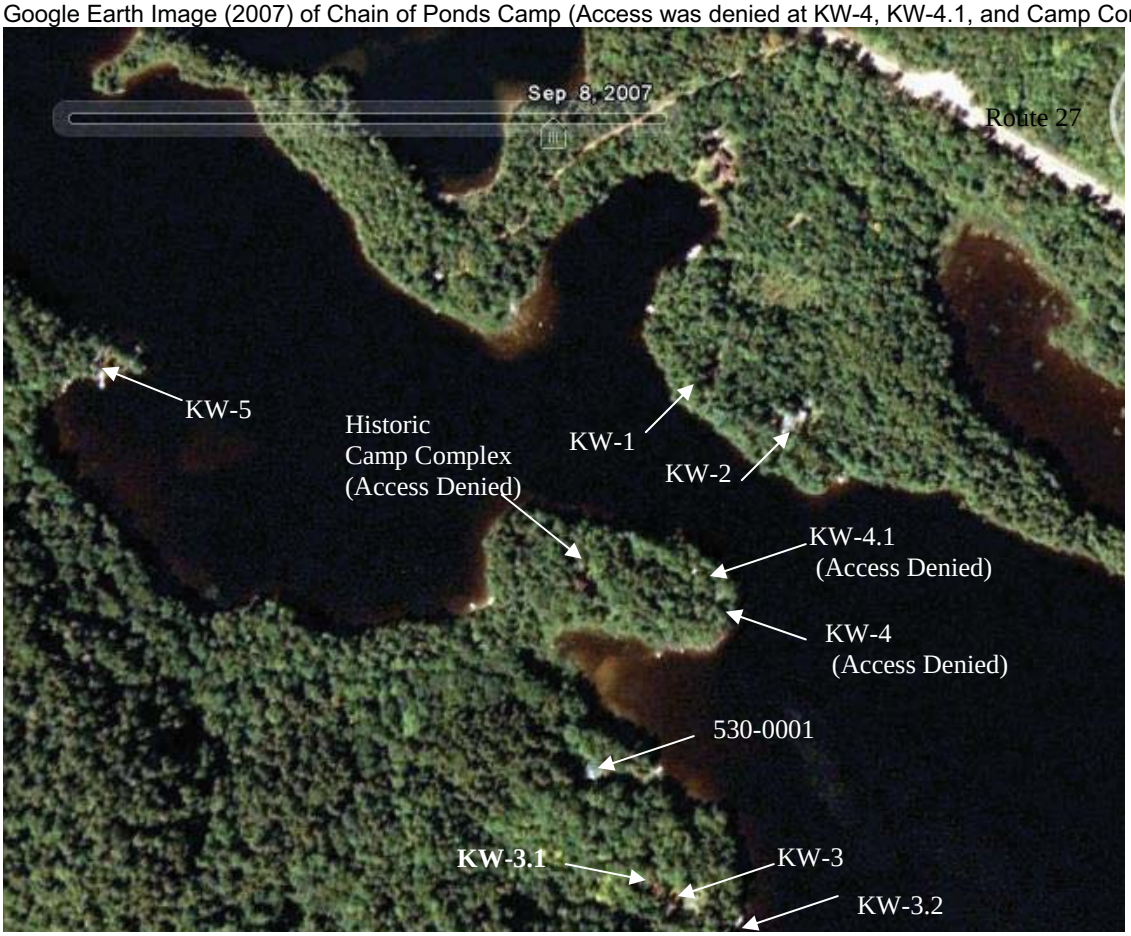
PROPERTY NAME: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Google Earth Image (2007) of Chain of Ponds Camp (Access was denied at KW-4, KW-4.1, and Camp Complex)



K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

SURVEY MAP NO. 530-0001

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

530-0001

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

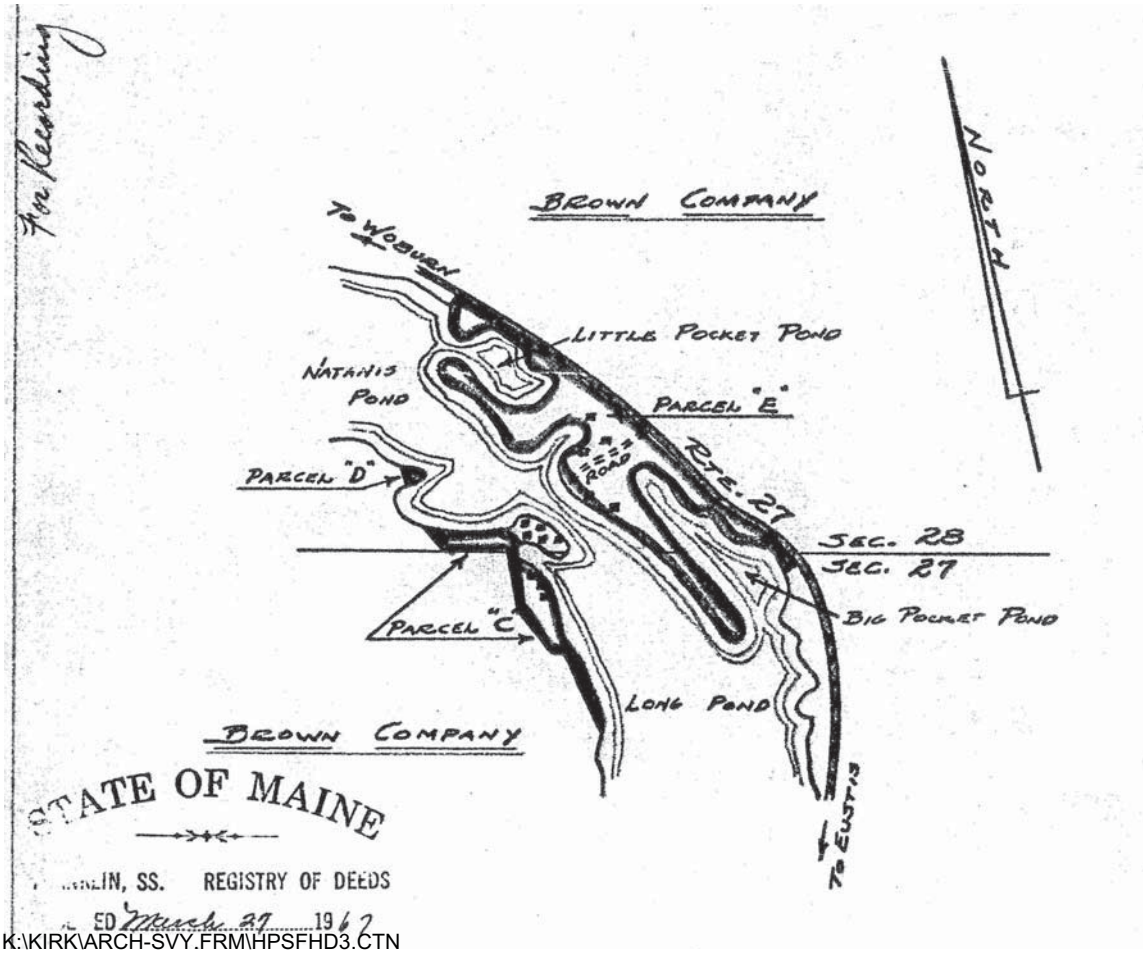
PROPERTY NAME: West side Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Plan of Chain of Ponds Camp (February 1967), Recorded in Book 131 ½ Page 14



K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

MRPC USE ONLY

Survey Map No. _____
Survey Map Name _____

S30-0001
INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Log house with a stone chimney

2. PROPERTY NAME (OTHER): Chain of Ponds Camp

3. STREET ADDRESS: W side of one road Chain-of-Ponds

4. TOWN: Chain of Ponds TWP 5. COUNTY: Franklin

6. DATE RECORDED: 5/2/91 7. SURVEYOR: K. E. McHaley

8. OWNER NAME: _____ ADDRESS: _____

9. PRIMARY USE (PRESENT):

SINGLE FAMILY	___	AGRICULTURE	___	COMMERCIAL/TRADE	___	FUNERARY	___
MULTI-FAMILY	___	GOVERNMENTAL	___	EDUCATION	___	HEALTH CARE	___
INDUSTRY	___	RELIGIOUS	___	HOTEL	___	LANDSCAPE	___
TRANSPORTATION	___	DEFENSE	___	SUMMER COTTAGE/CAMP	1	SOCIAL	___
RECREATION/CULTURE	___	UNKNOWN	___				

OTHER _____

10. CONDITION: GOOD 1 FAIR ___ POOR ___ DESTROYED ___, DATE _____

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

COLONIAL	___	STICK STYLE	___	COLONIAL REV.	___	FEDERAL	___
RENNAISSANCE REV.	___	GREEK REVIVAL	___	SHINGLE STYLE	___	BUNGALOW	___
ROMANESQUE	___	19TH/20TH C. REV.	___	R. ROMANESQUE	___	ITALIANATE	___
NEO-CLASSIC. REV.	___	SECOND EMPIRE	___	QUEEN ANNE	___	GOTHIC	___
HIGH VIC. GOTHIC	___	OTHER	Log house				

12. OTHER STYLISTIC CATEGORY:

COLONIAL	___	STICK STYLE	___	COLONIAL REV.	___	FEDERAL	___
RENNAISSANCE REV.	___	GREEK REVIVAL	___	SHINGLE STYLE	___	BUNGALOW	___
ROMANESQUE	___	19TH/20TH C. REV.	___	R. ROMANESQUE	___	ITALIANATE	___
NEO-CLASSIC. REV.	___	SECOND EMPIRE	___	QUEEN ANNE	___	GOTHIC	___
HIGH VIC. GOTHIC	___	OTHER	_____				

13. HEIGHT: 1 STORY ___ 1 1/2 STORY ___ 2 STORY ___ 2 1/2 STORY ___
3 STORY ___ 4 STORY ___ 5 STORY ___ OVER 5 (___) ___

14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):
1 BAY ___ 2 BAY ___ 3 BAY ___ 4 BAY ___ 5 BAY ___ MORE THAN 5 (___) ___

15. APPENDAGES: SIDE ELL___ REAR ELL___ FRONT___ ADDED STORIES___ SHED___ DORMERS___ PORCH___ TOWER___
CUPOLA___

SURVEY MAP NO. KW-1

SURVEY MAP NAME Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Megantic Fish and Game Club

2. PROPERTY NAME (OTHER): ____

3. STREET ADDRESS: East side of Long Pond at Chain of Ponds Camp, Chain of Ponds

4. TOWN: Chain of Ponds

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: ____

ADDRESS: ____

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	_X_ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER ____

10. CONDITION: _X_ GOOD ___ FAIR ___ POOR ___ DESTROYED, DATE ___/___/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER Rustic	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

13. HEIGHT:

___ 1 STORY	_X_ 1 1/2 STORY	___ 2 STORY	___ 2 1/2 STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	___ 2 BAY	_X_ 3 BAY	___ 4 BAY	____ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

_X_ SIDE ELL	_X_ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	_X_ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:

16. PORCH:
_X_ ATTACHED ___ ENGAGED _X_ ONE STORY ___ MORE THAN ONE STORY
_X_ FULL WIDTH ___ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE _X_ CENTRAL HALL ___ SIDE HALL
___ BACK HALL ___ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE ___ BALLOON FRAME
___ CONCRETE ___ STEEL _X_ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
_X_ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
_X_ GABLE SIDE ___ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL ____ TILE ____ SLATE ____ ASPHALT _X_ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
_X_ FIELDSTONE ___ BRICK ___ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE OTHER _____

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1894

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: _____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Chain of Ponds QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S E (W) NE NW SE SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-1

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

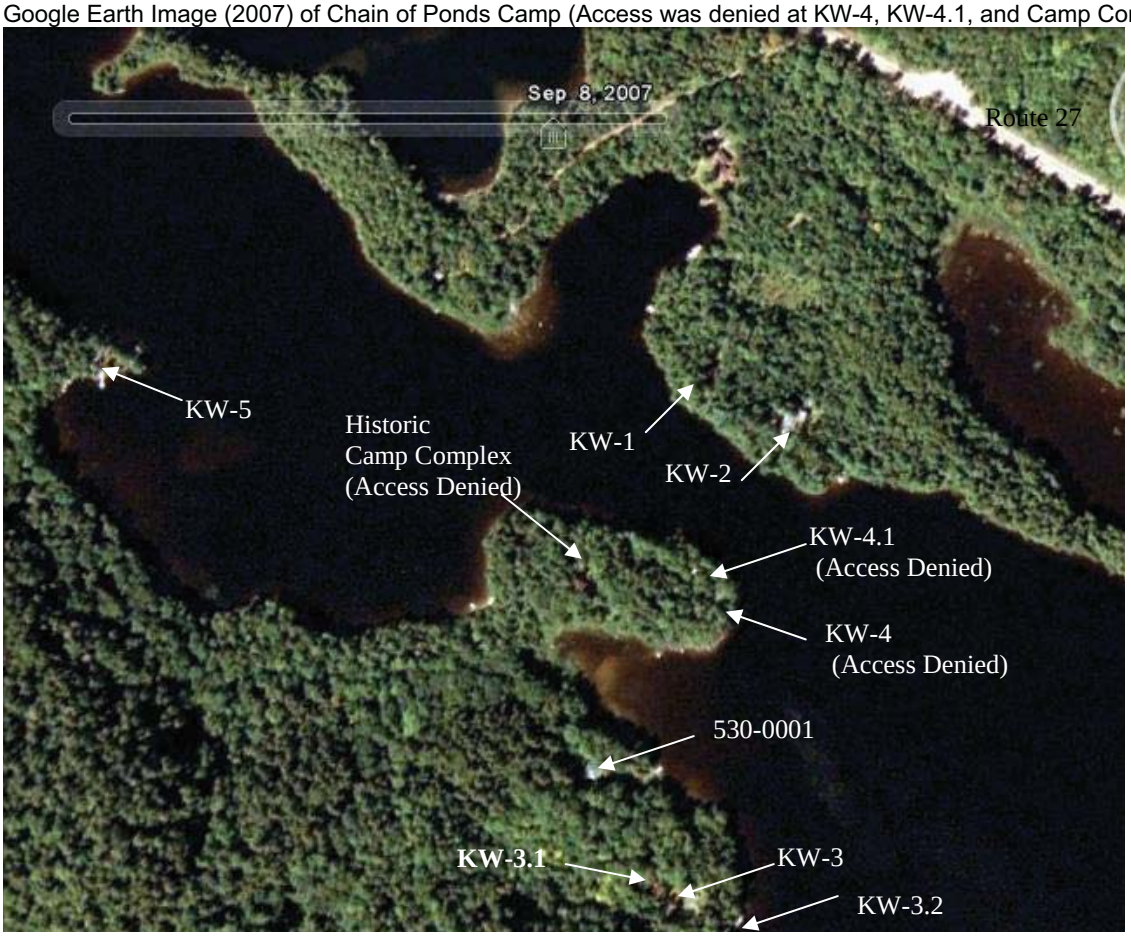
PROPERTY NAME: East side of Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Google Earth Image (2007) of Chain of Ponds Camp (Access was denied at KW-4, KW-4.1, and Camp Complex)



K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

SURVEY MAP NO. KW-1

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

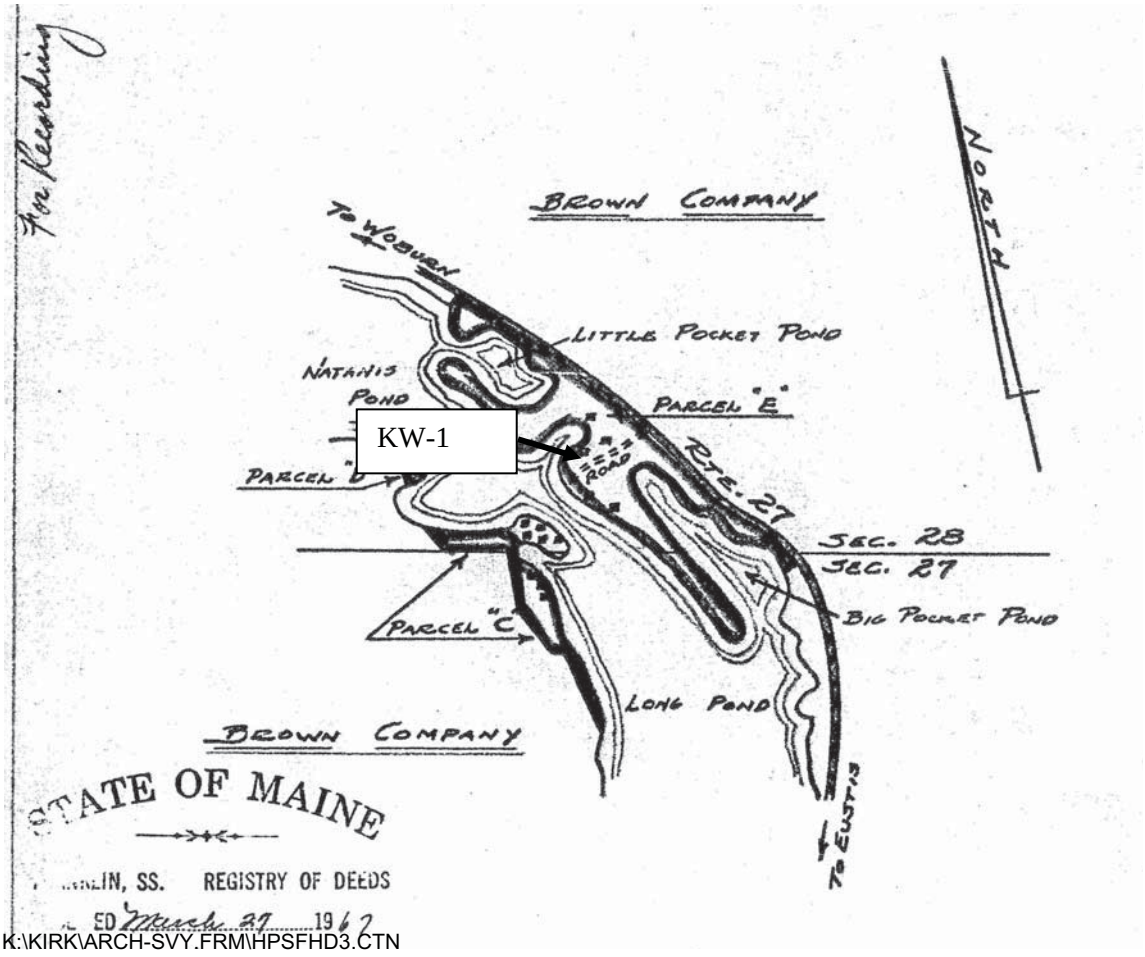
PROPERTY NAME: East side Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Plan of Chain of Ponds Camp (February 1967), Recorded in Book 131 ½ Page 14



K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

SURVEY MAP NO. KW-2

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Megantic Fish and Game Club

2. PROPERTY NAME (OTHER): ____

3. STREET ADDRESS: East side of Long Pond at Chain of Ponds Camp, Chain of Ponds

4. TOWN: Chain of Ponds

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: ____

ADDRESS: ____

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	_X_ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER ____

10. CONDITION: _X_ GOOD ___ FAIR ___ POOR ___ DESTROYED, DATE ___/___/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER Rustic	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

13. HEIGHT:

___ 1 STORY	_X_ 1 1/2 STORY	___ 2 STORY	___ 2 1/2 STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

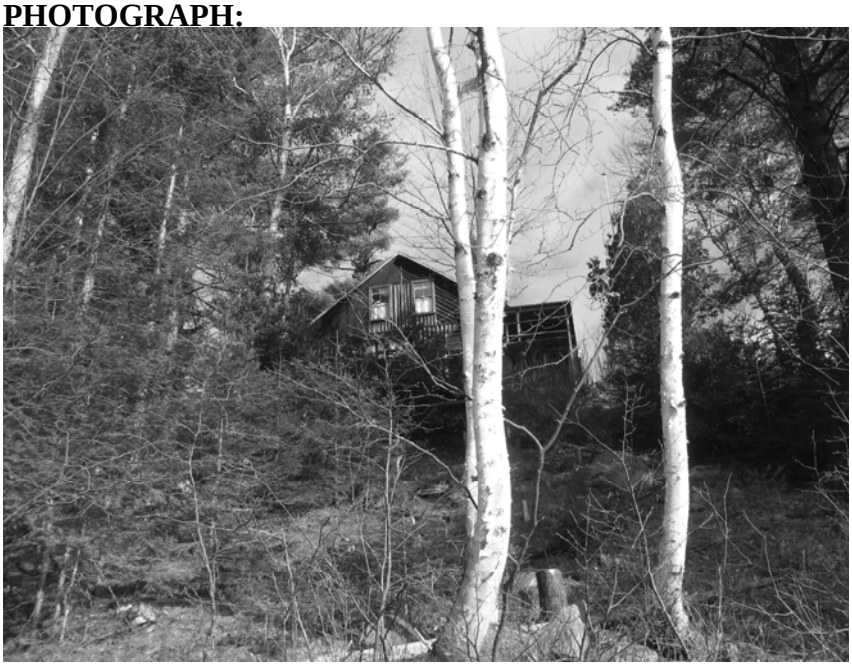
14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	___ 2 BAY	_X_ 3 BAY	___ 4 BAY	___ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

___ SIDE ELL	_X_ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	_X_ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:



16. PORCH:
_X_ ATTACHED ___ ENGAGED _X_ ONE STORY ___ MORE THAN ONE STORY
___ FULL WIDTH _X_ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE _X_ CENTRAL HALL ___ SIDE HALL
___ BACK HALL ___ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE ___ BALLOON FRAME
___ CONCRETE ___ STEEL _X_ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
_X_ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
_X_ GABLE SIDE ___ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL ____ TILE ____ SLATE ____ ASPHALT _X_ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
_X_ FIELDSTONE ___ BRICK ___ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
_X_ GARAGE OTHER _____

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1894

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: _____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Chain of Ponds QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N (S) E W NE NW SE SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-2

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

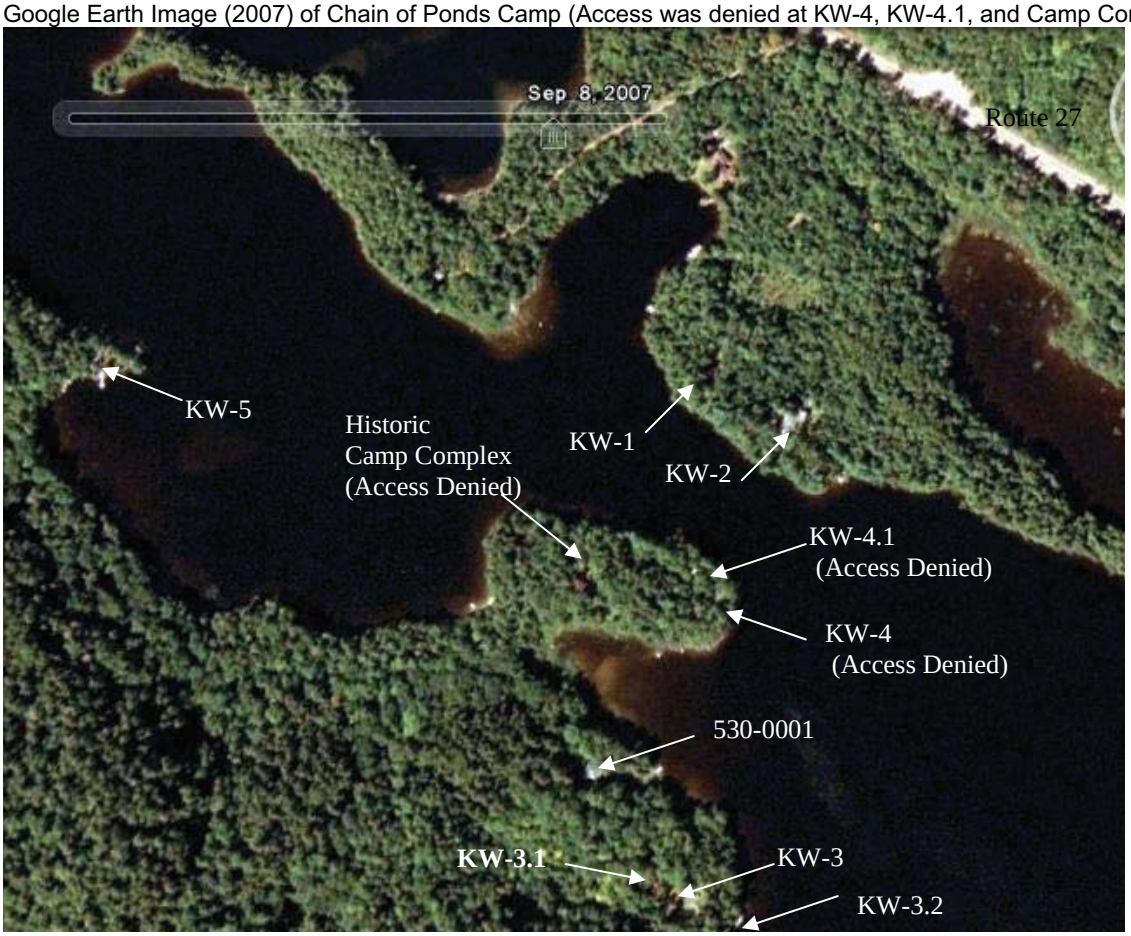
PROPERTY NAME: East side of Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Google Earth Image (2007) of Chain of Ponds Camp (Access was denied at KW-4, KW-4.1, and Camp Complex)



K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

SURVEY MAP NO. KW-2

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

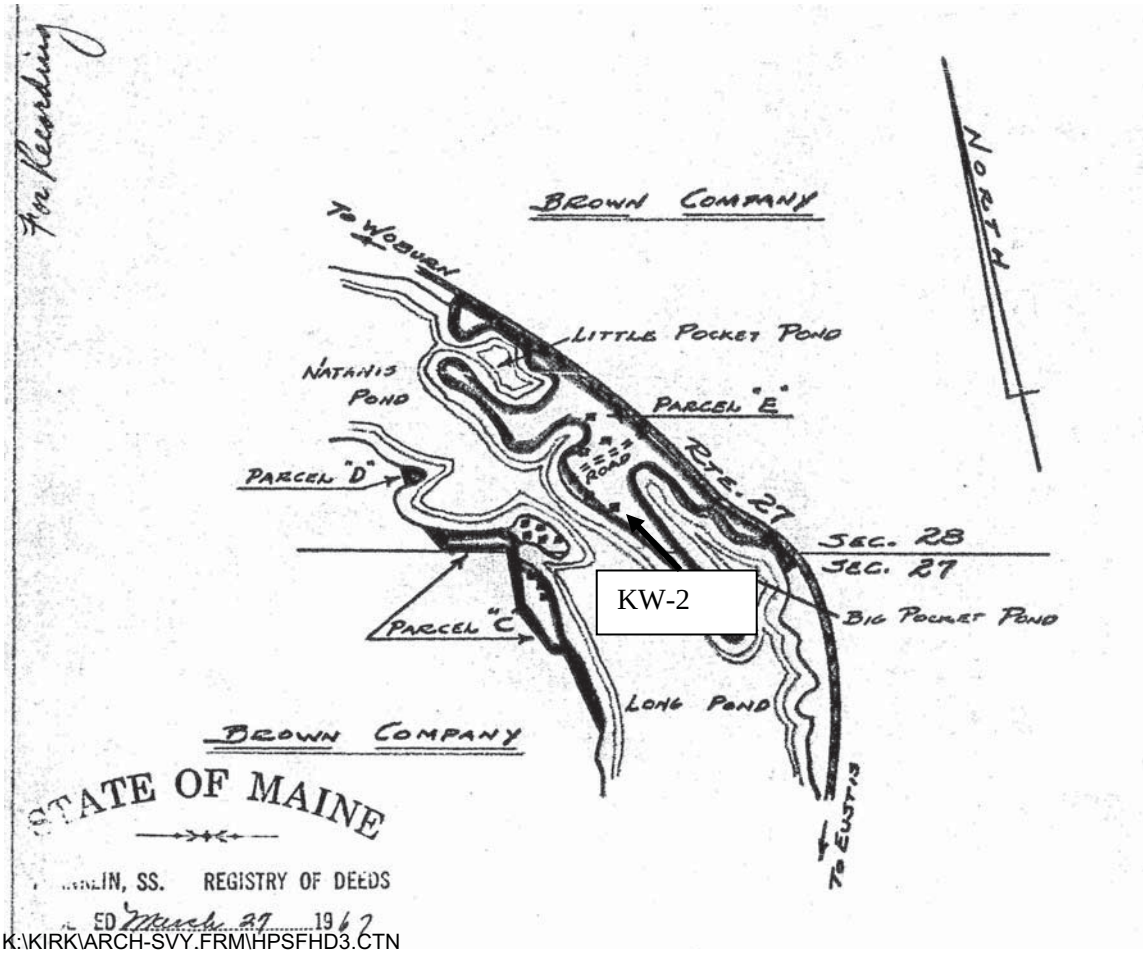
PROPERTY NAME: East side Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Plan of Chain of Ponds Camp (February 1967), Recorded in Book 131 ½ Page 14



SURVEY MAP NO. KW-3

SURVEY MAP NAME Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Megantic Fish and Game Club

2. PROPERTY NAME (OTHER): ____

3. STREET ADDRESS: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

4. TOWN: Chain of Ponds

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: ____

ADDRESS: ____

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	_X_ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER ____

10. CONDITION: _X_ GOOD ___ FAIR ___ POOR ___ DESTROYED, DATE __/__/__

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER Rustic	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

13. HEIGHT:

___ 1 STORY	_X_ 1 1/2 STORY	___ 2 STORY	___ 2 1/2 STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

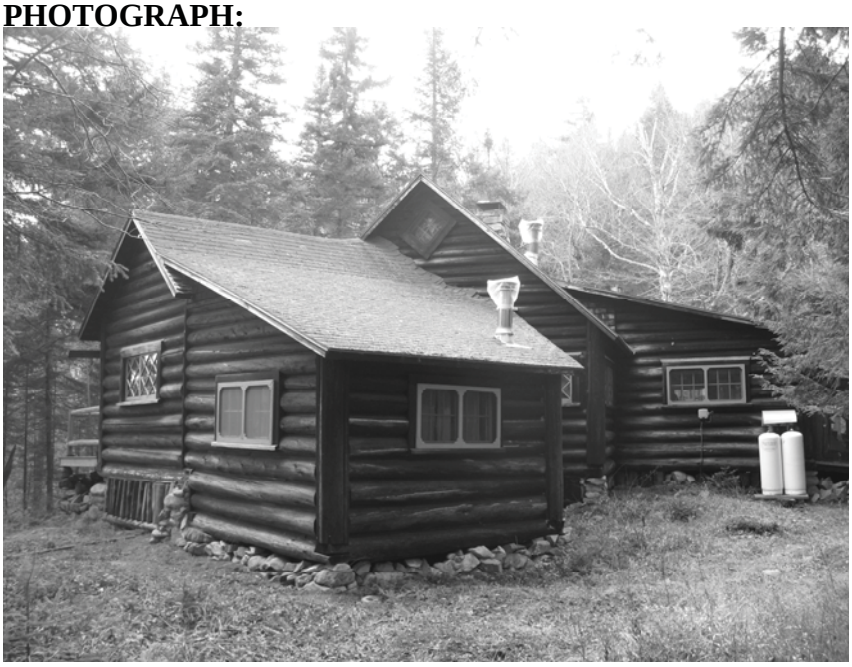
14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	___ 2 BAY	_X_ 3 BAY	___ 4 BAY	___ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

_X_ SIDE ELL	_X_ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	_X_ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:



16. PORCH:
_X_ ATTACHED ___ ENGAGED _X_ ONE STORY ___ MORE THAN ONE STORY
___ FULL WIDTH _X_ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE ___ CENTRAL HALL ___ SIDE HALL
___ BACK HALL _X_ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE ___ BALLOON FRAME
___ CONCRETE ___ STEEL _X_ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
_X_ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
_X_ GABLE SIDE ___ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL ____ TILE ____ SLATE ____ ASPHALT _X_ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
_X_ FIELDSTONE ___ BRICK ___ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE _X_ OTHER Boathouse and secondary camp

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1894

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: _____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Chain of Ponds QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S E W NE NW (SE) SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-3, -3.1, -3.2

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

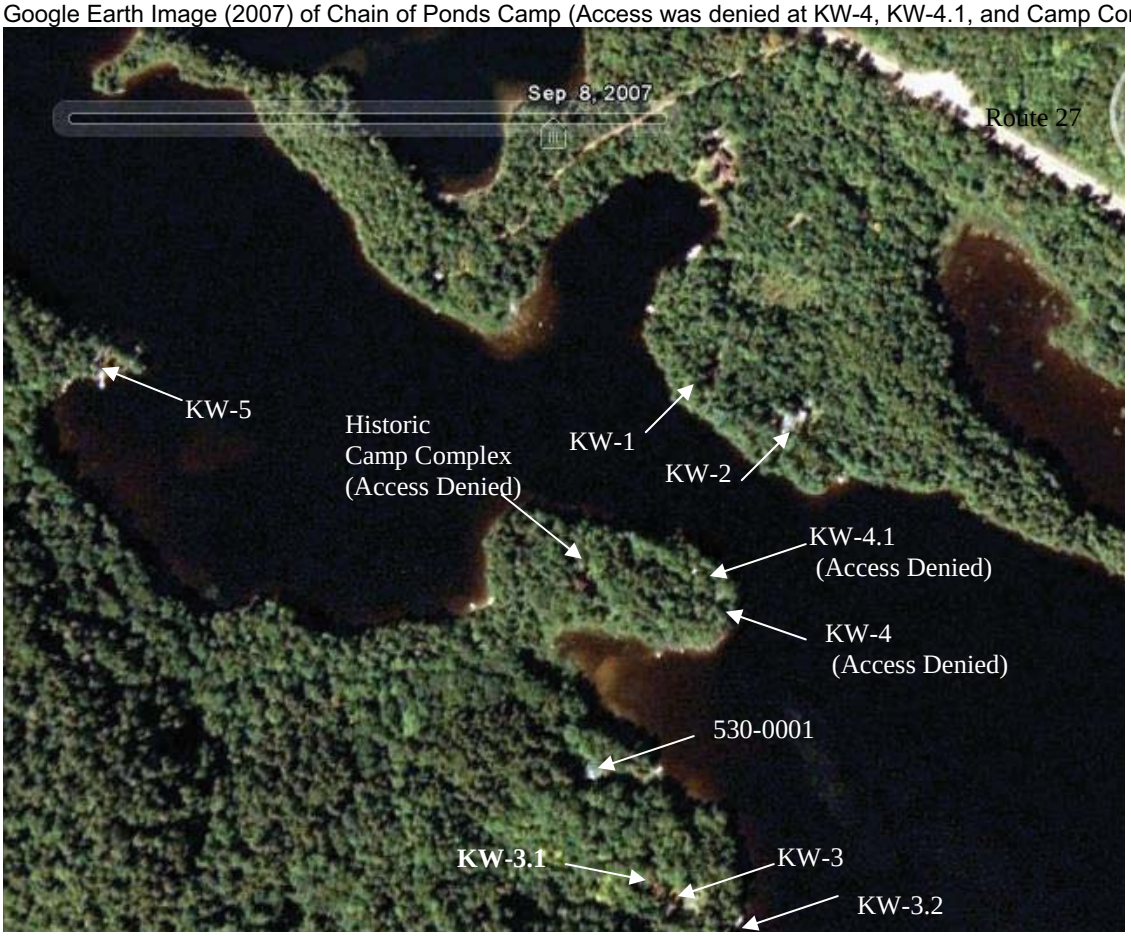
PROPERTY NAME: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Google Earth Image (2007) of Chain of Ponds Camp (Access was denied at KW-4, KW-4.1, and Camp Complex)



K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

SURVEY MAP NO. KW-3

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

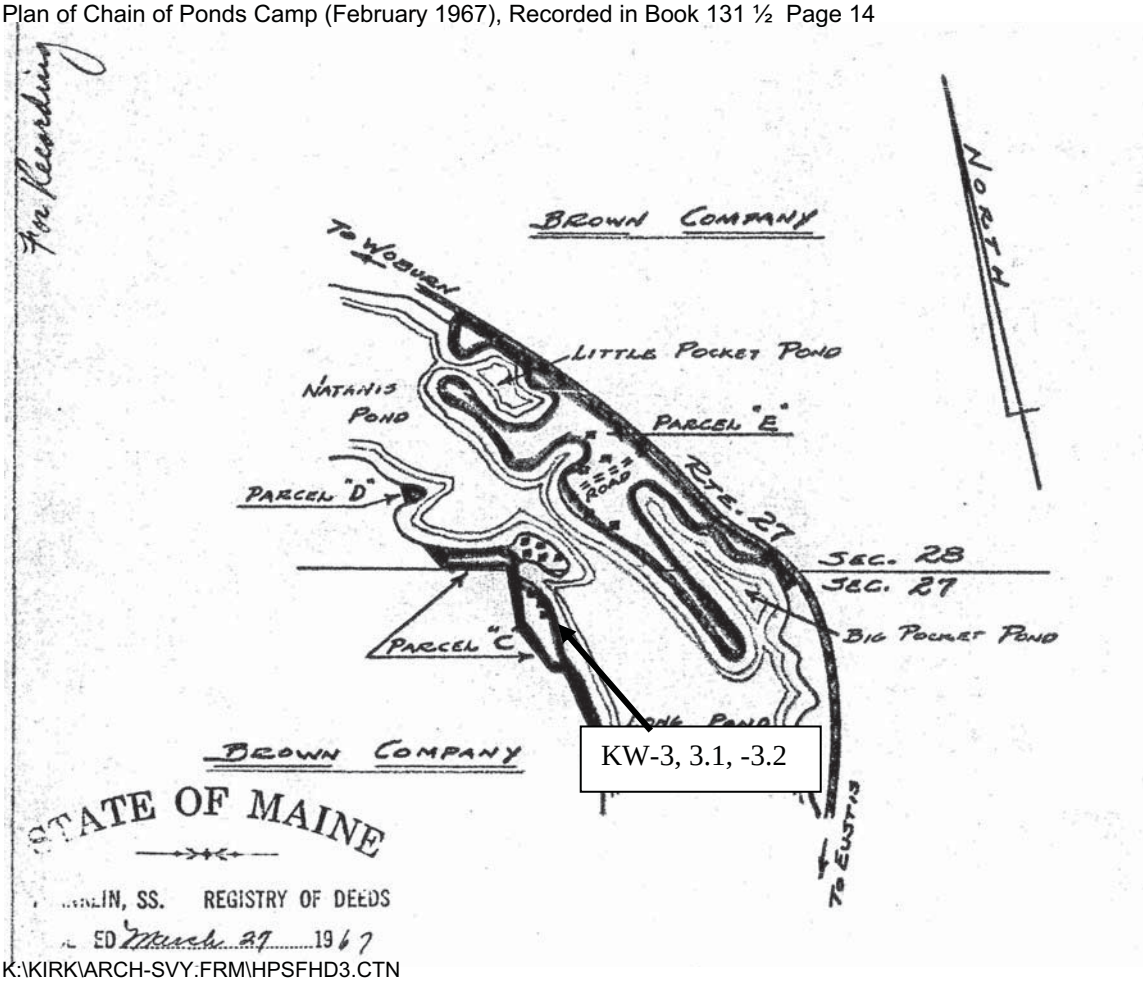
PROPERTY NAME: West side Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form):

Plan of Chain of Ponds Camp (February 1967), Recorded in Book 131 ½ Page 14



K:\KIRK\ARCH-SVY:FRM\HPSFHD3.CTN

SURVEY MAP NO. KW-3.1

SURVEY MAP NAME Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Megantic Fish and Game Club

2. PROPERTY NAME (OTHER): ____

3. STREET ADDRESS: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

4. TOWN: Chain of Ponds

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: ____

ADDRESS: ____

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	_X_ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER ____

10. CONDITION: _X_ GOOD ___ FAIR ___ POOR ___ DESTROYED, DATE ___/___/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER Rustic	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

13. HEIGHT:

_X_ 1 STORY	___ 1½ STORY	___ 2 STORY	___ 2½ STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	_X_ 2 BAY	___ 3 BAY	___ 4 BAY	___ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

___ SIDE ELL	___ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	_X_ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:

16. PORCH:
_X_ ATTACHED ___ ENGAGED _X_ ONE STORY ___ MORE THAN ONE STORY
___ FULL WIDTH _X_ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE ___ CENTRAL HALL _X_ SIDE HALL
___ BACK HALL ___ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE _X_ BALLOON FRAME
___ CONCRETE ___ STEEL ___ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
___ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
___ GABLE SIDE _X_ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL _X_ TILE ____ SLATE ____ ASPHALT____ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
___ FIELDSTONE ___ BRICK _X_ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE ___ OTHER _____

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1910

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: _____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Chain of Ponds QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S (E) W NE NW SE SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-3.2

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Megantic Fish and Game Club

2. PROPERTY NAME (OTHER): ____

3. STREET ADDRESS: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

4. TOWN: Chain of Ponds

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: ____

ADDRESS: ____

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	___ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		
_X_ OTHER Boathouse			

10. CONDITION: _X_ GOOD ___ FAIR ___ POOR ___ DESTROYED, DATE __/__/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	_X_ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

13. HEIGHT:

_X_ 1 STORY ___ 1 1/2 STORY ___ 2 STORY ___ 2 1/2 STORY ___ 3 STORY ___ 4 STORY
___ 5 STORY ___ OVER 5 (____)

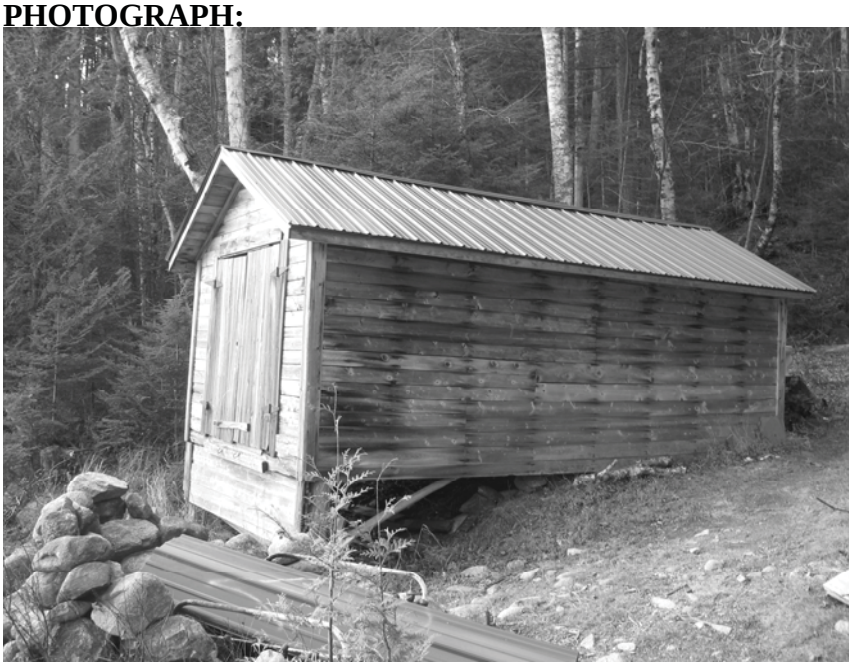
14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

_X_ 1 BAY ___ 2 BAY ___ 3 BAY ___ 4 BAY ___ 5 BAY ___ MORE THAN 5 (___)

15. APPENDAGES:

___ SIDE ELL	___ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	___ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:



16. PORCH:
___ ATTACHED ___ ENGAGED ___ ONE STORY ___ MORE THAN ONE STORY
___ FULL WIDTH ___ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE ___ CENTRAL HALL ___ SIDE HALL
___ BACK HALL ___ IRREGULAR OTHER 1-room

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE _X_ BALLOON FRAME
___ CONCRETE ___ STEEL ___ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
___ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
___ GABLE SIDE _X_ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL _X_ TILE ____ SLATE ____ ASPHALT____ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
___ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
_X_ OTHER Vertical wood board

23. FOUNDATION MATERIAL:
___ FIELDSTONE ___ BRICK _X_ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE ___ OTHER _____

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1910

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: _____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Chain of Ponds QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S E W NE NW (SE) SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-4

SURVEY MAP NAME Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Megantic Fish and Game Club

2. PROPERTY NAME (OTHER): ____

3. STREET ADDRESS: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

4. TOWN: Chain of Ponds

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: ____

ADDRESS: ____

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	_X_ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER ____

10. CONDITION: _X_ GOOD ___ FAIR ___ POOR ___ DESTROYED, DATE ___/___/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER Rustic	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

13. HEIGHT:

___ 1 STORY	_X_ 1 1/2 STORY	___ 2 STORY	___ 2 1/2 STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

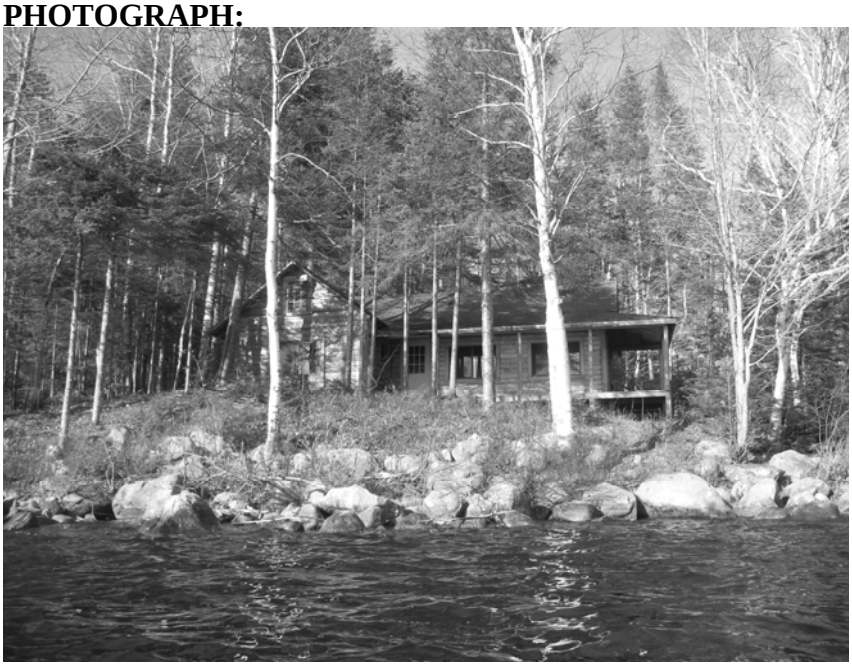
14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	___ 2 BAY	___ 3 BAY	_X_ 4 BAY	____ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

_X_ SIDE ELL	___ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	_X_ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:



16. PORCH:
_X_ ATTACHED ___ ENGAGED _X_ ONE STORY ___ MORE THAN ONE STORY
___ FULL WIDTH _X_ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE ___ CENTRAL HALL ___ SIDE HALL
___ BACK HALL _X_ IRREGULAR ___ OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE ___ BALLOON FRAME
___ CONCRETE ___ STEEL _X_ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
_X_ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
___ GABLE SIDE ___ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED _X_ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL ____ TILE ____ SLATE ____ ASPHALT _X_ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
_X_ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
_X_ FIELDSTONE ___ BRICK ___ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE _X_ OTHER Secondary camp

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1894

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: Based on aerial and survey maps there is a complex of buildings on the property not visible from the water; these buildings were not surveyed as access was denied by the property owner.

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Chain of Ponds QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N (S) E W NE NW SE SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-4

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

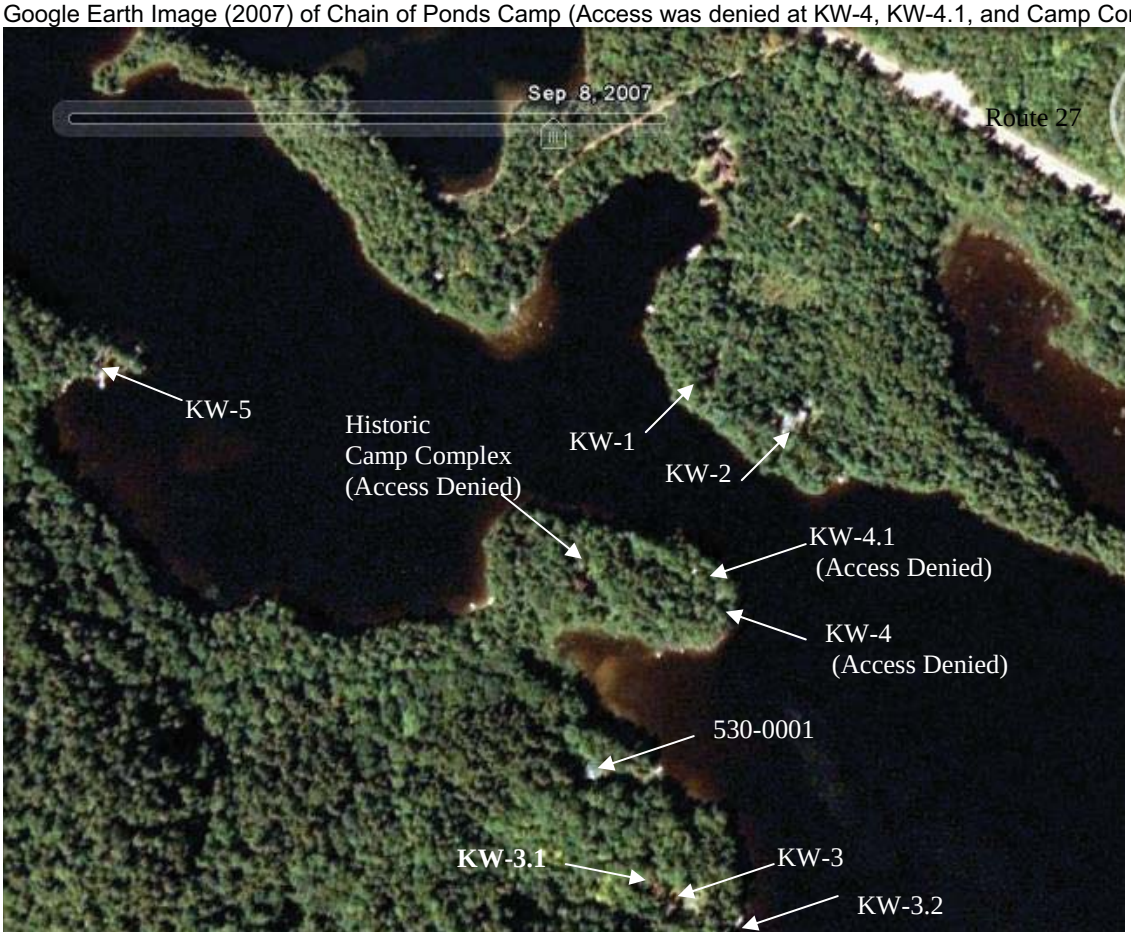
PROPERTY NAME: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Google Earth Image (2007) of Chain of Ponds Camp (Access was denied at KW-4, KW-4.1, and Camp Complex)



K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

SURVEY MAP NO. KW-4

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

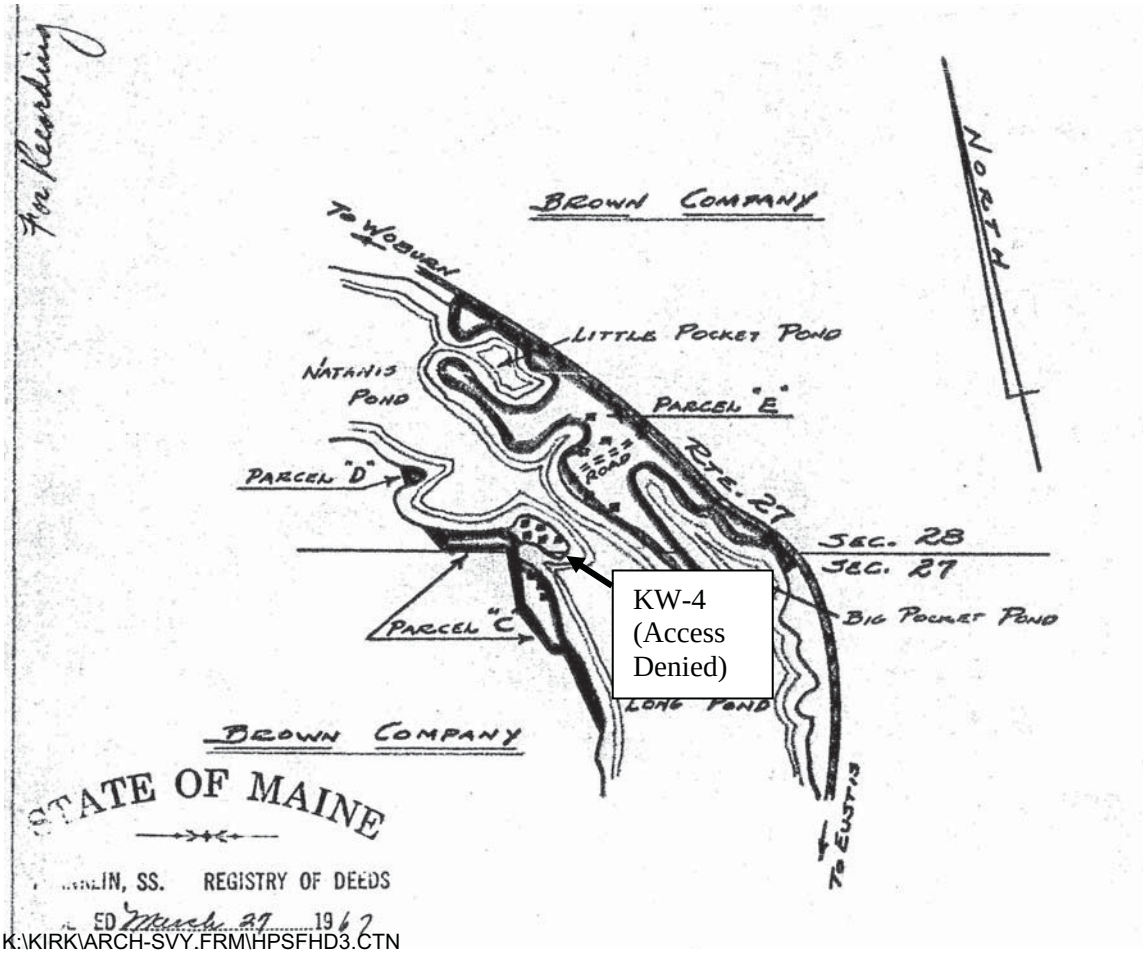
PROPERTY NAME: West side Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Plan of Chain of Ponds Camp (February 1967), Recorded in Book 131 ½ Page 14



KW-4 (Access Denied)

K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

SURVEY MAP NO. KW-4.1

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Megantic Fish and Game Club

2. PROPERTY NAME (OTHER): ____

3. STREET ADDRESS: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

4. TOWN: Chain of Ponds

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: ____

ADDRESS: ____

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	_X_ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER ____

10. CONDITION: ___ GOOD _X_ FAIR ___ POOR ___ DESTROYED, DATE __/__/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER Rustic	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

13. HEIGHT:

_X_ 1 STORY	___ 1½ STORY	___ 2 STORY	___ 2½ STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

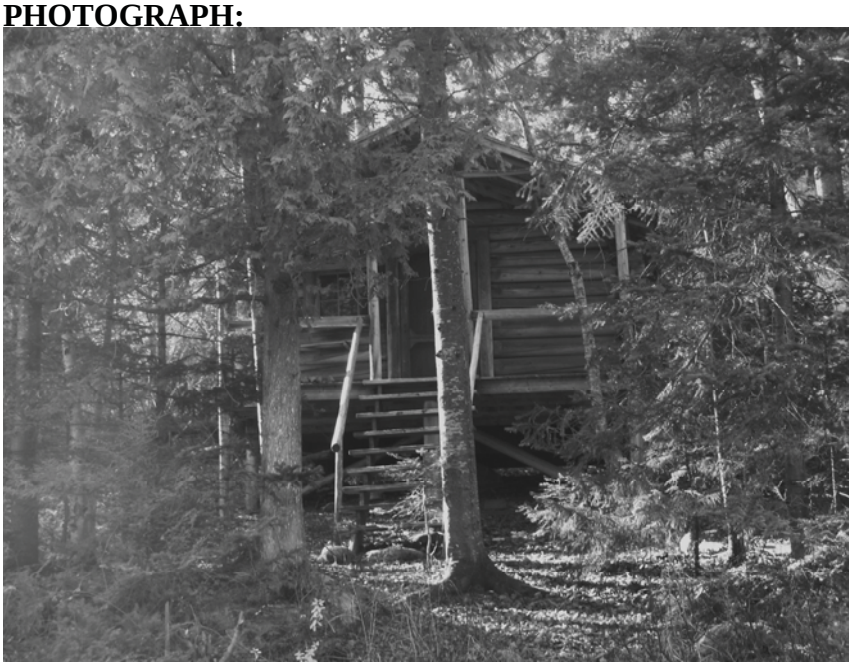
14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	_X_ 2 BAY	___ 3 BAY	___ 4 BAY	____ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

___ SIDE ELL	___ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	_X_ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:



16. PORCH:
_X_ ATTACHED ___ ENGAGED _X_ ONE STORY ___ MORE THAN ONE STORY
_X_ FULL WIDTH ___ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE _X_ CENTRAL HALL ___ SIDE HALL
___ BACK HALL ___ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE ___ BALLOON FRAME
___ CONCRETE ___ STEEL _X_ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
_X_ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
___ GABLE SIDE _X_ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL ____ TILE ____ SLATE ____ ASPHALT _X_ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
_X_ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
___ FIELDSTONE ___ BRICK _X_ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE ___ OTHER _____

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1894

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: _____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Chain of Ponds QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S (E) W NE NW SE SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-4.1

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

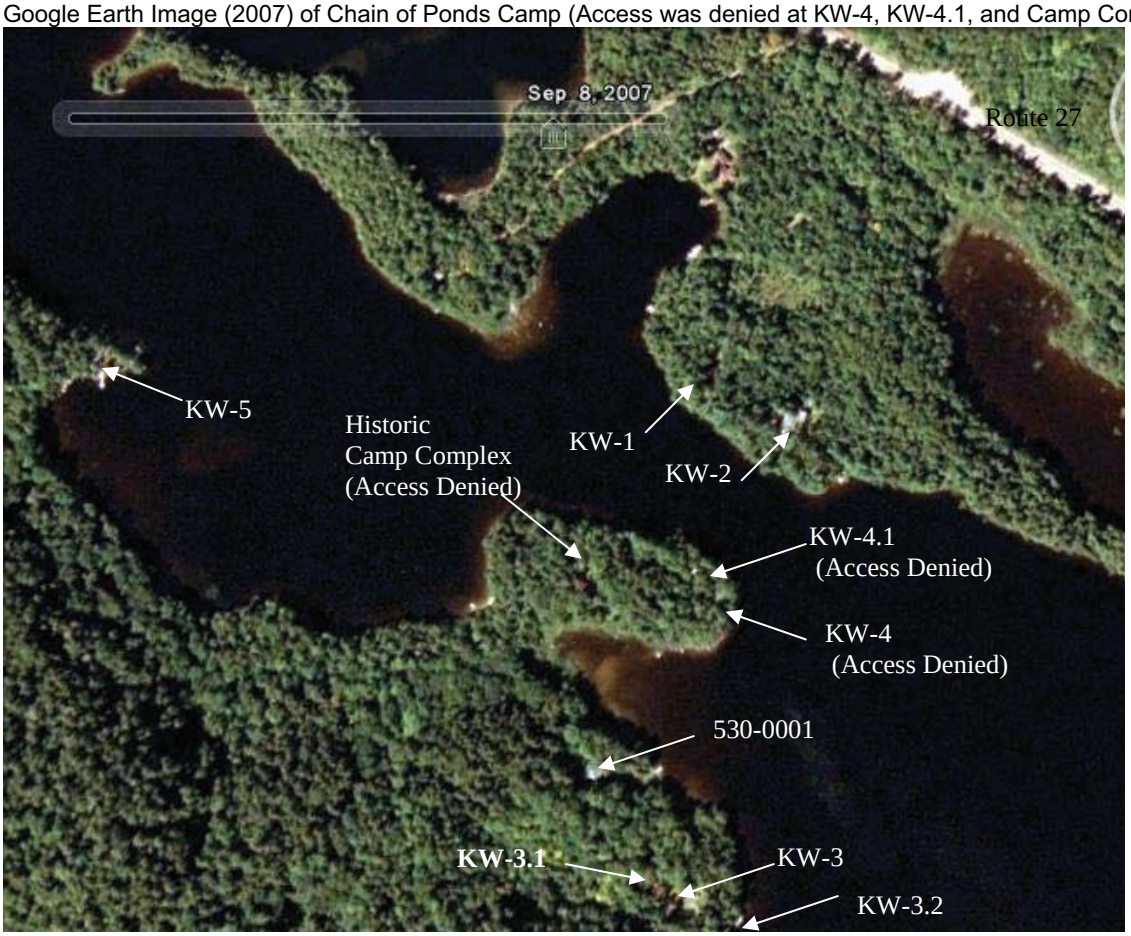
PROPERTY NAME: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Google Earth Image (2007) of Chain of Ponds Camp (Access was denied at KW-4, KW-4.1, and Camp Complex)



K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

SURVEY MAP NO. KW-4.1

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

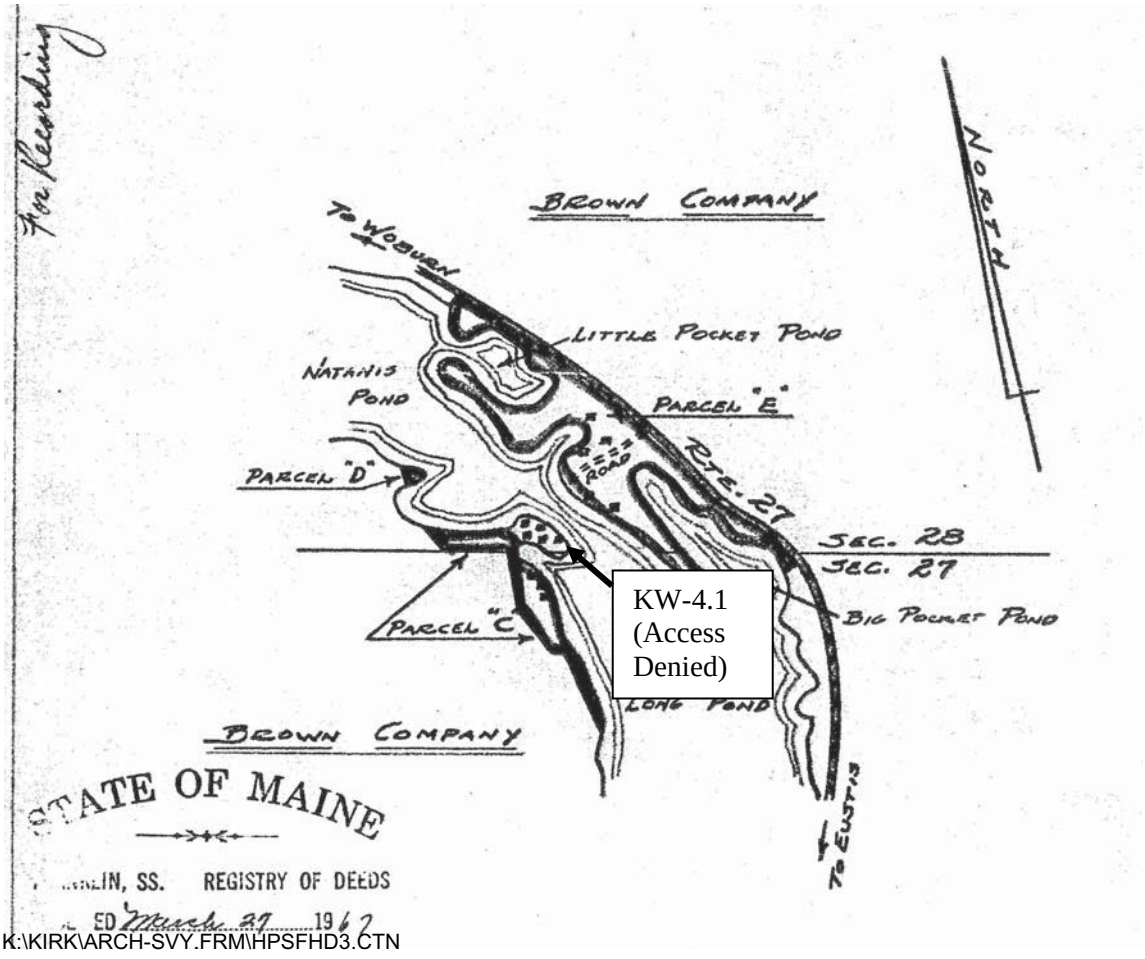
PROPERTY NAME: West side Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Plan of Chain of Ponds Camp (February 1967), Recorded in Book 131 ½ Page 14



KW-4.1 (Access Denied)

K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

SURVEY MAP NO. KW-5

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Megantic Fish and Game Club

2. PROPERTY NAME (OTHER): ____

3. STREET ADDRESS: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

4. TOWN: Chain of Ponds

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: ____

ADDRESS: ____

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	_X_ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER ____

10. CONDITION: ___ GOOD _X_ FAIR ___ POOR ___ DESTROYED, DATE __/__/__

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	_X_ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER ____	

13. HEIGHT:

_X_ 1 STORY	___ 1½ STORY	___ 2 STORY	___ 2½ STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	___ 2 BAY	_X_ 3 BAY	___ 4 BAY	___ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

___ SIDE ELL	___ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	___ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:

16. PORCH:
___ ATTACHED ___ ENGAGED ___ ONE STORY ___ MORE THAN ONE STORY
___ FULL WIDTH ___ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE _X_ CENTRAL HALL ___ SIDE HALL
___ BACK HALL ___ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE _X_ BALLOON FRAME
___ CONCRETE ___ STEEL ___ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
___ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
_X_ GABLE SIDE ___ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL ____ TILE ____ SLATE ____ ASPHALT _X_ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING _X_ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
___ FIELDSTONE ___ BRICK ___ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
_X_ OTHER _Not Visible_____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE ___ OTHER _____

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: _Ca. 1900_____

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES:_____

_____

_____

_____

_____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION:_____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: ___Chain of Ponds_____ QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S E W NE NW (SE) SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: __ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY:__R __ I

ASSOCIATED INVENTORY NUMBERS:_____

SURVEY MAP NO. KW-5

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

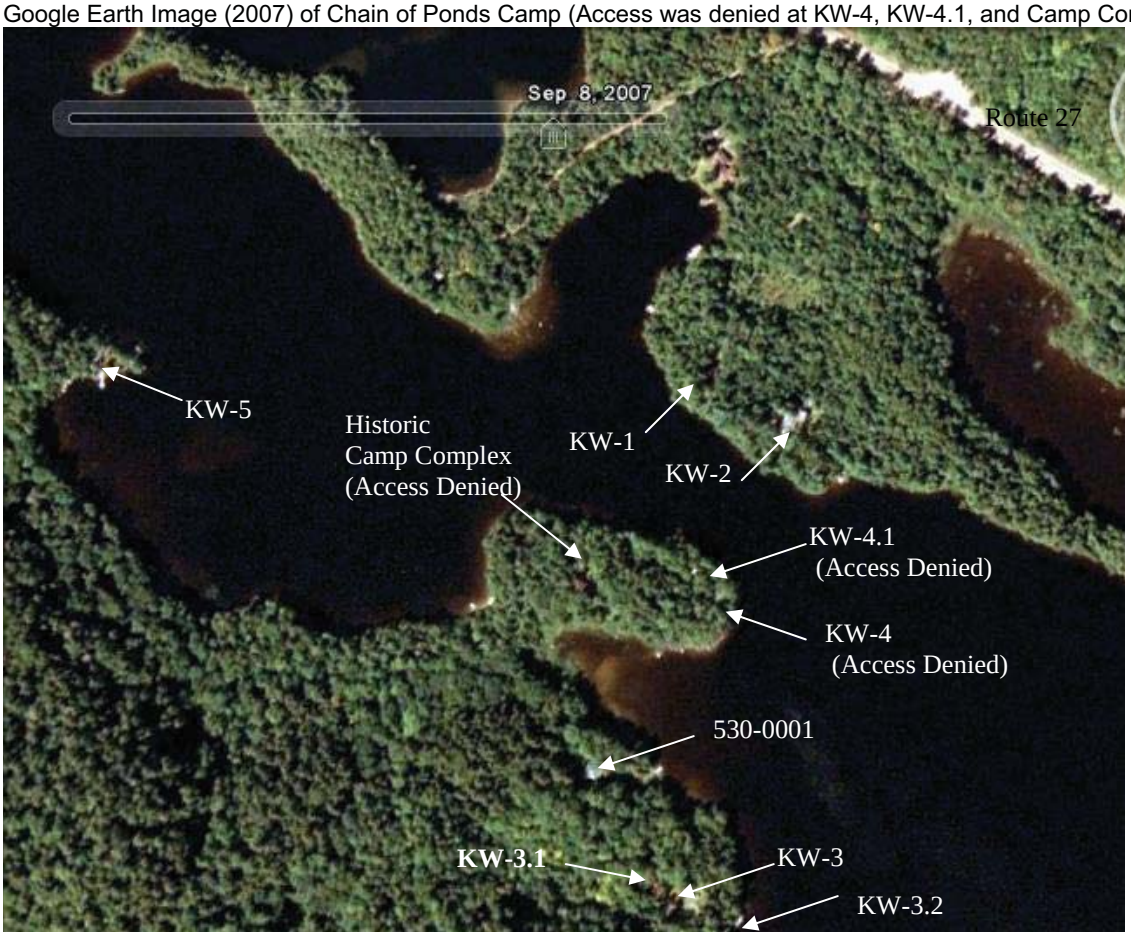
PROPERTY NAME: West side of Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Google Earth Image (2007) of Chain of Ponds Camp (Access was denied at KW-4, KW-4.1, and Camp Complex)



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SURVEY MAP NO. KW-5

SURVEY MAP NAME _Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

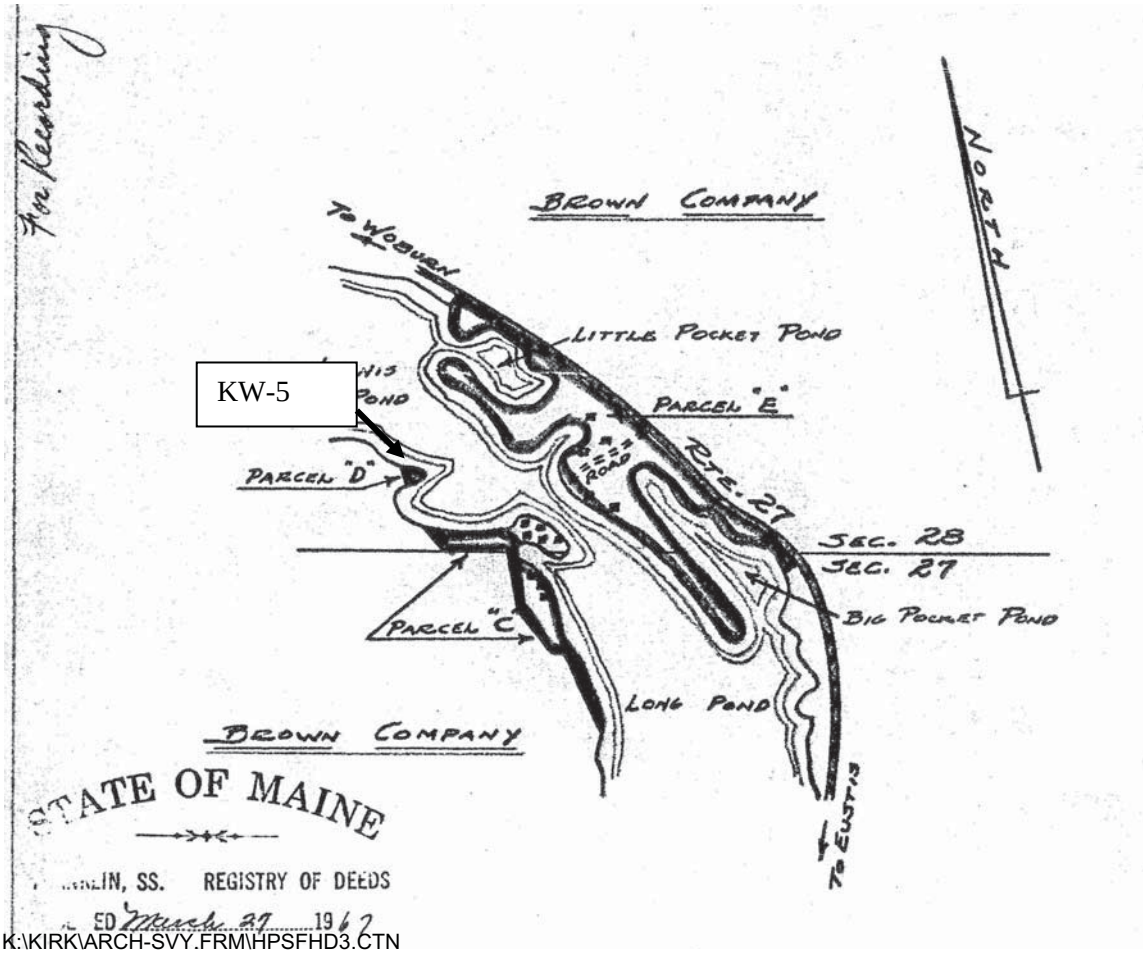
PROPERTY NAME: West side Long Pond at Chain of Ponds Camp, Chain of Ponds

TOWN: Chain of Ponds COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Plan of Chain of Ponds Camp (February 1967), Recorded in Book 131 ½ Page 14



KW-5

K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

SURVEY MAP NO. KW-6

SURVEY MAP NAME Chain of Ponds-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC):

2. PROPERTY NAME (OTHER):

3. STREET ADDRESS: West side of Bag Pond, Chain of Ponds

4. TOWN: Chain of Ponds

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME:

ADDRESS:

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY ___ AGRICULTURE ___ COMMERCIAL/TRADE ___ FUNERARY
___ MULTI-FAMILY ___ GOVERNMENTAL ___ EDUCATION ___ HEALTH CARE
___ INDUSTRY ___ RELIGIOUS ___ HOTEL ___ LANDSCAPE
___ TRANSPORTATION ___ DEFENSE _X_ SUMMER COTTAGE/CAMP ___ SOCIAL
___ RECREATION/CULTURE ___ UNKNOWN
___ OTHER

10. CONDITION: ___ GOOD _X_ FAIR ___ POOR ___ DESTROYED, DATE ___/___/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL ___ STICK STYLE ___ NEO-CLASSICAL REV. ___ FOUR SQUARE
___ FEDERAL ___ QUEEN ANNE ___ RENAISSANCE REV. ___ ART DECO
___ GREEK REVIVAL ___ SHINGLE STYLE ___ 19*TH*/20*TH* C. REVIVAL ___ INTERNATIONAL
___ GOTHIC REVIVAL ___ R. ROMANESQUE ___ ARTS & CRAFTS ___ RANCH
___ ITALIANATE ___ ROMANESQUE ___ BUNGALOW _X_ VERNACULAR
___ SECOND EMPIRE ___ HIGH VIC. GOTHIC OTHER

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL ___ STICK STYLE ___ NEO-CLASSICAL REV. ___ FOUR SQUARE
___ FEDERAL ___ QUEEN ANNE ___ RENAISSANCE REV. ___ ART DECO
___ GREEK REVIVAL ___ SHINGLE STYLE ___ 19*TH*/20*TH* C. REVIVAL ___ INTERNATIONAL
___ GOTHIC REVIVAL ___ R. ROMANESQUE ___ ARTS & CRAFTS ___ RANCH
___ ITALIANATE ___ ROMANESQUE ___ BUNGALOW ___ VERNACULAR
___ SECOND EMPIRE ___ HIGH VIC. GOTHIC OTHER

13. HEIGHT:

_X_ 1 STORY ___ 1½ STORY ___ 2 STORY ___ 2½ STORY ___ 3 STORY ___ 4 STORY
___ 5 STORY ___ OVER 5 (____)

14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY ___ 2 BAY _X_ 3 BAY ___ 4 BAY ___ 5 BAY ___ MORE THAN 5 (___)

15. APPENDAGES: _X_ SIDE ELL ___ REAR ELL ___ FRONT ___ ADDED STORIES ___ SHED
___ DORMERS ___ PORCH ___ TOWER ___ CUPOLA ___ BAY WINDOW

PHOTOGRAPH:

16. PORCH:
___ ATTACHED ___ ENGAGED ___ ONE STORY ___ MORE THAN ONE STORY
___ FULL WIDTH ___ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE _X_ CENTRAL HALL ___ SIDE HALL
___ BACK HALL ___ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE ___ BALLOON FRAME
___ CONCRETE ___ STEEL _X_ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
___ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
_X_ GABLE SIDE ___ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL _X_ TILE ____ SLATE ____ ASPHALT _X_ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
___ FIELDSTONE ___ BRICK ___ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
_X_ OTHER Not Visible

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE OTHER Shed

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1900

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: _____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Chain of Ponds QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S E W NE (NW) SE SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-7

SURVEY MAP NAME Jim Pond-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC):

2. PROPERTY NAME (OTHER):

3. STREET ADDRESS: West side of Route 27 1.38 miles northwest of Shadagee Falls

4. TOWN: Alder Stream

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME:

ADDRESS:

9. PRIMARY USE (PRESENT):

_X_ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	___ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER

10. CONDITION: ___ GOOD _X_ FAIR ___ POOR ___ DESTROYED, DATE ___/___/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	_X_ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER	

13. HEIGHT:

_X_ 1 STORY	___ 1½ STORY	___ 2 STORY	___ 2½ STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	_X_ 2 BAY	___ 3 BAY	___ 4 BAY	___ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

___ SIDE ELL	_X_ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	___ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:

16. PORCH:
___ ATTACHED ___ ENGAGED ___ ONE STORY ___ MORE THAN ONE STORY
___ FULL WIDTH ___ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE ___ CENTRAL HALL ___ SIDE HALL
___ BACK HALL _X_ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE _X_ BALLOON FRAME
___ CONCRETE ___ STEEL ___ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
___ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
___ GABLE SIDE ___ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED _X_ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL _X_ TILE ____ SLATE ____ ASPHALT____ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
___ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA _X_ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
___ FIELDSTONE ___ BRICK ___ WOOD _X_ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE OTHER Wagon shed and wood shed

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1900

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: _____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Jim Pond QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S E W NE NW (SE) SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-7

SURVEY MAP NAME Jim Pond-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

PROPERTY NAME: West side of Route 27 1.38 miles northwest of Shadagee Falls

TOWN: Alder Stream COUNTY: Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form):

Wood shed, looking north

MHPC USE ONLY

SURVEY MAP NO. KW-7.1

SURVEY MAP NAME _Jim Pond-Kibby Wind_____

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Barn/Agricultural Structure Survey Form

1. PROPERTY NAME (HISTORIC): _____

2. PROPERTY NAME (OTHER): _____

3. STREET ADDRESS: West side of Route 27 1.38 miles northwest of Shadagee Falls

4. TOWN: Alder Stream

5. COUNTY: Franklin

6. DATE RECORDED: 7/15/08

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: _____

ADDRESS: _____

73. PRIMARY USE (HISTORIC):

___ BARN, MIXED USE	___ HAY BARN	___ DAIRY BARN	___STABLE/LIVERY
___ SILO	___ MILK HOUSE	___ CIDER HOUSE	___ SUGAR SHACK
___ HOP HOUSE	___ SPRING/WELL HOUSE	___ POULTRY BARN	___ CHICKEN COOP
___ GREENHOUSE	_X_ WAGON SHED	___ WORKER HOUSING	___ ICE HOUSE
___ SMOKE HOUSE	___ POTATO BARN	___ CORN CRIB	___ PIGGERY
___ ANIMAL SHED (TYPE)_____		___ OTHER_____	

ARCHITECTURAL DATA

74. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ FEDERAL	___ QUEEN ANNE
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ GOTHIC REVIVAL
___ ARTS & CRAFTS	___ ITALIANATE	___ BUNGALOW	_X_ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	___OTHER _____	

75. HEIGHT:

_X_ 1 STORY ___ 1 1/2 STORY ___ 2 STORY ___ 2 1/2 STORY ___ 3 STORY ___ 4 STORY ___ OVER 4 (____)

76. PLAN:

___ ENGLISH ___ NEW ENGLAND ___ ROUND ___ BANK BARN _X_ OTHER 2-bay

___CONNECTED _X_ DETACHED

77. PRIMARY STRUCTURAL SYSTEM:

___ HAND-HEWN ___ SAWN HEAVY TIMBERS _X_ STUD CONSTRUCTION ___STONE ___ BRICK

___ LOG ___ CONCRETE ___OTHER _____

78. EXTERIOR SIDING:

___ CLAPBOARD ___ WOOD SHINGLE ___ ASPHALT ___ ASBESTOS ___ CORRUGATED METAL

___ ALUMINUM/VINYL ___STONE ___ BRICK ___ CONCRETE

_X_ OTHER Vertical wood board

79. ROOF CONFIGURATION:

___ GABLE SIDE _X_ GABLE FRONT ___ MONITOR ___ GAMBREL ___ HIP ___ SHED

___ OTHER_____

80. ROOF MATERIAL:

___ WOOD _X_ METAL ___ SLATE ___ ASPHALT ___ ASBESTOS

___ OTHER _____

81. FOUNDATION MATERIAL:

___ FIELDSTONE ___ BRICK ___ CONCRETE ___ GRANITE OTHER Not Visible

82. DOCUMENTED DATE OF CONSTRUCTION: _____

54. ESTIMATED DATE OF CONSTRUCTION: Ca. 1900

PHOTOGRAPH

FRAMING CROSS SECTION

SKETCH FRAMING OF ONE TRANSVERSE SECTION (BENT) OF BARN AND ONE LATERAL SECTION (EAVE WALL) OF STRUCTURE. LABEL EACH SKETCH TO SHOW CARDINAL DIRECTION.

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MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:_____

NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER

DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: __R __ I

SURVEY MAP NO. KW-8

SURVEY MAP NAME Jim Pond-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC):

2. PROPERTY NAME (OTHER):

3. STREET ADDRESS: West side of Route 27 1.3 miles northwest of Shadagee Falls

4. TOWN: Alder Stream

5. COUNTY: Franklin

6. DATE RECORDED: 11/6/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME:

ADDRESS:

9. PRIMARY USE (PRESENT):

_X_ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	___ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER

10. CONDITION: ___ GOOD _X_ FAIR ___ POOR ___ DESTROYED, DATE ___/___/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER Rustic	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER	

13. HEIGHT:

_X_ 1 STORY	___ 1½ STORY	___ 2 STORY	___ 2½ STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	___ 2 BAY	_X_ 3 BAY	___ 4 BAY	___ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

___ SIDE ELL	_X_ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	_X_ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:

16. PORCH:
_X_ ATTACHED ___ ENGAGED _X_ ONE STORY ___ MORE THAN ONE STORY
_X_ FULL WIDTH ___ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE _X_ CENTRAL HALL ___ SIDE HALL
___ BACK HALL ___ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE _X_ BALLOON FRAME
___ CONCRETE ___ STEEL ___ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
___ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
___ GABLE SIDE _X_ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL _X_ TILE ____ SLATE ____ ASPHALT____ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA _X_ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
___ FIELDSTONE ___ BRICK ___ WOOD _X_ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE OTHER _____

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1900

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: _____

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Jim Pond QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S (E) W NE NW SE SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-9

SURVEY MAP NAME Louise Mountain-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Arnold Pond Fish and Game Club

2. PROPERTY NAME (OTHER): _____

3. STREET ADDRESS: Arnold Pond Fish and Game Club off Route 27, Arnold Pond

4. TOWN: Corburn Gore

5. COUNTY: Franklin

6. DATE RECORDED: 11/7/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME: _____

ADDRESS: _____

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	_X_ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		

OTHER _____

10. CONDITION: _X_ GOOD ___ FAIR ___ POOR ___ DESTROYED, DATE ___/___/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER Rustic	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER _____	

13. HEIGHT:

___ 1 STORY	_X_ 1 1/2 STORY	___ 2 STORY	___ 2 1/2 STORY	___ 3 STORY	___ 4 STORY
___ 5 STORY	___ OVER 5 (____)				

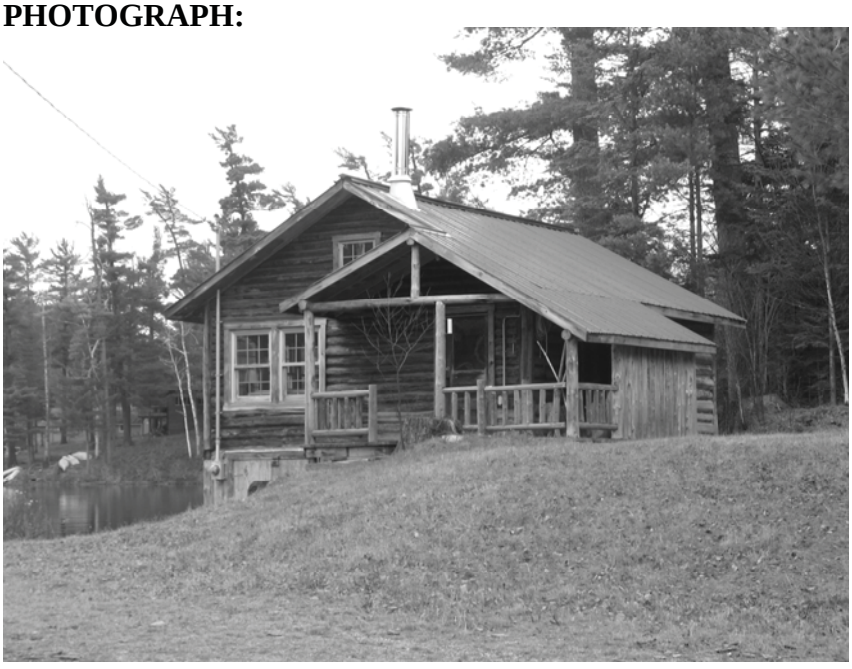
14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY	_X_ 2 BAY	___ 3 BAY	___ 4 BAY	___ 5 BAY	___ MORE THAN 5 (___)

15. APPENDAGES:

___ SIDE ELL	___ REAR ELL	___ FRONT	___ ADDED STORIES	___ SHED
___ DORMERS	_X_ PORCH	___ TOWER	___ CUPOLA	___ BAY WINDOW

PHOTOGRAPH:



16. PORCH:
_X_ ATTACHED ___ ENGAGED _X_ ONE STORY ___ MORE THAN ONE STORY
___ FULL WIDTH ___ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE ___ CENTRAL HALL _X_ SIDE HALL
___ BACK HALL ___ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE ___ BALLOON FRAME
___ CONCRETE ___ STEEL _X_ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
_X_ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
___ GABLE SIDE _X_ GABLE FRONT ___ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL _X_ TILE ____ SLATE ____ ASPHALT____ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
_X_ FIELDSTONE ___ BRICK ___ WOOD _x_ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
___ GARAGE OTHER _____

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1900

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: Based on aerial and survey maps there is a complex of buildings on the property not visible from the water; these buildings were not surveyed as access was denied by the property owner.

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Louise Mountain QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S E W (NE) NW SE SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: ___ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: ___R ___ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-9

SURVEY MAP NAME _Louise Mountain-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

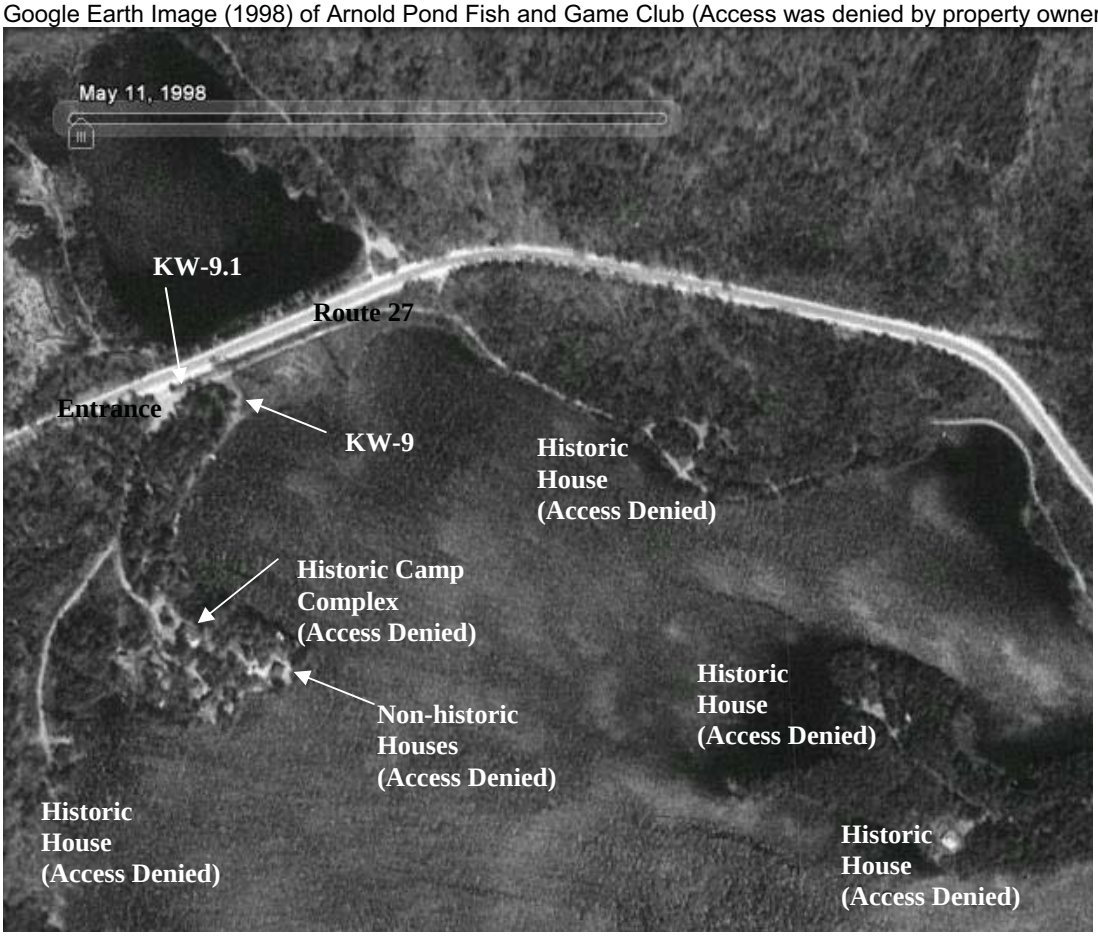
PROPERTY NAME: Arnold Pond Fish and Game Club off Route 27, Arnold Pond

TOWN: Coburn Gore COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Google Earth Image (1998) of Arnold Pond Fish and Game Club (Access was denied by property owners)



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SURVEY MAP NO. KW-9

SURVEY MAP NAME _Louise Mountain-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

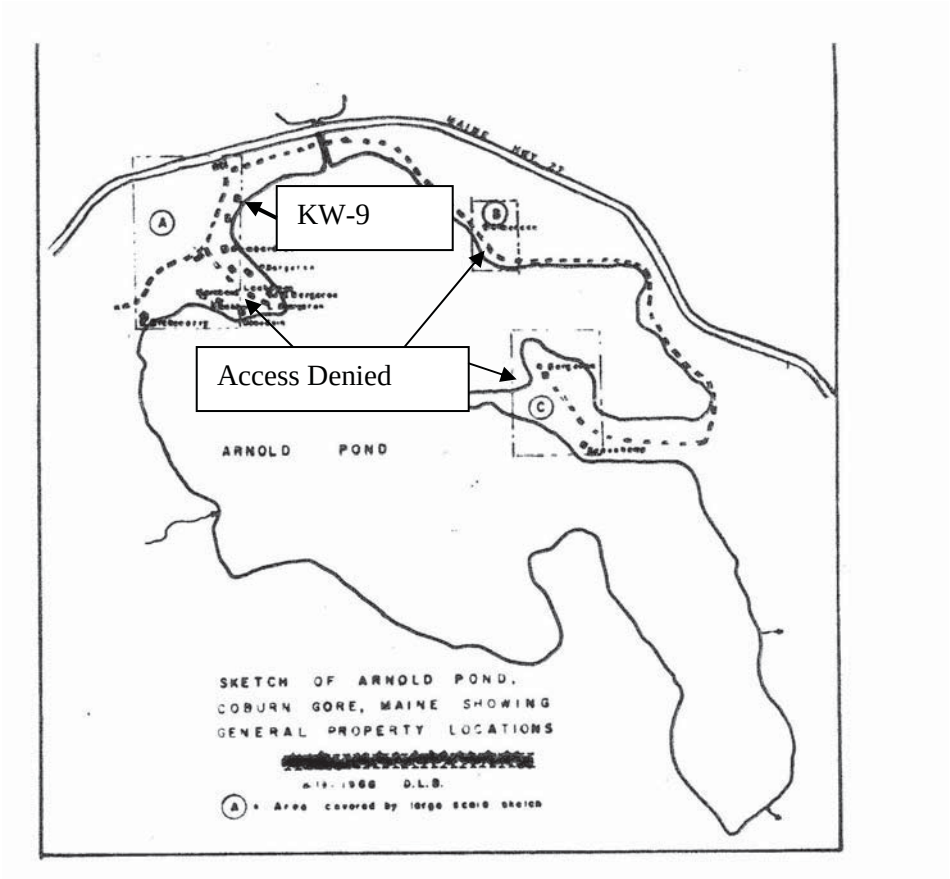
PROPERTY NAME: Arnold Pond Fish and Game Club off Route 27, Arnold Pond

TOWN: Coburn Gore COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form): _____

Plan of Arnold Pond (September 1968), Recorded in Book 132 ½ Page 22



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SURVEY MAP NO. KW-9.1

SURVEY MAP NAME Louise Mountain-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): Arnold Pond Fish and Game Club

2. PROPERTY NAME (OTHER):

3. STREET ADDRESS: Arnold Pond Fish and Game Club off Route 27, Arnold Pond

4. TOWN: Corburn Gore

5. COUNTY: Franklin

6. DATE RECORDED: 11/7/09

7. SURVEYOR: Geoffrey Henry-TRC Environmental

8. OWNER NAME:

ADDRESS:

9. PRIMARY USE (PRESENT):

___ SINGLE FAMILY	___ AGRICULTURE	___ COMMERCIAL/TRADE	___ FUNERARY
___ MULTI-FAMILY	___ GOVERNMENTAL	___ EDUCATION	___ HEALTH CARE
___ INDUSTRY	___ RELIGIOUS	___ HOTEL	___ LANDSCAPE
___ TRANSPORTATION	___ DEFENSE	___ SUMMER COTTAGE/CAMP	___ SOCIAL
___ RECREATION/CULTURE	___ UNKNOWN		
_X_ OTHER Gatehouse			

10. CONDITION: _X_ GOOD ___ FAIR ___ POOR ___ DESTROYED, DATE ___/___/

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	_X_ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER	

12. OTHER STYLISTIC CATEGORY:

___ COLONIAL	___ STICK STYLE	___ NEO-CLASSICAL REV.	___ FOUR SQUARE
___ FEDERAL	___ QUEEN ANNE	___ RENAISSANCE REV.	___ ART DECO
___ GREEK REVIVAL	___ SHINGLE STYLE	___ 19*TH*/20*TH* C. REVIVAL	___ INTERNATIONAL
___ GOTHIC REVIVAL	___ R. ROMANESQUE	___ ARTS & CRAFTS	___ RANCH
___ ITALIANATE	___ ROMANESQUE	___ BUNGALOW	___ VERNACULAR
___ SECOND EMPIRE	___ HIGH VIC. GOTHIC	OTHER	

13. HEIGHT:

_X_ 1 STORY ___ 1 1/2 STORY ___ 2 STORY ___ 2 1/2 STORY ___ 3 STORY ___ 4 STORY
___ 5 STORY ___ OVER 5 (____)

14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR):

___ 1 BAY ___ 2 BAY _X_ 3 BAY ___ 4 BAY ___ 5 BAY ___ MORE THAN 5 (___)

15. APPENDAGES: ___ SIDE ELL ___ REAR ELL ___ FRONT ___ ADDED STORIES ___ SHED
___ DORMERS _X_ PORCH ___ TOWER ___ CUPOLA ___ BAY WINDOW

PHOTOGRAPH:

16. PORCH:
_X_ ATTACHED ___ ENGAGED _X_ ONE STORY ___ MORE THAN ONE STORY
___ FULL WIDTH ___ WRAPAROUND ___ SLEEPING PORCH ___ SECONDARY PORCH

17. PLAN:
___ HALL AND PARLOR ___ 1/2 CAPE _X_ CENTRAL HALL ___ SIDE HALL
___ BACK HALL ___ IRREGULAR OTHER _____

18. PRIMARY STRUCTURAL SYSTEM:
___ TIMBER FRAME ___ BRACED FRAME ___ BRICK ___ STONE _X_ BALLOON FRAME
___ CONCRETE ___ STEEL ___ LOG ___ PLANK WALL ___ PLATFORM FRAME
___ FRAME CONSTRUCTION - TYPE UNKNOWN OTHER _____

19. CHIMNEY PLACEMENT:
_X_ INTERIOR ___ INTERIOR FRONT/REAR ___ CENTER ___ INTERIOR END ___ EXTERIOR
OTHER _____

20. ROOF CONFIGURATION:
___ GABLE SIDE ___ GABLE FRONT _X_ HIP ___ MANSARD ___ FLAT
___ GAMBREL ___ PARAPET GABLE ___ SHED ___ CROSS ___ GABLE
___ COMPOUND OTHER _____

21. ROOF MATERIAL: WOOD ____ METAL ____ TILE ____ SLATE ____ ASPHALT __X__ ASBESTOS ____

22. EXTERIOR WALL MATERIALS:
___ CLAPBOARD ___ BRICK ___ FLUSH SHEATHING ___ WOOD SHINGLE ___ STONE
_X_ LOG ___ PRESSED METAL ___ CONCRETE ___ STUCCO ___ ASPHALT
___ GRANITE ___ ASBESTOS ___ TERRA COTTA ___ BOARD AND BATTEN ___ ALUMINUM/VINYL
OTHER _____

23. FOUNDATION MATERIAL:
___ FIELDSTONE ___ BRICK _X_ WOOD ___ CONCRETE ___ GRANITE ___ ORNAMENTAL CONC. BLOCK
OTHER _____

24. OUTBUILDINGS/FEATURES:
___ CARRIAGE HOUSE ___ FENCE OR WALL ___ CEMETERY ___ BARN (CONNECTED)
___ BARN (DETACHED) ___ FORMAL GARDEN ___ LANDSCAPE/PLANT MAT. ___ ARCHAEOLOGICAL SITE
_X_ GARAGE OTHER _____

HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: _____ 26. ESTIMATED DATE OF CONSTRUCTION: Ca. 1910

27. DATE MAJOR ADDITIONS/ALTERATIONS

28. ARCHITECT: _____ 29. CONTRACTOR: _____

30. ORIGINAL OWNER:

31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES:

32. CULTURAL/ETHNIC AFFILIATION:
___ ENGLISH ___ FRENCH ACADIAN ___ NATIVE AMERICAN ___ SCOTTISH ___ FRENCH CANADIAN
___ EAST EUROPEAN ___ IRISH OTHER _____

33. HISTORIC CONTEXT(S):
___ COMMERCE ___ INDUSTRY ___ TRANSPORTATION ___ AGRICULTURE ___ MILITARY
___ RELIGION ___ CIVIC AFFAIRS ___ RECREATION ___ HABITATION ___ EDUCATION
___ ART, LIT, SCIENCE ___ SOCIAL

34. COMMENTS/SOURCES: Garage is not historic

35. HISTORICAL DRAWINGS EXIST: ___ YES ___ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: _X_ ORIGINAL ___ MOVED DATE MOVED
37. SETTING: _X_ RURAL/UNDISTURBED ___ RURAL/BUILT UP ___ SMALL TOWN ___ URBAN ___ SUBURBAN
38. QUADRANGLE MAP USED: Louise Mountain QUADRANGLE #:
39. UTM NORTHING: _____ 40. UTM EASTING:
41. FACADE DIRECTION (CIRCLE ONE): N S E W NE NW (SE) SW

==========

MHPC USE ONLY

DATE ENTERED IN INVENTORY: _____ PHOTO FILE #:
NR STATUS: L ___ HD ___ E ___ NE ___ ND ___ REVIEWER
DATA SOURCE: __ HPF ___ CLG ___ R&C ___ STAFF ___ STATE SURVEY OTHER _____ LEVEL OF SURVEY: __R __ I

ASSOCIATED INVENTORY NUMBERS: _____

SURVEY MAP NO. KW-9.1

SURVEY MAP NAME _Louise Mountain-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

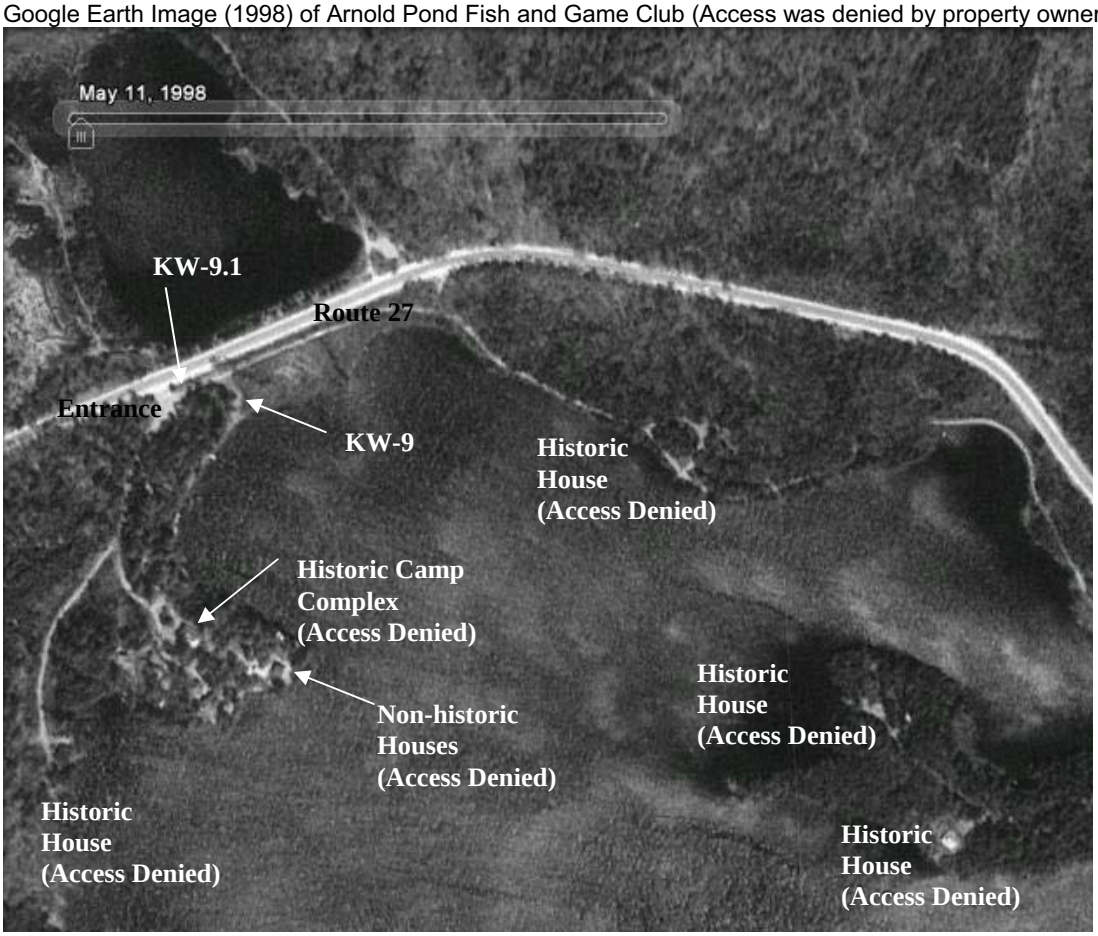
PROPERTY NAME: Gatehouse Arnold Pond Fish and Game Club off Route 27, Arnold Pond

TOWN: Coburn Gore COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form):

Google Earth Image (1998) of Arnold Pond Fish and Game Club (Access was denied by property owners)



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SURVEY MAP NO. KW-9.1

SURVEY MAP NAME _Louise Mountain-Kibby Wind

MHPC USE ONLY

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

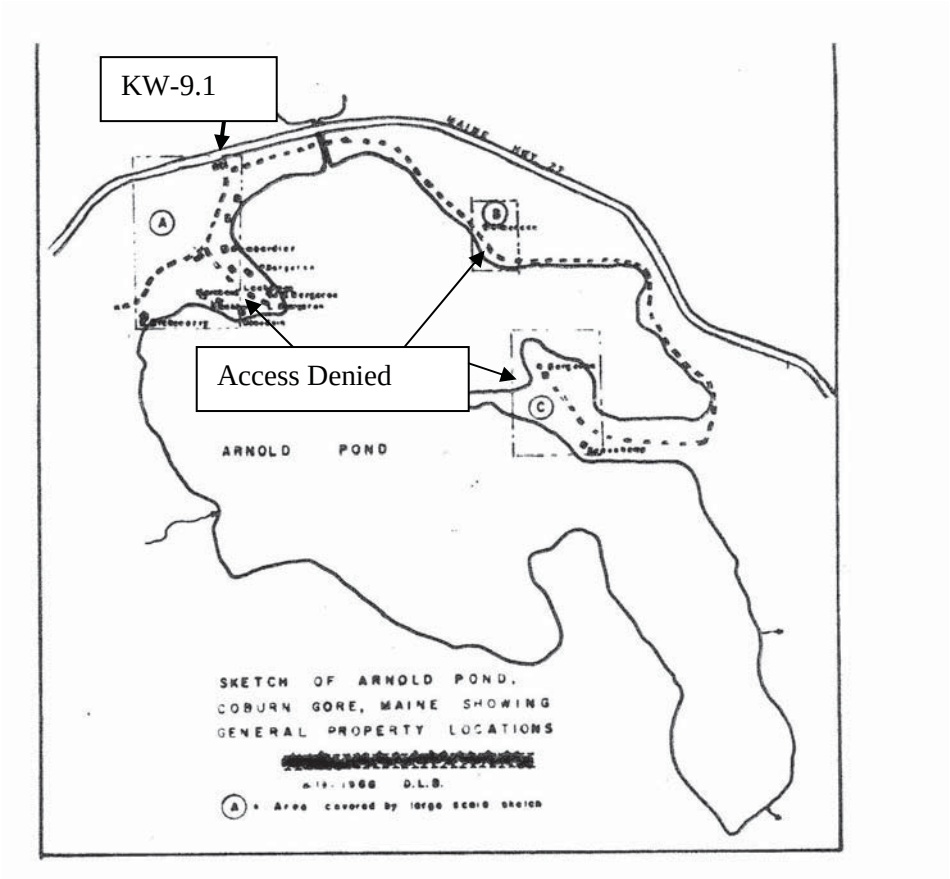
PROPERTY NAME: Arnold Pond Fish and Game Club off Route 27, Arnold Pond

TOWN: Coburn Gore COUNTY: _Franklin

SURVEYOR: Geoffrey Henry-TRC Environmental DATE: 11/6/09

DATA FIELD # (From Survey Form):

Plan of Arnold Pond (September 1968), Recorded in Book 132 ½ Page 22



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ATTACHMENT B.15-4

Archaeological Resources Memorandum

71 Oak Street
Ellsworth, ME 04605

207.667.4055 PHONE
207.667.0485 FAX

www.TRCsolutions.com

Memorandum

To: Steven Wallace, TRC South Portland, Maine
From: Richard Will, TRC, Ellsworth, Maine
Date: November 23, 2009
RE: Proposed Kibby Expansion Wind Power Project

TransCanada's Kibby Expansion Wind Power Project (the "Kibby Expansion Project") is a 45 megawatt ("MW") grid-scale wind energy project proposed to be located in Kibby and Chain of Ponds Townships, Franklin County, Maine (see Figure 1. The Kibby Expansion Project consists of 15 Vestas V90 3 MW wind turbines ("WTGs") and associated turbine access roads along the Sisk Mountain ridgeline, adjacent and to the west of the current Kibby Project B Series on Kibby Range. Associated elements of the Project include: an approximately 3.3-mile long access road to the Sisk Mountain ridgeline, which utilizes the existing forestry roadway network as much as possible; approximately 8.9 miles of aboveground 34.5 kilovolt ("kV") electrical interconnections (collector lines) between the turbines and to a common, newly proposed Kibby Expansion Project Substation, and a short 115 kV electric transmission tap line between the new Kibby Expansion Project Substation and the existing Kibby Project 115 kV electric transmission line.

The project area has been reviewed for archaeological resources on three prior occasions. The first occurred in 2003 (Will 2003), the second took place in 2007 (Will 2007), and the most recent was accomplished during review of TransCanada's four meteorological towers (met towers) located on the ridge of Sisk Mountain (Will 2009).

Dr. Richard Will of TRC Ellsworth, Maine was hired to conduct a cultural resources management investigation of the proposed wind power project. The investigation involved review of materials provided by the client; examination of topographic, surficial, and bedrock geologic maps, and review of Maine Historic Preservation (MHPC) archaeological site files.

Survey for Precontact period archaeological site locations is based upon application of sensitivity criteria used to predict whether a cultural resource might be present. Those criteria include factors such as proximity to water, soil type (well drained), proximity of other archaeological sites, and topography (level). Given that Maine Precontact people were largely hunters and gatherers, they preferred settling near water bodies due to the abundant animal and plant resources that could be found along waterways and interior lakes and ponds. In addition, major streams and rivers provided convenient travel routes to rich resource areas, as well as for commerce with neighboring regions. Thus, in assessing sensitivity of an area for prehistoric resources, the proximity to water ranks extremely high (Spiess 1992).

People also frequent locations to obtain raw materials for tool manufacture. Rock resources (stone quarries) are the best preserved locations among these. As stone used by prehistoric inhabitants are typically found in certain geologic settings, the sensitivity for the presence of lithic procurement sites can be readily assessed by identifying the nature of the bedrock within a project area.

The project area is not considered an area for Precontact period archaeological sensitivity due to several factors. First, review of MHPC files reveals that there are no known archaeological sites in the area. Second, the bedrock geology of Maine documents that Sisk Mountain ridgeline is not underlain by any lithic materials that would be suitable for stone tool manufacture (Osberg, Hussy, and Boone 1985). Third, surficial geology maps covering the project area, including access roads and collector lines, is draped in till (Thompson and Borns 1985), which drains poorly and is not greatly suited to camping. Fourth, no major water bodies or named streams are crossed; any upgrades to existing roads involve replacement of some culverts on low-lying brooks with low archaeological sensitivity. Taken together, the factors indicate that no further archaeological investigation of this project area is warranted.

References Cited

Osberg, P. H., A. M. Hussey, and G. M. Boone
1985 **Bedrock Geologic Map of Maine**. Maine Geological Survey, scale 1:500,000

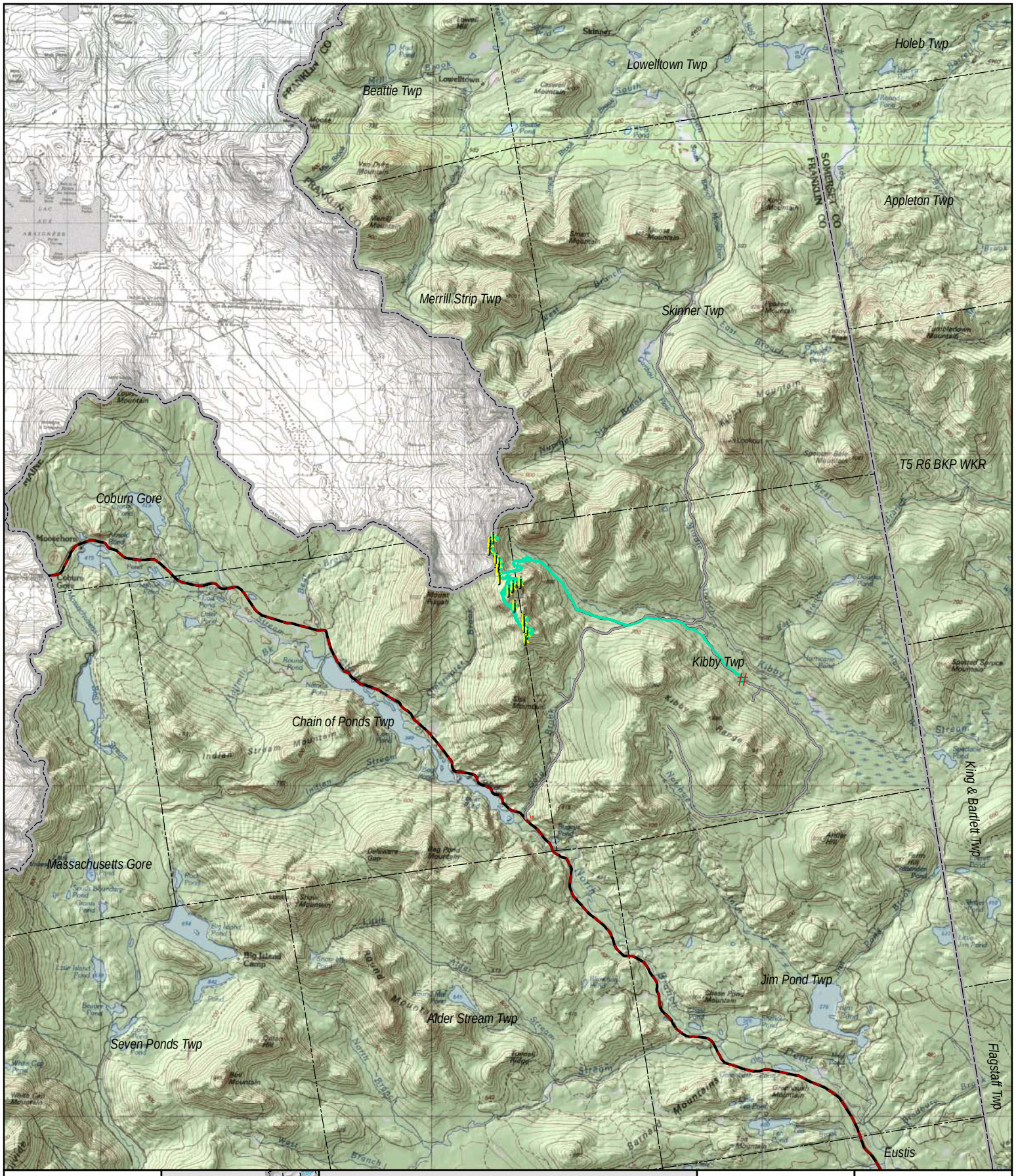
Spiess, A. E.
1992 Maine Prehistoric Archaeological Sites: Introduction and Management. Report on file with the Maine Historic Preservation Commission, Augusta.

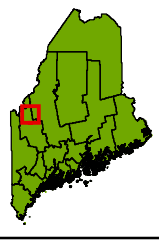
Thompson, W. B., and H. W. Borns, Jr. (eds.)
1985 Surficial Geologic Map of Maine. **Maine Geological Survey**, Department of Conservation, Augusta.

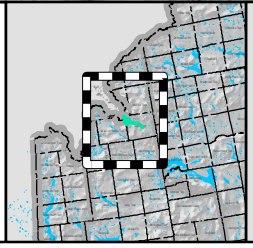
Will, Richard
2009 Proposed Meteorological Towers on Sisk Mountain. Memo on file with the Maine Historic Preservation Commission, Augusta.

2003 Report on Phase I Archaeological Survey of the New England Wind Energy Station. Report on file with the Maine Historic Preservation Commission, Augusta.

2007 Archaeological Phase I Testing of the Kibby Wind Power Transmission Line. Report on file with the Maine Historic Preservation Commission, Augusta.







j Turbine Locations

Project Footprint

\# Substation

" Operations and Maintenance Building

1

Miles

0 1 2

Kibby Expansion Wind Power Project

Figure 1

TRC
14 Gabriel Drive
Augusta, ME 04330

Created 11/24/2009

EXHIBIT B.16 OTHER PERMIT REQUIREMENTS

The status of other permits, consultations and approvals required for the Project is as follows. More detailed descriptions of the numerous agency meetings and consultations, and rare species, wildlife habitat and other natural resource issues referenced below are provided in Exhibit B.15.

- A Clean water Act Section 404 permit will be required from the U. S. Army Corps of Engineers ("USACE") for temporary and permanent placement of fill in Waters of the U. S. Total impacts to Waters of the U.S. from the proposed Project are anticipated to be approximately 4.4 acres. As a result an individual permit application is expected to be submitted to the USACE in late January or early February 2010. Multiple agency meetings and consultations have occurred with the participation of USACE Maine Project Office. These meetings and consultations have resulted in refinement of the Project footprint to minimize to the extent practicable the permanent and temporary impacts to Waters of the U.S. Consultations with the USACE are ongoing and will continue after the Section 404 application is submitted. A copy of the USACE permit will be forwarded to LURC staff when it is issued.
- Consultation with the United States Fish and Wildlife Service ("USFWS") has been ongoing throughout Project development, although no specific permit is required. TransCanada consulted with USFWS on pre-construction avian and bat monitoring and survey protocols, and other habitat survey methodologies, including for Canada lynx. The USFWS has been involved in refinement of the Project footprint, and has reviewed federally-listed Threatened and Endangered ("T&E") species issues in the Project vicinity. The USFWS was involved in determination of appropriate post-construction monitoring efforts for avian and bats during permitting of the Kibby Project, and the intent of that monitoring plan will also apply to the Kibby Expansion. Consultations with the USFWS will continue, as needed, through its role as a reviewing agency in the USACE permit process. The USFWS has not indicated if it is expecting to comment on this LURC application.
- The United States Environmental Protection Agency ("USEPA") is not required to issue any specific permit for the Project, but will likely participate as a review agency in the USACE permit process.
- Consultation and meetings with the Maine Department of Inland Fisheries and Wildlife ("MDIFW") has been ongoing throughout Project development, since they will participate in the review of state-listed T&E animal and other wildlife issues for the LURC application, although no specific permit is required from MDIFW. The MDIFW has been heavily involved in development of survey protocols for birds and bats and refinement of the Project footprint along the Sisk Mountain ridgeline due to the presence of Bicknell's thrush and bog lemming habitat. Consultations with the MDIFW will continue throughout the LURC permitting process.
- Similarly, consultation and meetings with the Maine Natural Areas Program ("MNAP") has been ongoing throughout the Project design and has included discussion and evaluation of the subalpine fir habitat that is present generally at elevations above 3,160 feet msl on the Sisk Mountain Ridge. Consultations with the MNAP will continue, as needed, through its participation in the review of state-listed T&E plant and unique or exemplary natural

community issues for the LURC application. Again, no specific permit is required to be issued by MNAP.

- A Notice of Intent ("NOI") To Comply With the MPDES Stormwater Construction General Permit will be submitted to the MDEP approximately 60 days prior to commencement of construction.
- The Federal Aviation Administration ("FAA") issues notices to determine whether structures are a hazard to aviation and specifies aviation safety lighting and marking requirements. A filing will be made to the FAA in December, 2009, reflecting the proposed 15 WTG locations. TransCanada expects that synchronized red lights will be required on many, if not all WTGs and a determination that the proposed new turbines would not be a hazard to navigation, as was the case for the Kibby Project. The FAA philosophy for lighting for the Kibby Project was to light peripheral and most elevated turbines and we expect this same philosophy to be applied to the Kibby Expansion Project. A copy of the FAA determination will be forwarded to LURC staff when it is received.
- The underlying landowner will submit the appropriate Forest Operations Notification as appropriate for clearing activities.

No other federal or state approvals are required. No local approvals are required.