

**Town of Andover Natural Resource Assessment
of an Active/Proposed Commercial Property Situated
between
Routes 11, 4, and 4-A, Andover, NH**

Completed by:

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Town Objectives:

The Town of Andover has requested that important on-site natural resources or significant public assets be identified at the "Bog Pond" Property (Tax Map 28; Lot 242 which is 43.65 acres in size). Recommendations will be made on the potential division of the property based on its potential commercial value; but at the same time balanced with the consideration or protection of the on-site natural resources. A property line adjustment was suggested based on "actual" field conditions and/or presence of on-site natural resources. Based on the town's objectives to eventually place the subject property into a conservation easement, additional recommendations were made on the sections of the property that might be considered a component of said easement. A "practical" approach was taken to minimize the future cost of potential survey work. Although the Bog Pond property was the main focus, a complete review was made of the entire commercial zone as "designated" by the Town of Andover.

Specific recommendations (this section is positioned at the end of this report) were then made for each Tax Lot contained within the commercial designated property (both north and south of Route 11). Areas recommended for placement into a conservation easement were identified and discussed thoroughly. These areas have been identified and outlined with a dashed line onto an Aerial Photo/Tax Map Overlay Map. Options were also provided to provide some flexibility to the town.

Site Locus/Commercial Property Description:

The subject commercial property is located on the northwestern end of town. The northern section of the tract is situated between State Highways # 4, 4-A, and 11. The southern section of the commercial tract is situated between State Highway # 11 and Cillyville Road with Mill Road being located on the west and Potter's Road on the east. The two tracts have been designated as a commercial zone by the Town of Andover. Existing businesses (a restaurant, a convenience store, a lumber outlet, and Andover's Recycling Center) are already situated at the commercially zoned property. The remaining portion of the property is undeveloped land consisting of either forest or wetlands.

Important Town Tax Map and Lot information for the land designated as "commercial" was compiled through the help of town personnel and by the chairperson of the Andover Conservation Commission; and is provided with this report (please see the attachment at the end of this report). Information provided include owner addresses; the respective Tax Map, Lot, and Sub. (if this category applies); road identification to lots; usage; acreage of individual lots, and Town of Andover land and building assessments. This information should be helpful in identifying property owners within the commercial zone and help identify those ownerships adjacent the town owned parcel. Two of these abutters (Belletetes & Charles) have already indicated interest in potentially acquiring conservation easements on their respective properties and combining their efforts with the town's desire to place the Bog Pond property under a protective conservation easement as well. When several parcels can be combined under a conservation easement, it is oftentimes more attractive to a potential holder of said easement.

Within the northern tract is Blackwater Pond (also known locally and more popularly as Bog Pond). This respective pond is fed by an extensive wetland system on the north including Eagle Pond and several perennial brooks (Walker Brook, Beverly Brook, Frazier Brook, and Kimpton Brook). Blackwater Pond then flows in a southwesterly direction via Frazier Brook to the Blackwater River. Adjacent the Blackwater Pond is a large wetland contingent consisting of emergent marsh and an extensive red maple swamp. This red maple swamp covers much of the area around the pond and extends and occupies much of the southeast corner of this commercial property. (Please refer to the attached aerial photo and the Wetland Resource Map by *Granit*). It appears much of the area designated as commercial in the northern section at the subject property (between State Highways # 4, 4-A, and 11) is undevelopable due to the presence of extensive wetlands, existing development, steeper slopes (8 to 15%) or evidence of ledge. Of public significance there are two recreational corridors that cross the property. A major recreational trail (an earlier railroad bed) accommodating summer hikers, bicyclists, horse riding, and snowmobilers in the winter months is situated parallel to Route # 4 along the northeast end of the property. Originating from this respective trail is another snowmobile trail which crosses the subject property following the edge of the large red maple swamp southeast of Blackwater Pond in an east/west direction.

Natural Resource Value/Asset Identification & Description:

1. A field inspection was completed on December 3, 2015. Andy Deegan from the Ausbon Sargent Land Protection Trust attended as well.
2. The identification of a large wetland system with an open water component (i.e., Blackwater Pond), with an adjoining emergent marsh, adjacent red maple swamp, and perennial brook (Frazier Brook) was made – its prior state designation as a *Prime Wetland* elevates its importance.
3. This wetland system is high valued/high functioning performing a total of seven chief functions including *ground water recharge/discharge, flood flow alteration, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, sediment/shoreline stabilization, wildlife habitat, and production export*.
4. The Blackwater Pond (Bog Pond) and its associated wetlands' designation as a *Prime Wetland* in addition to its high functional assessment contributes to its overall value as a significant wetland system and very worthy of as much protection the Town of Andover may offer.
5. The above wetland's system linkage with both upper (Eagle Pond & Frazier Brook) and the lower (Black Water River) wetland systems adds to its significance.
6. Increasing the overall value is the linkage to the Black Water River, a significant river corridor.
7. The groundwater relationship of the respective wetland (and the subject property) with a section of aquifer found beneath the subject commercial property. Adding to this value is the aquifer's connection with a larger aquifer beginning in the north and west and stretching to the east to the Village of Andover. Potential contamination by proposed any commercial development should be considered.
8. The wetland's importance is accentuated by the presence of very sensitive (*hydric*) soils.
9. Increasing the benefit of the wetland is its potential connection to one state *endangered species* and to another *species of concern* that may be located at the property (please refer

to the accompanying NH Natural Heritage Bureau's letter). The *endangered* species listed was the Brook floater (*Alasmodonta varicosa*) and the species of concern was the Wood turtle (*Glyptemys insculpta*).

10. NH Fish & Game Tier I Habitat (*highest ranked*) was found at the northern end of Blackwater Pond. Beaver lodges were noted at the northern perimeter of Blackwater Pond. Beaver presence increase overall usage by many other species of wildlife normally accentuating the diversity of that wetland. (Please refer to the attached *Granit* Map at the back of the report).
11. Specific critical habitat including potential egg laying areas for turtles at the northern perimeter of an earlier borrow pit/disturbed area at the back of the existing town recycling property. This habitat feature is accentuated by the potential usage by the wood turtle, a species of *special concern* as identified by the NH Natural Heritage Bureau.
12. Specific critical habitat including accumulated rock piles at the northern perimeter of an earlier borrow pit and disturbed area at the back of the existing town recycling property. This may provide "critical" basking (sunning/warming) areas and or *hibernacula* to different species of snakes.
13. The presence of an adjacent southeast/northwest earlier railroad bed providing recreation opportunities to hikers, bicyclists, horse riding, cross-country skiing, and snowmobiles.
14. The presence of an additional north/south snowmobile trail through the property providing an important linkage to gasoline & food amenities as well as a popular restaurant & other local snowmobile trail extensions.
15. The linkage of the property with several large conservation parcels/state forest land. This link accentuates the natural resource value of the property significantly (also helps to negate some of the current commercial property secondary impacts). Please refer to the attached Map showing the adjacent Conservation Lands.
16. Numerous *co-occurrences* of resource related assets that compliment overall value at the property and/or accentuating the individual resource assets themselves.

NH Natural Heritage Bureau Relevance & Potential Restraints; NH 483-B Shoreland Water Quality Protection Act Jurisdiction and/or Considerations; and (Federal) US Fish & Wildlife Service Jurisdiction/Consideration;

1. The potential identification of a state *endangered* species (brook floater) and a *species of concern* (wood turtle) at the property by the NH Natural Heritage Bureau (NHB) could affect future commercial development objectives.
2. NH Fish & Game would most likely prescribe protective measures at the property to safeguard both the brook floater and wood turtle. This state involvement would be triggered when the *NH Alteration of Terrain Application* is submitted to develop the property or during the review by the Wetlands Bureau (if a wetland impact is proposed) as a component of the proposed development.
3. It also appears that due to the proximity of the subject property with Frazier Brook and the Blackwater River, that any future commercial development would be subject to 483-B under the *Shoreland Water Quality Protection Act*. A Shoreland Application could be required to assure the before mentioned surface waters are protected.
4. The US Fish and Wildlife Service will assert their jurisdiction at the subject property if there is a nexus with federal permitting (for example, the review by the US Army Corp.

as a component of the NH Wetland Bureau review). An “Official Species” List will be required by the US Fish & Wildlife Service. More than likely the *Northern long-eared bat* and *Small-whorled pagonia* will be identified and recommended for long-term protection. If these species are identified a Biological Assessment of the project site will be required to assess the likelihood of these species being present. W/regard to the Northern long-eared bat, the US F&W Service will not allow any tree cutting within any proposed development from April 1 to Sept. 30 (this is the period that bats potentially use forest trees as maternity sites and summer hibernacula). The Town of Andover could also be responsible for complying with regulations that protect migratory birds as well. This would involve analyzing potential impacts by any commercial development and implementing appropriate conservation measures.

5. The Town of Andover should recognize that due to the property’s significant natural resource value, the Blackwater Pond’s designation as a *Prime Wetland*, and proximity to the Blackwater River, that it appears that the permitting requirements by the state or federal government may be lengthy and costly. This fact may discourage many potential developers and/or investors from becoming involved or taking the risk to begin with. The price offered for parcels at the commercial property may reflect these regulatory hardships. Knowing the number of regulatory restraints that are at play and their potential to impact future development may allow the town to place much more emphasis on placing the land at the property into a conservation easement – to recognize that some real limitations exist with regard to development.
6. After review of the NH Natural Heritage Bureau findings, Michael Marchand from NH’s Fish & Game on 12/31/2015 provided the following suggestions:
 - a.) Where possible, employ a wooded, uncut buffer to protect Blackwater Pond (Bog Pond) and it associated wetland.
 - b.) Where possible, establish a wooded, uncut buffer adjacent the Frazier Brook.
 - c.) Prevent any potential impacts to the Blackwater River. If possible, provide a wildlife linkage from the extensive wetland adjacent the Blackwater Pond to the Blackwater River to the south. There appears a potential linkage from the vast conservation lands on the north through the subject property with tracts of unbroken land on the south.
 - d.) Protect potential critical habitat within the earlier gravel pit along its northwest perimeter. Protect any sandy/gravelly area for turtle egg laying/snake basking areas.
7. It was noted during the December field inspection that the current configuration of commercial development (north of the building center and at the back of the Town’s Recycling Center) within the northern tract at the commercial property is positioned in close proximity to the Blackwater Pond and its associated wetland. Andover Town Planning Board/the Zoning Board/the Conservation Commission might want to consider in the future, if development is to occur requiring protective buffers between the slated development and the adjacent wetlands. The “rule of thumb” is the “*wider the better*” with a minimum of 100 feet to more significant wetlands. Prime Wetlands due to their significance and high function should be afforded a 200 foot buffer.

Land Trust Considerations/Objectives:

1. Before a regional land trust will entertain holding and maintaining a conservation easement, the overall protection/stewardship of said tract must generally align with the organization's primary objectives.
2. It is recommended that if this is indeed a goal the Town of Andover wants to pursue, that the town's conservation objectives be closely "meshed or tailored" to bolster a land trust's desire to hold the specific conservation easement.
3. Andy Deegan from the Ausbon Sargent Land Protection Trust (526-6555) during the field inspection commented that *public good or public service/benefit* is a primary objective/driving force of the land trust.
4. Andy Deegan did clarify that land tracts with wetland areas, even if considered significant or unique, are *already generally protected by town, state, or federal regulations*. It was preferred that a conservation easement provide other public driven benefits as well. He suggested if wetlands were to be protected, the buffers of these wetlands should be included as protective zones as well.
5. In the case of this potential conservation easement, in addition to protecting significant wetlands, it could provide the general public with important and varied recreational opportunities. The presence of an adjacent major southeast/northwest recreation trail (an earlier railroad bed) provides both summertime and wintertime opportunities to hikers, bicyclists, horse riders, cross-country skiers, and snowmobilers.
6. In addition, the presence of a north/south snowmobile trail through the subject property provides an important linkage to other snowmobile extensions as well. Andy Deegan expressed particular interest in protecting/accentuating these trail components.
7. Preserving critical habitat was another high priority of the Ausbon Sargent Land Trust. As mentioned earlier, the areas disturbed by the prior gravel operations may provide critical habitat to species of turtle (snapping, painted, spotted, and the wood turtle) for potential egg laying. Discarded stones from earlier gravel withdrawals may provide resident snake species with basking (sunning) opportunities or possibly winter hibernacula. Pioneer species now occupy the perimeter of the earlier gravel borrow areas - this specific habitat is quite uncommon in NH and is worthy of protection.
8. Andy Deegan did comment that dumping activities (as were observed in several locations) would need to be cleaned beforehand, and in the future, tightly controlled if the conservation easement was to be agreed upon.

Preliminary Recommendations and/or Reasoning:

1. Sub-divide the commercial property based on protecting its high valued natural resources/assets, established recreational trails, and potential critical habitats.
2. Divide the property in a methodical/practical manner to accentuate and balance both its resource value and long-term commercial property value.
3. The northeast section of the northern tract of the proposed commercial property (northeast of the Andover Recycling Center) is wetland (a large red maple swamp). (Please refer to the Existing Wetlands Resource Map by *Granit* at the back of this report). Please note this section of the commercial property is unsuited for development.
4. The center section of the northern tract of the commercial property and the section directly south east of this tract (across Route 11) have slopes of 8 to 15% with presence of extensive ledge. Please refer to the USGS Map by *Granit*. This area is shown as two

protruding hills shown opposite of one another. Blasting and major excavation will be required to develop these areas for commercial development. In addition, the expense thereof could be very expensive or even prohibitive.

5. The upland area directly adjacent the Blackwater Pond and its associated wetland should not be encroached upon. To provide adequate protection of this high valued wetland, permanent wetland buffers should be established and not considered a component of the commercial development. A minimum 200 foot wide buffer is recommended. The southwest/ northeast snowmobile trail is located within this buffer. Protecting this buffer would also protect the integrity of this important snowmobile linkage. Establishing a buffer would also afford protection to critical habitat found along the northwest perimeter of the earlier borrow pit. An intermittent stream flowing from the red maple swamp on the northeast would also be safeguarded. This stream crosses underneath the snowmobile via an undersized culvert that should be replaced with an appropriate structure.
6. The riparian corridor adjacent the Frazier Brook (the area between Fox Farm Road and the current development incorporating the existing restaurant, convenience store, and building center) should not be further encroached upon. This wooded buffer although now limited in width offers some protection to this surface water.
7. Taking into account the above, it appears viable development activities at the subject property are limited to the following:
 - a.) There appears to be two commercial lots adjacent the access road into the northern tract of the current commercial property. One lot is situated behind the present convenience store and building center (southwest of the entry access road). The other lot is situated just northeast of the convenience store (northeast of the entry access road).
 - b.) A commercial lot may exist just south of the entry to the Andover Recycling Plant. Further investigation is needed to establish existence of ledge/suitability.
 - c.) There appears to be an additional two lots situated on flatter terrain on the commercial zoned properties southeast of Route 11 – one located just north of Mill Road and adjacent Route 11 and another on the northeast corner of this property (across from the entrance to Andover Recycling Center).
8. A *Proposed Commercial Development Layout Map* is being provided for review.
9. It is important to note that there will be challenges in combining the commercial objectives of the town and the protection of important natural resources/assets situated at the property. If commercial development is to occur the employment of stormwater management will be important to minimize impact on both Blackwater Pond (Bog Pond) Frazier Brook and the adjacent Blackwater River. It does not appear stormwater management measures (detention/retention basins, storm drains, or low impact development (LID) principles have been employed at the subject commercial property (however, a cursory review was made of the current development and Andover Recycling Center and these measures might not have been noted). When deciding on the balance between commercial development and protection of present resources one must consider other current/existing impacts as well. The proximity of well-travelled state roads (Routes 4, 11, and 4-A), the current configuration of development, the constant flow of traffic into/out of the subject property, human activity, the necessary commercial lighting, minimal stormwater measures, wintertime snowmobiling on two interior trails and overall noise are the on-site on-the-ground conditions. One must keep these in mind when

seeking a “realistic balance” between commercial objectives and effective long-term protection of the on-site natural resource assets. Additional discussion will be needed between the Planning Board, Zoning Board, and the Conservation Commission to craft a thoughtful balance between the commercial objectives and the future protection of the important natural resources.

Adjacent Landowner Participation/Cooperation:

1. A few adjacent landowners (Charles & Belletetes) on the western side of Blackwater Pond have indicated interest at participating with the formation of a conservation easement. (These suggested conservation easement areas have been outlined by a dashed line onto an Aerial Photo/Tax Map Overlay).
2. Participatory interest by these landowners would increase the proposed easement’s significance/effectiveness, but would also accentuate the overall protection of the Blackwater Pond and its associated wetlands.
3. It would be important for the Town of Andover to provide the necessary assistance to help these landowners accomplish or facilitate this action.

Proposed Map Plan Attachment w/Subdivision Line Adjustments:

1. Please see the attached. The Aerial Photo Tax Map Overlay offers a reasonable “first attempt” at recognizing areas with potential commercial values but at the same time, not including those areas that are undevelopable (presence of wetlands) or should not be built upon (unsuited slopes/presence of ledge). The Proposed Map Plan also recognizes sensitive wetland areas and their critical buffers and/or potential critical habitats and/or on-site recreational trails.

Specific Conservation Easement Inclusion Recommendations by Tax Map/Lot Nbr.:

#A: The Commercial Section of the Property located north of Route 11 (Main Street):

Tax Map 28, Lot 90-242; the “Town Parcel”; (43.65 acres):

- 1.) Based on the evaluation of the on-site natural resources and further assessment of commercially usable sections of the subject parcel, it is recommended that a large % of this tract be placed into a permanent conservation easement. It should be stressed that much of the property is either occupied by wetlands, are situated on moderated steep and rocky terrain, and/ or as an logical alternative may afford important buffer protection to sensitive wetlands and two individual trail corridors if an easement was established permanently.
- 2.) The acreage that serves the existing recycling center should be subdivided out. However, the back section of the recycling tract should be preserved to protect on-site *critical habitat* for both turtles and snakes, some of which may be endangered/threatened. This also serves to protect the snowmobile trail linkage and adjacent respective buffers from the R X R State Trail to Route 11.

- 3.) It should be noted the acreage adjacent and northeast of the current recycling center is composed of a red maple swamp and is unsuited for commercial development.
- 4.) It should be noted that much of the area between the western boundary of the town parcel and the recycling center is moderately steep with a high evidence of ledge. Based on these observations the potential cost to develop this section would most likely be prohibitive or may not be attractive when a potential buyer compares other commercially available properties. Leaving this section of the town parcel undeveloped and in forest would potentially provide a wildlife corridor to the Blackwater River system. According to Mike Marchand from NH F&G this action would provide an important linkage from the upper wetland systems, Bog Pond, to and from the Blackwater River.
- 5.) The section of the town parcel adjacent Bog Pond is all wetlands (and again undevelopable). This area should be protected permanently as well as its associated wetland buffer. The buffer due to its proximity to the snowmobile trail (situated between the state rail system and Route 11) would also establish a protected travel corridor here.
- 6.) Please see the attached aerial photo overlay showing the recommended easement for the parcel located north of Route 11.
- 7.) *Few options are practical or realistic* from a development perspective for the town parcel. As stated, a large % of the town parcel is unsuited to commercial development. The most northern area occupied by the current recycling center might be considered but as said, this section contains critical habitat (egg laying/hibernacula/early pioneer species) and/or provides a desired buffer to wetlands. Because it is located at the back of the site, and has no visual exposure from Route 11, it is unlikely a potential buyer would be interested anyways. Lastly, developing the area just west of the recycling center could be explored but is likely to be cost prohibitive.

Tax Map 28, Lots 322-154 (16.1 acres) & 232-187 (6.8 acres) belonging to Belletetes:

- 1.) **Option # 1:** Place the remaining undeveloped land at Belletetes into a Conservation Easement. This would serve to safeguard the Bog Pond and associated wetlands, its wetland buffer component, the riparian buffer at Frazier Brook, and an active snowmobile travel corridor. It would also provide an important wildlife linkage towards the Blackwater River System from Bog pond.
- 2.) **Option # 2:** At minimum establish place a 150-200 foot wetland buffer at the north end of Lot # 322-154. Also establish a permanent riparian buffer (the existing uncut vegetated section) between Frazier Brook and the current development (at Lots # 360-141 & 329-150). Lastly, establish a minimum north/south 100-150 foot buffer corridor through Lot # 232-187 to safeguard the active snowmobile trail connecting Route 11 from the DOT rail trail.

Tax Map 28, Lot 425-118 (9.9 acres) belonging to Ron Charles:

- 1.) Place into a conservation easement the section of property between Fox Farm Road and Frazier Brook. This could be easily justified as it would offer protection to the adjacent riparian buffer at Frazier Brook.

Tax Map 28, Lot 395-227 (6.5 acres):

- 1.) Implement the same recommendation with this abutter as suggested above (minus the residence if one exists).

Tax Map 28, Lots 386-337 (25.14 acres) & 309-529 (19.2 acres):

- 1.) Place these properties adjacent Bog Pond in to a conservation easement. At minimum, establish a 150 foot protected buffer adjacent the Bog Pond and associated wetland.

Note: The above discussion covers the tax lots immediately adjacent the respective town owned subject parcel. The involvement of these adjacent landowners to potentially place all or part of their land into a conservation easement strengthens overall town objectives to protect the Bog Pond and its associated wetlands. Their participation, most likely, would also be looked at favorably by a future holder of the conservation easement.

#B: The Commercial Section of the Property located south of Route 11 (Main Street):

Tax Map 28, Lot 294-105 (6.69 acres):

- 1.) If possible the town should recommend a no-cut/vegetated buffer be established adjacent the Blackwater River along the southwest side of this property. This action would help to protect the riparian buffer, an important component of any river. Its position with the confluence of Frazier Brook elevates its significance. The action may also provide a bit of an linkage with the parcel owned by Ron Charles (425-118)

Tax Map 28, Lot 259-94 (2 acres):

- 1.) This parcel has the potential to be commercially developed.

Tax Map 28, Lot 184-86 (8.65 acres); Lot 189-42 (2.7 acres); Lot 103-82 (7.1 acres); Lot 194-30 (.52 acre); & Lot 82-25 (7.2 acres):

- 1.) **Option #1:** Potentially consider these parcels (minus the residences) as a component of the conservation easement to provide a wildlife corridor from the town-owned parcel to the Blackwater River (recommended as well by NHF&G) as a potential management strategy.

Tax Map 28, Lot 85-90 (12 acres):

- 1.) **Option #2:** Depending on being able to compile the above conservation easements, include or substitute this parcel as well with the main objective being providing a corridor from the town owned parcel to the Blackwater River System.
- 2.) **Option #3:** Consider development of this tract as the topography is generally flat and well suited for this land usage. If possible set aside the western side of this tract as a component of a conservation easement.

Tax Map 28, Lot 58-187 (1.6 acre); Lot 59-160 (.8 acres); Lot 58-133 (1 acre); & Lot 64-96 (1.3) acre):

1.) These parcels have the potential to be commercially developed.

This finalizes this report at this time. A first draft was submitted to the Town of Andover for preliminary review and comments. Clarification of tax lot information was made by the town as needed.

It is suggested that this report be forwarded to Andy Deegan at the Ausbon Sargent Land Protection Trust (526-6555). His comments during the project site field inspection were taken into account when formulating how the property might be subdivided to protect important resource areas or how important recreational assets could be safeguarded or how an effective conservation easement could be compiled. I look forward to hearing from the Town of Andover.

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