FIELDSTONE
LAND CONSULTANTS, PLLC
Surveying ⌖ Engineering
Land Planning ⌖ Septic Designs
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June 9, 2013

William Parker
Community Development Director
Town of Milford
1 Union Square
Milford, NH 03055

RE: Wetland Classification Report
Brox Community Lands
Map 38, Lots 17 & 58
Heron Pond Road, Milford NH 03055

Dear Mr. Parker,

Fieldstone has completed the wetland delineation and survey location of the jurisdictional wetlands located on properties property known as Brox Community Lands as shown on the reference plan provided, Map 38, Lots 17 and 58 approximately 147 acres total. This wetlands report references the Wetlands Location Plan prepared by this office and revised June 10, 2013 to include classification designations.

The soils at the subject property are dominated by Hinckley Loamy Sand formed by glacial outwash sands and gravels. The terrain is undulating low hills and depressions where undisturbed. Disturbed areas associated with historical and current gravel removal operations have typical gravel pit features such as assorted piles of loam, stumps and boulders along the boundary of the active pit and level areas to steep slopes within the pit. Vegetation cover at the site is primarily mature and mixed hardwood and white pine forest with several gravel woods roads and previously cleared and excavated areas.

WETLAND DELINEATION

The wetlands on site were delineated by Christopher A. Guida, New Hampshire Certified Wetland Scientist #53 using the 1987 US Army Corps of Engineers Wetland Delineation Manual Y-87 and regional supplements and the Field Indicators for Identifying Hydric Soils in New England Version 3. Soil auger holes were advanced at regular intervals to verify hydric soil conditions, hydrophytic plant community dominance and hydrology were continuously evaluated during wetland delineation. Wetland delineation and classification was conducted in April-June 2013.

Wetland flag locations were captured using Survey Grade GPS base station and rover instrumentation. Survey location data was processed and fit onto the reference/base plan provided utilizing like points and features

located on the ground and depicted on the base plan. The accuracy of the base plan to actual property boundaries has not been verified as part of this wetland delineation and location effort.

WETLAND CLASSIFICATION

The jurisdictional wetlands located on site have been classified in accordance with the US Fish and Wildlife Classification of Wetlands and Deepwater Habitats in the United States (Cowardin et al 1979). Generally speaking there were three basic wetland categories observed on site, 1) Palustrine , Open Water / Emergent persistent / Scrub-Shrub, semi-permanently flooded, beaver influenced (POW/EM1/SSFb) (Areas C & I), 2) Palustrine, Forested, broad-leaved deciduous and needle-leaved evergreen, seasonally saturated/flooded (PFO1,4E). This category included wetlands bordering the larger open water areas as well as isolated areas with vernal pool characteristics. 3) Palustrine, scrub-shrub, broad-leaved deciduous, seasonally saturated/flooded, excavated (PSS1Ex). Man influenced and/or created wetland associated with historic anthropogenic land alterations and previous gravel removal operations.

The various wetland areas delineated on site have been designated as numbers 'A-J' as shown on the accompanying Wetlands Location Plan as revised on 6/10/13. The following areas are classified and described as follows:

Area – A & B
These areas are classified as Palustrine, Forested, broad-leaved deciduous and needle-leaved evergreen, seasonally saturated/flooded, excavated (PFO1,4Ex). These wetland areas are located at the toe of a steep cut bank (now forested) which appears to be the result of historical excavation of sand and gravel material below the seasonal high water table and then abandoned. These wetlands areas separated by what appears to be an old access road or bermed area. Each area has a localized deeper ponded area which then transition into forested wetland areas dominated by early successional species such as gray birches and alder. This area also receives storm water runoff from a culvert and drainage swale associated with the construction of Heron Pond Road. Although initially man-made, these areas were observed to meet some criteria used to establish the functional components of a vernal pool, including presence of salamander and wood frog egg masses, no apparent fish population, and holding water for at least 2 consecutive months after spring ice-out.

Area – C & J
These areas are classified as Palustrine , Open Water / Emergent persistent / Scrub-Shrub, semi-permanently flooded, beaver influenced (POW/EM1/SSFb). These wetland areas are dominated by open water areas interspersed with dead trees indicative of previously dryer conditions. There was also a minor component and localized areas of Aquatic Bed classification within Area C and a Riverine component within Area J which were not delineated separately as part of this delineation effort. The open water areas transition into a scrub-shrub type wetland and then into a forested wetland and finally into upland areas. These are typical beaver pond wetland areas formed by beaver dams obstructing the flow of small streams creating deeper ponded areas upstream of the dams. Current beaver activity also appears to have raised the water level within the pond and adjacent wetland areas above the historical wetland line as evidenced by submerged upland trees and non-wetland soils along the perimeter of the impounded area. Water levels within these areas may have significant fluctuations depending on the presence or absence of beaver activity.

Wetland Classification Report
Brox Community Lands

Area – D & F

These areas are classified as Palustrine, Forested, broad-leaved deciduous and needle-leaved evergreen, seasonally saturated/flooded (PFO1,4E). These isolated wetland areas are relatively small naturally occurring seasonally ponded areas located in bowl shaped depressions at the toe of the surrounding slope. These areas are surrounded by mature forest comprised of mixed hardwoods and needle leaved evergreen trees. These types of wetlands are frequently forested wetlands with a localized deeper ponded areas within the perimeter of the jurisdictional wetland line. These areas were observed to be naturally occurring and met some of the criteria used to establish the functional components of a vernal pool, including presence of salamander and wood frog egg masses, no apparent fish population, and holding water for at least 2 consecutive months after spring ice-out.

Area – E & G

These areas are classified as Palustrine, Forested, broad-leaved deciduous and needle-leaved evergreen, seasonally saturated/flooded (PFO/SS1,4E). These isolated wetland areas are naturally occurring seasonally ponded areas located in bowl shaped depressions at the toe of the surrounding slope. These areas are somewhat larger than areas D & F and are located in larger, flatter low areas surrounded by mature forest comprised of mixed hardwoods and needle leaved evergreen trees. These two areas likely have a longer hydroperiod due to the size and depth of the wetlands. These two wetland areas had larger ponded areas interspersed with scrub-shrub wetland as well as forested areas. Although these two areas also may not dry out completely on an annual basis, they were observed to be naturally occurring and contained some of the necessary criteria used to establish the functional components of a vernal pool, including presence of salamander and wood frog egg masses, no apparent fish population, and holding water for at least 2 consecutive months after spring ice-out.

Area E was surrounded by mature undisturbed forested area with the exception of a small area on the southern side where the wetland abuts the existing gravel pit area. This area had steep slopes with some assorted piles of soil and debris apparently deposited during gravel removal operations.

Area G was also surrounded by mature undisturbed forested area with the minor exception of what appeared to be a man-made trenched area at the southern end of the wetland.

Area – H

This area would be classified as Palustrine, Forested, broad-leaved deciduous, seasonally saturated/flooded, excavated (PFO/SS1Ex). This wetland area is located at the toe of a steep cut bank within an active gravel pit area. The wetland area appears to be the result of historical excavation of sand and gravel material below the seasonal high water table and then abandoned. Over time wetland plants and have established themselves within the deepest portion of the area (approximately 6-12" standing water). Although there have been no recent excavation activities within this area there does appear to be continued disturbance by periodic ATV travel through the area. Even though the wetland area is man-made, there was evidence of wood frog breeding activity within the ponded area. Although some of the criteria used to establish the functional components of a vernal pool such as the presence of wood frog egg masses was present during site inspections conducted during May and June, this area is not believed to provide viable breeding habitat for vernal pool dependent species due to the shallow water depth, short hydro-period and high water temperatures.

Vernal pool dependent species frequently lay eggs in unintentionally created wet areas such as logging skidder ruts, agricultural farming activities and within active gravel pits. However, usually these unintentionally created habitats do not have the necessary components to provide for successful hatching and survival of the dependent species. In accordance with Env-Wt 101.106 "Vernal pool" means a surface water or wetland, including an area intentionally created for purposes of compensatory mitigation, which provides breeding habitat for amphibians and invertebrates that have adapted to the unique environments provided by such pools and which:
"(a) Is not the result of on-going anthropogenic activities that are not intended to provide compensatory mitigation, including but not limited to:
(1) Gravel pit operations in a pit that has been mined at least every other year; and
(2) Logging and agricultural operations conducted in accordance with all applicable New Hampshire statutes and rules; ..."

Area – I

These two very small areas would be classified as Palustrine, Forested, broad-leaved deciduous, seasonally saturated/flooded, excavated (PFO1,4Ex). These areas are located at the toe of a bank apparently created by the placement of loam and woody debris along the edge of the active gravel pit area (grubbed off and overburden materials); Although these areas meet the criteria for jurisdictional wetland area, they appear to be accidentally created during gravel removal operations. Even though the wetland area is man-made, there was evidence of wood frog breeding activity within the ponded area. Although some of the criteria used to establish the functional components of a vernal pool such as the presence of wood frog egg masses was present during site inspections conducted during May and June, these areas are not believed to provide viable breeding habitat for vernal pool dependent species due to the shallow water depth, short hydro-period and high water temperatures.

This area is located near Area H and would also fall under the unintentionally created wetland area referenced in Section H above: Env-Wt 101.106 (a) (1)(2)

An additional field inspection was conducted on June 3, 2013 to verify the 2013 hydro-period of on-site wetlands. The field inspection indicated that all wetland areas appeared to still contain sufficient water depth to support the development of vernal pool depended species with the exception of Areas H & I. Although Areas H & I were still holding water on June 3, 2013 (approximately 6" and 2" respectively with less than 20% of previous surface area) the water depth did not appear to be sufficient to support continued development of vernal pools species.

It should also be noted that several areas throughout the active gravel pit area occasionally tend to pond rainwater during and after storm events. These areas likely have compacted soils with loam and assorted other fine particles which restrict water movement through the soil. Although water on the surface may be present during and after storm events or even after initial spring snow melt, these areas do not exhibit the three necessary criteria for jurisdictional wetland, hydric soils, wetland hydrology, and wetland vegetation.

Also, due to the high groundwater transmissivity of sands and gravels on site, the nearby beaver activity at the site does not only have the potential to change the edge of delineated wetland but also to raise/lower the local groundwater table proximate to the impoundment elevation of nearby beaver dams.

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Please feel free to contact me if you have any questions or if I can be of further assistance.

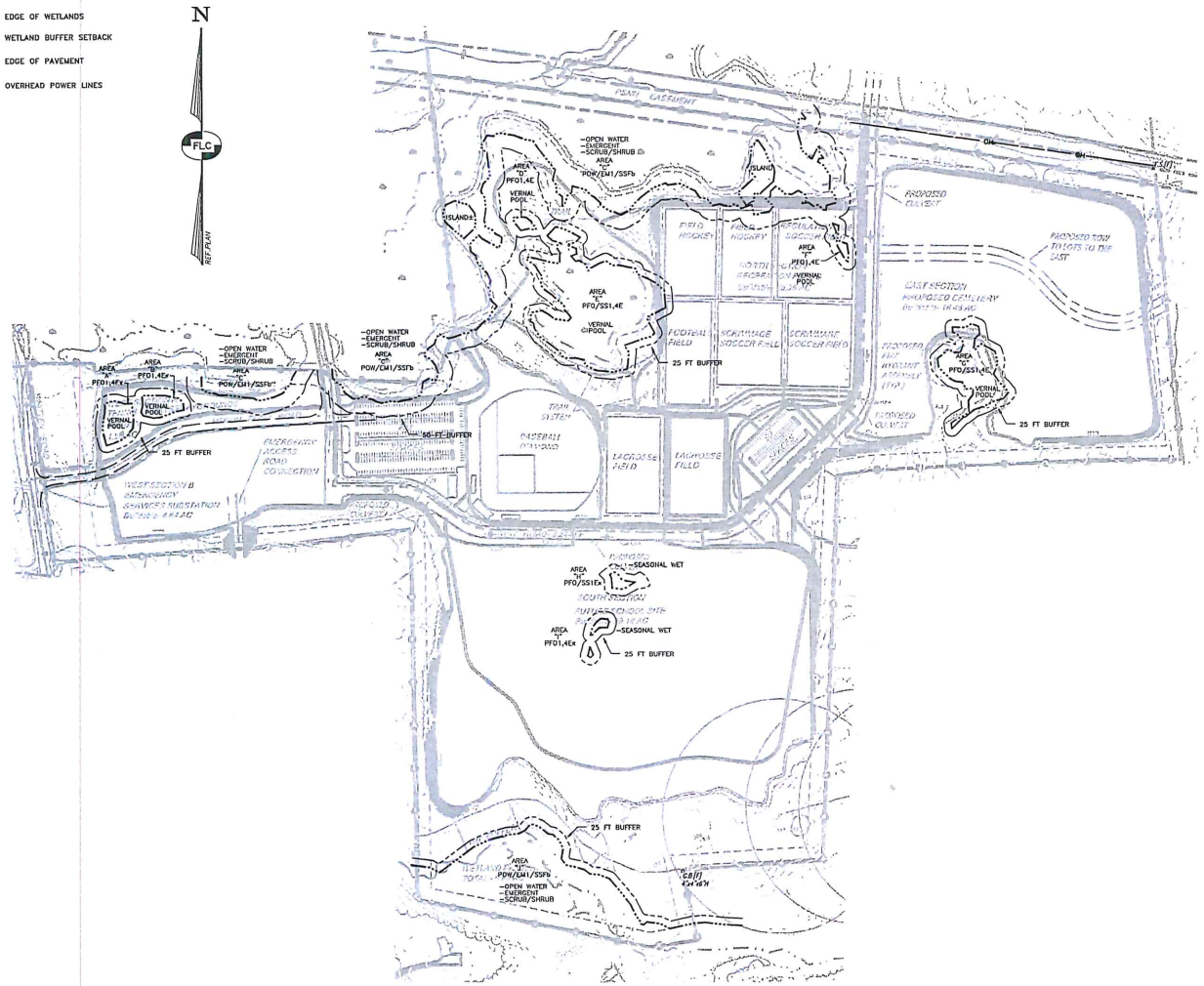
Sincerely,

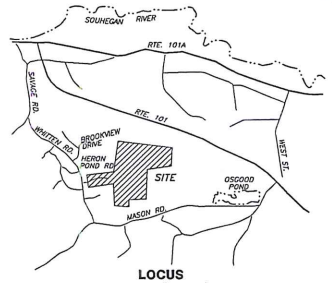
FIELDSTONE LAND CONSULTANTS, PLLC

Christopher A. Guida, C.S.S., C.W.S.
Certified Soil & Wetland Scientist

LEGEND:

- EDGE OF WETLANDS
- WETLAND BUFFER SETBACK
- EDGE OF PAVEMENT
- OH — OVERHEAD POWER LINES





LOCUS
SCALE: 1"=1500±'

REFERENCE PLAN:

"BROX PROPERTY COMMUNITY LAND – MASTER PLAN STUDY", SCALE: 1"= 200', DATED: NOVEMBER 1, 2004 BY CLOUGH HARBOUR & ASSOCIATES, LLP.

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE JURISDICTIONAL WETLANDS ON THE SUBJECT PARCELS.
2. THE WETLANDS WERE FIELD LOCATED BY THIS OFFICE WITH A GLOBAL POSITIONING SYSTEM (GPS).
3. THE WETLAND AREAS HAVE BEEN OVERLAYED ONTO THE REFERENCE PLAN, AS SHOWN. THIS HAS BEEN ACHIEVED THROUGH THE LOCATION OF LIKE FEATURES AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE.
4. PRIOR TO ANY FUTURE DEVELOPMENT OF TAX MAP 38, LOTS 17 AND 58 ADJACENT TO JURISDICTIONAL WETLANDS AS DEPICTED ON THIS PLAN, A PRECISE WETLAND LOCATION RELATIVE TO PROPERTY BOUNDARIES SHOULD BE CONDUCTED CONCURRENT WITH ANY NECESSARY BOUNDARY AND TOPOGRAPHIC SURVEYING.
5. JURISDICTIONAL WETLANDS HAVE BEEN CLASSIFIED IN ACCORDANCE WITH US FISH AND WILDLIFE CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS IN THE UNITED STATES (COWARDIN ET AL. 1979).

CERTIFICATION:

WETLANDS WERE DELINEATED IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS 1987 WETLAND DELINEATION MANUAL Y-87-1 AND REGIONAL SUPPLEMENTS FOR NORTHEAST AND NORTHCENTRAL REGION AND FIELD INDICATORS FOR HYDRIC SOILS IN NEW ENGLAND BY CHRISTOPHER A. GUIDA, C.W.S. IN APRIL OF 2013.

DATE:_____

GRAPHIC SCALES

200' 100' 0 200' 400' 600'

IMPERIAL: 1"=200'

REV.	DATE	DESCRIPTION	C/O	DR	CK
C	6/10/13	WETLAND CLASSIFICATION AREAS	C/O	CAG	CEB
B	5/7/13	ADD NOTES AND BUFFER LINES	C/O	CAG	CEB
A	4/29/13	VERIFY LOCATION AND ADD DESCRIPTION	C/O	CAG	CEB

WETLANDS LOCATION PLAN

PREPARED FOR:

TOWN OF MILFORD
BROX COMMUNITY LANDS

TAX MAP 38 LOTS 17 & 58
MILFORD, NEW HAMPSHIRE

SCALE: 1" = 200' APRIL 23, 2013

Surveying ✧ Engineering ✧ Land Planning ✧ Permitting ✧ Septic Designs

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FILE: 519WTOA.dwg	PROJ. NO. 519.00	SHEET NO. 1 OF 1

Area A
4-9-2013

Area B
4-9-2013

Area C
4-9-2013

Area D
4-9-2013

Area E
4-9-2013

Area F
4-9-2013

Area G
4-9-2013

Area H
4-9-2013

Area I
4-9-2013

Area J
4-9-2013