

**Brooklyn Inland Wetlands Commission
Regular Meeting Minutes
March 10, 2020**

Call to Order: The meeting was called to order at 6:03 p.m.

Members Present: Jeffrey Arends, Demian Sorrentino, George Sipila, Richard Oliverson and James Paquin.

Absent: None.

Staff Present: Margaret Washburn, Wetlands Agent, Audrey Cross-Lussier, Recording Secretary.

Also Present: Norm Thibeault, Attorney Harry Heller, John Malarkey, Jeffrey Weaver, Madilyn Smith, public in attendance.

Seating of Alternates: None.

Election of Officers:

Chairman: A motion was made by Jeff Arends to nominate Demian Sorrentino as Chairman. Mr. Sorrentino declines the nomination as Chairman.

A motion was made by Richard Oliverson to nominate Jeff Arends as Chairman. George Sipila seconds this motion. No discussion held. Motion passes unanimously. Jeff Arends accepts the nomination as Chairman although makes note of his hectic work schedule.

Vice Chairman: A motion as made by Jeff Arends to nominate Demian Sorrentino as Vice Chairman. Jim Paquin seconds this motion. No discussion held. All in favor. Motion passes unanimously. Mr. Sorrentino accepts the nomination.

Public Commentary: None.

Additions to the Agenda: None.

Approval of Minutes: Regular Meeting Minutes of February 11, 2020. Minutes were approved as written with no change.

Chairman Arends stated he listened to the recordings of the January 14, 2020 and the February 11, 2020 meetings.

Public Hearings:

1. 021120B Vachon Brooklyn, LLC, 512 Providence Road, Map 41, Lot 13A/14, PC Zone; Construction of (2) 16 ft. wide access driveways to access proposed new vehicle storage lots. Drive to the larger of the two proposed parking areas will be in an area historically used for an agricultural crossing.

A motion was made by Jim Paquin to open the public hearing. Demian Sorrentino seconds the motion. No discussion held. All in favor. The motion passes unanimously.

Norm Thibeault, Killingly Engineering, represents the applicant. Vachon Chevrolet is the former Premier Chevrolet. Vachon Chevrolet purchased King Cadillac in Putnam, CT. They plan to move all operations to this facility. The proposal is two vehicle storage areas to store new vehicles. The intention is to bring customers to these storage areas by golf carts to look at the vehicles. The first area is adjacent to Aldin Associates Limited Partnership, gas station and convenience store. There will be a small area that will store two dozen cars in total. The second one is located in the north rear of the lot. They are anticipating 120 to 140 vehicles stored there.

The first wetland impact is in the southwest portion off the existing parking area. In constructing the access drive there will be a small impact of 1200 sq. ft. The second area described was an agricultural crossing with old photos from the 1930's showing this clearly. The wetlands are essentially scrub shrub wetland with red maple overstory. Mr. Thibeault reviews Joe Theroux, Soil Scientist, reports dated 11/14/19 and 3/5/20 (see attached).

Mr. Thibeault stated they are proposing a total of 3,100 sq. ft. of wetland impacts. Over 1,200 ft in area one at the southeast portion and at the existing agricultural crossing 1,800 sq. ft. They are proposing to put two 30-inch culverts, counter sunk into the soil, provide a natural bottom in the pipes filled with sediment and organic material to keep the consistency of the area. There was a pipe there with work having been done previously when Premier Chevrolet owned the property. The pipe is no longer in place. The wetland crossing does not provide any flow in one direction or the other, it is from or to the wetland. The area is flat. The intention of the two pipes is not to provide a mechanism for any significant flow, it is to keep the current hydrologic conditions. To balance the areas of impact, two wet basins are proposed. The bottom of the basins will be constructed down into the water table, organic material placed upon them and a wetland seed mixture applied to the bottom of the basin. The bottoms of the basins are slightly over 4,000 sq. ft. compared to the 3,100 sq. ft. of proposed impact.

During construction super silt fence is proposed around the perimeter of the site especially where wetland impacts are conducted and where excavation is being proposed adjacent to the wetland. Silt fence backed with hay bales or wood chip berms are proposed in the area of the crossing. There will be a temporary corduroy crossing where the pipes are going during tree removal. Once the trees and stumps are removed and the significant machine activity is completed the crossing will be removed, pipes will be installed.

The total area of pavement is slightly over 30,000 sq. ft. There will be some stormwater detention. Two basins are proposed. The smaller parking area basin will be a water quality basin. The larger basin rear of the site northern portion will act as a stormwater retention basin and water quality basin. The wet basin will provide a filtering mechanism for sediment transported off the paved areas. To increase the retention time within the basin it has a berm in the middle and created a pathway for the water to funnel through the basin with a series of check dams prior to reaching the outlet. The outlet is a tier outlet shown on sheet 5 of the plans. Mr. Thibeault discusses the drainage computations.

Mr. Thibeault commented per Ms. Washburn the plans have not been reviewed by Syl Pauley, P.E., NECCOG.

Chairman Arends asked if there be any kind of controls for oil and gasoline leaks for vehicles stored in the larger lot. Mr. Thibeault commented there will be new vehicles stored there. Mr. Arends commented that once the IWWC approves the application they can put anything back there. Mr. Thibeault and the applicant will look at this and propose something acceptable to the Commission.

Mr. Sipila asked if this will be a fenced in area. Mr. Thibeault stated yes, it will be fenced, landscaped and gated.

Chairman Arends asked if the crossing is still there from the 1934 aerial photo. Mr. Thibeault stated it is still there. Ms. Washburn reviews photos from her inspection report.

Mr. Arends asked if this will be the predominant crossing for the construction phase. Mr. Thibeault stated it will be the spot for the construction phase and the permanent access.

Mr. Sorrentino recommends conditioning the lot to have only new vehicles stored there, Mr. Thibeault agrees.

Mr. Sorrentino asked Ms. Washburn if it is commonplace to utilize stormwater basins for wetland mitigation. Ms. Washburn stated no. Discussion ensued with regards to stormwater maintenance.

Ms. Washburn asked where the stumps will be stockpiled. Mr. Thibeault stated they will be taken off site. Ms. Washburn questioned on site stump grinding. Mr. Thibeault stated it is on site chipping.

Ms. Washburn asked where the proposed chipping stockpile will be? Mr. Thibeault commented towards the top of the site where the loam stockpile is located.

Ms. Washburn asked how long will this project take to complete? Mr. Thibeault would have to check with contractor, perhaps 60 to 90 days. Ms. Washburn asked when would the start date be? Mr. Thibeault would like to start as soon as possible. The application has not been submitted to PZC. They are hoping to start end of May 2020.

Mr. Sorrentino asked if Ms. Washburn has visited the site. She stated yes. Mr. Sorrentino asked if she saw any other area for potential mitigation other than the stormwater basin. Mr. Thibeault reviewed the site plan with members to show where Ms. Washburn and he inspected.

Ms. Washburn asked if it is possible to do plantings in the wet basins? Mr. Sorrentino asked if the lots will be sanded? Discussion ensued.

Ms. Washburn asked if the Commission has asked for off site mitigation. Chairman Arends does not think they have ever done in his time on the Commission. Ms. Washburn feels it is allowed per regulations. Mr. Sorrentino does not have a problem with this. Discussion ensued.

Commission members discussed having a site walk. Mr. Thibeault will check with the owner to grant permission.

Chairman Arends opens up public commentary from the audience:

Pat Morgan, 49 Westview Drive: How close will this project be to the residential property line. Mr. Thibeault stated the asphalt will be 50-feet from the property line with the fence being 10-feet from the property line. Ms. Morgan asked if there will be any leveling of the property. Mr. Thibeault stated they are going to cut down into the embankment to push material forward. They are not proposing to lower the grade up against the property, the grades will be lowered from the property line. Ms. Morgan asked if any trees will be taken down. Mr. Thibeault stated there will be trees taken down that are necessary, but the intention is to keep a good stand of trees. The standing trees will be approximately 40-50-feet from the parking area with grading of the embankment. There will also be plantings that grow anywhere from 10 to 20-feet high providing a year-round evergreen screening. Ms. Morgan asked if the same thing will be done on the Eversource side, leaving 50 feet of trees. Mr. Thibeault stated yes. Ms. Morgan asked what kind of lighting will be used? Mr. Thibeault stated the lighting will be dark sky compliant lighting, low intensity security lighting. It is the intention of the owner to keep the pole heights down 10 to 12 feet high.

Gary Marquis, 43 Westview Drive: How high and what type of fence will be used? Mr. Thibeault stated it will be 6-feet high, most likely chain linked with privacy slats.

Chairman Arends asked if there will be a speaker system back there. Mr. Thibeault stated no, there will be security cameras back there.

Mr. Oliverson asked how many lamp posts will be on the back lot. Mr. Thibeault stated they are showing approximately 8.

Ms. Washburn asked if there are catch basins in the parking lot. Mr. Thibeault stated no it is all sheet flow.

Gary Marquis – concerns are with the drainage from the hard ball onto his property. Mr. Thibeault stated the drainage is going to the south, none towards the Marquis property.

Mr. Marquis stated there is an outlet on 43 Westview Drive located on the northeast side of the wetlands. Mr. Marquis questions if this drainage will be sufficient? Mr. Thibeault stated they cannot increase the rate of flow off of the property by regulations which is the intention of the stormwater basins. Mr. Thibeault further explains this.

Mr. Sorrentino asks based on his review of the drainage area, which direction is the hydraulic gradient, west or east. Mr. Thibeault demonstrates on the site plan and discusses.

Ms. Washburn asked both areas where fill is proposed up to the edge of wetlands, is there silt fence and double staked hay bales? Mr. Thibeault stated yes.

Ms. Washburn discusses the Japanese knotweed present on the site. It may be difficult to prevent it from growing in the basins. Would the IWWC wish to establish a plan for controlling the knotweed if and when it becomes established in the detention basins? Mr. Sorrentino asked if it is prevalent throughout the site or is it isolated. Mr. Thibeault states it is isolated, on the edge of existing parking lot. As part of mitigation of invasive species, eradication can be offered yearly for a few years to try to remove the invasive species. Discussion ensued.

Gary Marquis: With the tree line at 50-feet, how will this affect the rooting system of the big pines back there. Mr. Thibeault stated the intention is to remove the ones that could intentionally be impacted and keep the ones intact where the roots are not disturbed. Mr. Marquis asked if the fence is going to be along the entire property line. Mr. Thibeault stated yes and demonstrates this on the site plan.

Chairman Arends asked if what was submitted is an example of the plantings. Mr. Thibeault stated yes.

Mr. Sorrentino commented to members of the public that are concerned about the site plan elements, lighting, fencing, clearing, these are out of the jurisdiction of the IWWC. These concerns are best addressed with Planning and Zoning Commission during the public hearing.

Mr. Marquis: How will snow removal be handled? Mr. Thibeault stated it will be pushed in the direction of the flatter area (demonstrated on site plan).

Nick, 49 Westview Drive: Who would be in charge of cleaning out the culvert, is it the town or the property owner? Mr. Thibeault and Chairman Arends stated it would be the property owner.

Ms. Morgan asked what will this do to their property values? Mr. Arends cannot answer that question. Mr. Sorrentino stated it is not the jurisdiction of the IWWC.

A motion was made by George Sipila to continue the public hearing to next month's meeting April 14th. Richard Oliverson seconds this motion. No discussion held. All in favor. The motion passes unanimously.

Old Business:

- 1. 102219B Strategic Commercial Realty, Inc., d/b/a Rawson Materials, Maynard Road, Map 29, Lot 5, RA Zone: Excavation of approximately 1.2 million cubic yards of sand and gravel.**

Chairman Arends stated the public hearing is now closed and deliberations are to begin.

Mr. Sorrentino stated that they have received comments from Syl Pauley, P.E., NECCOG, but with the public hearing closed, his comments cannot be included into the record.

Chairman Arends addressed IWWC with his concerns; dust control-the methodology prevents dust, he could not find this in any of the notes whatsoever in the plans, he does not believe this. With regards to a watering truck that can shoot a volume of water sufficient enough to go up a 60 degree bank, 100 feet, to prevent dust control, he has not seen any specs of any trucks that can do this at a gravel site. Putting together wind, geography, and the reduced natural buffer to the watercourse, there goes margin of error. The 75-feet is too close. By reducing the natural vegetation between the disturbance and the watercourse, you are eroding the canopy. The water temperature has to be considered especially in the kettle wetlands; the canopy provides dust protection. Reducing to 75-feet is asking for trouble. Mr. Arends attended State sanctioned inland wetland watercourse training for commissioners and agents and it was recommended to have a 200-foot setback from all continuous watercourses. Mr. Arends stands by this, there should be a 200-foot setback from the Quinebaug River. Mr. Arends is open to suggestions for the kettle wetlands.

Mr. Sorrentino stated that the only recommendation that can be taken other than their own personal opinions is the recommendations from the consultant of GZA who were hired to review this plan. Mr. Sorrentino believes their recommendation was to adhere a 125-foot setback from the kettle wetland. The IWWC did not ask them to review anything associated with the Quinebaug River and they did not provide any information on recommended setbacks from the Quinebaug River.

Deliberations ensued. Commission Members polled:

George Sipila 175-feet from the kettle wetland, 175-feet from the edge of Quinebaug River

Richard Oliverson 125-feet from kettle wetland, 175-feet from the edge of Quinebaug River.

Jim Paquin 125-feet from the kettle wetland, 175-feet from the edge of Quinebaug River.

Demian Sorrentino 125-feet from the kettle wetland, 175-feet from the edge of Quinebaug River.

Jeff Arends 125-feet from the kettle wetland, 200-feet from the edge of the Quinebaug River.

Mr. Sorrentino stated the condition of the 125-foot of the kettle wetland is consistent with the GZA recommendation.

A motion was made by Demian Sorrentino to approve application 102219B Strategic Commercial Realty, Inc., d/b/a Rawson Materials, Maynard Road, Map 29, Lot 5, RA Zone: Excavation of approximately 1.2 million cubic yards of sand and gravel based on plans stamped received 2/10/20 with the following conditions:

1. That the grading plans be revised to reflect a 125-foot non-disturbance setback from the kettle wetland and a 175-foot non-disturbance setback from the ordinary high watermark of the Quinebaug River.
2. Standard Conditions of the IWWC shall apply. The operator shall meet with the Wetlands Enforcement Officer prior to disturbance of the soil to review these conditions.
3. After clearing limits have been flagged by a licensed land surveyor, the applicant shall contact the Wetlands Enforcement Officer to inspect the limits of work prior to starting any clearing of vegetation.
4. Wetlands flagging shall be maintained throughout the duration of the permit.
5. Permit Duration: The permit duration is controlled by the Inland Wetlands and Watercourses Regulations Section 11.6. Pursuant to this Section, this permit shall be valid for 5 years.
6. Final Plans: The final plans shall place the approval motion on one sheet. One set of final plans shall be submitted with the live signatures and seals of all design professionals with a signature block on each sheet for signature by the IWWC Chair.
7. When the excavation is approximately 20-feet above the proposed bottom elevation, contact the Land Use Department to schedule witnessing deep test pits in order to evaluate the depth to seasonal high ground water. If no seasonal high groundwater indicators are observed, when the excavation is approximately 10-feet above the proposed bottom elevation, contact the and Use Department to schedule witnessing deep test pits in order to evaluate the depth to seasonal high ground water to review limits or work prior to starting any clearing of vegetation.
8. Within 12 months after clearing the site, the applicant shall contact the Wetlands Enforcement Officer to inspect the wetland buffer signs.

Jim Paquin seconds this motion. Mr. Arends feels dust control is very questionable. No further discussion held. In favor – Demian Sorrentino, George Sipila, James Paquin, Richard Oliverson. Not in favor – Jeffrey Arends. The motion passes 4-1.

- 2. 021120B Vachon Brooklyn, LLC, 512 Providence Road, Map 41, Lot 13A/14, PC Zone; Construction of (2) 16 ft. wide access driveways to access proposed new vehicle storage lots. Drive to the larger of the two proposed parking areas will be in an area historically used for an agricultural crossing.**

A motion was made by Demian Sorrentino to table application 021120B to next month's regular meeting April 14, 2020. George Sipila seconds this motion. No discussion held. All in favor. Motion passes unanimously.

New Business:

- 1. John P. Malarkey, 66 Riverfarm Drive, previously approved application 121118A, construction of a single-family dwelling, septic system, well, driveway and site grading within 125-feet of wetland.**

Mr. Malarkey currently resides at 20 Day Street. He owns the property at 66 Riverfarm Drive. Paul Terwilliger, PC Survey, surveyed the lot. There are some trees Mr. Malarkey would like to cut down as they are a hazard to where the new home will be built with fear of them falling on the new construction and propane tanks. He would like to cut these trees and leave the stumps. Ms. Washburn visited and reviewed the site and marked the trees with green tape. Eight trees are on the east side which will be close to the new construction. The house will move a bit.

Ms. Washburn reviews photos with the Commission Members. Ms. Washburn does not object to any of the tree removal. She gave him permission to remove a few trees on a knoll. He moved the sediment controls.

Mr. Oliverson asked if the trees will be removed from the site. Mr. Malarkey stated he will remove the trees and leave the stumps low.

Mr. Malarkey asked if he could place stones at the entrance of his property to be used as a driveway tracking pad. Ms. Washburn and the Commission Members agreed with this.

A motion was made by Demian Sorrentino to amend application 121118A to include the cutting of the additional trees and leaving the stumps. George Sipila seconds this motion. No discussion held. All in favor. The motion passes unanimously.

- 2. 031020A Darko Krsulic/Owner, Evan Sigfridson/Applicant, 293 Hartford Road, Map 16, Lot 39, RA Zone; Demolish remainder of collapsed coop, dig and pour frost walls for proposed 24 x 34 ft. accessory building.**

No one was present to represent the application.

Ms. Washburn stated there were no maps received where the work is proposed. There is no map to show the wetlands or the work in relation to wetlands. The wetlands according to GIS, shows the barn is in or next to wetlands. They want to demolish chicken coops. There is no wetlands delineation done. Discussion ensued.

A motion was made by Demian Sorrentino to not receive application 031020A, table the application and advise the Wetlands Agent to have the applicant get a wetlands delineation and a site plan for this application. Jim Paquin seconds this motion. No discussion held. All in favor. The motion passes unanimously.

3. 031020B Jeffrey Weaver, Day Street, Map 43, Lot 6, RA/R30 Zone; 6-lot subdivision, work in upland review area, septic system, driveway, residential house, well, minor grading.

Jeff Weaver represents application 031020B. The proposed 6-lot subdivision is west of the current 10-lot subdivision on Day Street. The wetlands touch to the back of Lot #6. No work or crossing is being proposed in the wetlands. Mr. Sorrentino asked if Mr. Oliverson is a direct abutter to the property. Mr. Weaver stated not to the subdivision but of the remaining land he is an abutter.

Ms. Washburn has not visited the site. Ms. Washburn would like to receive the delineation report. Revised plans will be submitted from David Held, Provost and Rovero.

Mr. Sorrentino asked if there are any direct impacts. Mr. Weaver stated Lot #1 is in the upland review, Lot#6 the wetland are approximately 200 feet back from the wall.

Commission Members feel there is no significant impact. No public hearing is required.

Ms. Washburn asked if they wish her to do the site visit or would the Commission like to go. Chairman Arends asks Ms. Washburn to do a site visit and report back to the Commission.

Mr. Weaver commented there are 5 lots in the R30 Zone and 1 lot in the RA Zone.

A motion was made by Jim Paquin to receive application 031020B Jeffrey Weaver, Day Street, Map 43, Lot 6, RA/R30 Zone; 6-lot subdivision, work in upland review area, septic system, driveway, residential house, well, minor grading and continue to next month's meeting April 14, 2020.

Ms. Washburn stated she has informed Syl Pauley, P.E., NECCOG, that the application has been received and requires a review. As soon as Mr. Archer receives the stamped plans from David Held, he will e-mail them to Ms. Washburn and Mr. Pauley.

George Sipila seconds this motion. No further discussion held. All in favor. The motion passes unanimously.

Communications:

1. Budget Update: Budget reviewed.

2. Wetland Agent's Monthly Report:

Ms. Washburn introduces Sharon Diamen who lives on Barrett Hill Road. She is interested in becoming a Wetlands Member. She is a retired physician. She lived in Chester, CT for 34 years living next to a flood plane and the Connecticut River. Chairman Arends commented there are on-line courses that are available for new members to take. Mr. Arends commented that the

Commission would love to have Ms. Diamen as a new member. She is recommended to meet with the First Selectman Rick Ives for an appointment.

Ms. Washburn met with Anne Opperman who lives at 33 Pomfret Road (Route 169). She would like to remove hazardous trees along her driveway the edge of Route 169. Also, removal of multiflora rose. Ms. Washburn would like guidance from the Commission if this will require a permit to do the work and if the wetlands should be delineated.

Chairman Arends considers this function of maintenance, not going in with heavy equipment, no digging involved, a bucket truck is okay. Mr. Sorrentino states that it is safe to advise people they can trim brush, cut trees, especially dead trees, as long as they are not disturbing the earth or creating a potential for erosion and sedimentation, it is their right to do so.

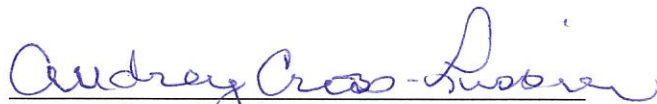
Ms. Washburn met with Sara Hemingway (Audubon Society) who said that Paula may be willing to train and organize volunteers if this Town wanted to do a vernal pool survey. Ms. Washburn mentioned this to Chairman Arends, and he said the Conservation Commission may like to do this.

Seth Duval, Woodward Rd, is planning to be ready for an inspection, Ms. Washburn will call him in April 6th to report at the April 14th meeting. Ms. Washburn invites any Commission Members to come along.

Mark Curreri, Appell Rd, has resolved his issues with Yee Kim Timber.

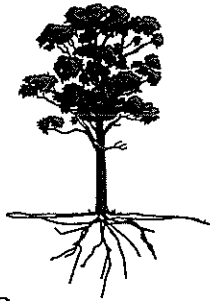
Public Commentary: None.

Adjourn: A motion was made by Jim Paquin to adjourn the meeting at 8:00 p.m. Richard Oliverson seconded this motion. No discussion held. All in favor. The motion passes unanimously.


Audrey Cross-Lussier, Recording Secretary

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MAR 09 2020



Joseph R. Theroux

~ Certified Forester/ Soil Scientist ~

Phone 860-428-7992~ Fax 860-376-6842

P.O. Box 32, Voluntown, CT. 06384

Forestry Services ~ Environmental Impact Assessments
Wetland Delineations and Permitting ~ E&S/Site Monitoring
Wetland function and value assessments

11/14/19

Killingly Engineering Associates

P.O. Box 421

Dayville, CT. 06241

Re: Wetland delineation, Vachon Chevrolet site, Brooklyn, CT.

Dear Mr. Glaude,

At your request I have delineated the inland wetlands/watercourse on the above referenced 4.68 acre & 5.84 properties shown as lot#13A and lot 14.

These wetlands have been delineated in accordance with the standards of the National Cooperative Soil Survey and the definitions of wetlands as found in the Connecticut Statutes, Chapter 440, Sections 22A-38.

Fluorescent pink flags with a corresponding location number delineate the boundary between the upland soils and the inland wetlands/watercourse that was found.

Flag numbers WF-1 thru WF-21, WF-1-1 thru WF-1-12 and WF-1A thru WF-18A delineate the southern boundary of the palustrine forested/scrub-shrub wetland/watercourse that bisect the properties.

Flag numbers WF-1B thru WF42B delineate the northern boundary of the palustrine forested/scrub-shrub wetland/watercourse. This wetland was inundated on the date of the delineation, (11/14/19).

Flag numbers WF-1C thru WF-11C delineate an isolated pocket of wetland soils that have formed in an old shallow excavated area. As this depressed area was partially inundated on the date of the delineation and has no inlet or outlet, it may be classified as a vernal pool or as vernal habitat.

These wetland soils are characterized by thick mineral and/or organic "A" horizons and low chroma colors within 20 inches of the soil surface.

The remainder of these parcels was inspected for inland wetlands and watercourses and none were found.

In conclusion, if you have any questions concerning the delineation or this report, please feel free to contact me.

Thank you,

A handwritten signature in black ink, appearing to read 'J. R. Theroux', written in a cursive style.

Joseph R. Theroux
Certified Soil Scientist
Member SSSSNE, NSCSS.

RECEIVED

MAR 09 2020



Joseph R. Theroux

~ Certified Forester/ Soil Scientist ~

Phone 860-428-7992 ~ Fax 860-376-6842

P.O. Box 32, Voluntown, CT. 06384

Forestry Services ~ Wetland Impact Assessments

Wetland Delineations and Permitting ~ E&S/Site Monitoring

Wetland Function & Value Assessments

3/5/20

Killingly Engineering Associates
P.O. Box 421
Dayville, CT. 06241

Re: Wetland function/value and impact assessment report for proposed parking expansion for Vachon Chevrolet, Providence Road, Brooklyn, Connecticut.

Dear Mr. Glaude,

At your request, I have reviewed the site plans entitled: "PROPOSED PARKING EXPANSION, "VACHON CHEVROLET" PROVIDENCE ROAD (ROUTE 6) BROOKLYN CONNECTICUT, dated 1/7/2020 and the above referenced property for the purposes of assessing the wetland functions and values and potential impacts to the inland wetlands and watercourses in proximity to the proposed parking area expansion.

The wetland function and value assessment was conducted on 2/26/20.

Existing Conditions

The property composed by two separate lots is 10.52 acres in size and is located on the north side of Providence Road, (Route 6), in Brooklyn, CT.

The southeast portion of the site is occupied by the car dealership with both paved and gravel parking areas. The remaining portion of the property is occupied by a large palustrine forested/scrub-shrub wetland & watercourse complex and adjacent forested uplands.

Upland Review Areas

The 125 foot upland review area around the delineated forested/scrub-shrub wetland/watercourse is vegetated in the overstory with a mix of white pine and mixed hardwoods in the sawtimber and polewood size classes. The mixed hardwoods include white and scarlet oaks, and red maple.

The understory is comprised of polewood and saplings in these species as well as shrub species such as highbush blueberry. Herbaceous vegetation includes hay scented ferns and miscellaneous grasses.

Wetlands

A palustrine forested/scrub-shrub wetland/watercourse was delineated in the central portion of the property. (See wetland delineation report). The wetland was inundated on the date of the delineation, (11/14/19) and the assessment, (2/26/20).

This area has formed due to the presence of a perched or seasonal ground water table that provides the hydrology to allow it to remain inundated throughout the year.

The wetland/watercourse is vegetated around its perimeter with scarlet oaks, white pine and red maple in the sawtimber size classes.

The majority of this wetland/watercourse is densely vegetated with red maple saplings and typical wetland shrub species such as highbush blueberry, speckled alder, sweet pepperbush, winterberry and spicebush.

Herbaceous vegetation included sphagnum moss, sensitive & cinnamon ferns, sedges, rushes, skunk cabbage, tussock sedges and misc. grasses. Floating duckweed was also noted in one area.

Wildlife tracks/sign found and directly observed in and adjacent to the wetland/watercourse included mammals and bird species such as: white tailed deer, eastern coyote, red tailed fox, raccoon gray & red squirrels, red tailed hawk, American crow, red wing blackbird, and numerous songbird species.

Due to the time of year, no amphibians or reptiles were observed although undoubtedly the main wetland/watercourse serves as habitat for numerous species.

A small depressed area containing wetland soils was also delineated in the northeast portion of the property, (delineated by the "C" series flags). This area was most likely a historic excavation, in which these wetland soils have formed due to prolonged wetness.

The perimeter of this area is vegetated in the overstory with red maple sawtimber and polewood, and the understory is comprised of shrubs such as highbush blueberry, and speckled alder. Herbaceous vegetation included sensitive and cinnamon ferns. Sedges were found within the inundated portion of the wetland.

It is my opinion that this small wetland may possibly serve as vernal habitat, although no wood frogs, salamanders or egg masses were found on the date of the assessment, (2/25/20).

Wetland Functions and Values

The forested/scrub-shrub wetland/watercourse, and the small wetland were inspected to determine wetland functions and values utilizing the Army Corps. Of Engineers methodology as outlined in "The Highway Methodology Workbook Supplement".

This methodology recognizes 8 separate wetland functions: groundwater recharge/discharge, floodflow alteration/storage, fish/shellfish habitat, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, sediment/shoreline stabilization and wildlife habitat. The 4 wetland values include: recreational value, educational/scientific value, uniqueness/heritage value and threatened/endangered species habitat.

For each wetland function or value to be determined, 2 to 31 different considerations/or qualifiers are considered as rationale to apply or eliminate that specific function or value.

Palustrine forested/scrub-shrub wetland/watercourse functions:

The following is a list of the wetland functions exhibited by this wetland/watercourse and their descriptions:

Floodflow alteration: the large wetland/watercourse exhibits flood storage potential due to the flat topography, and valuable properties, structures and resources are located adjacent to the wetland.

Ground water recharge and discharge: Ground water recharge function is possible due to the perched water table being trapped and slowly infiltrating during dry season. This is a primary function of this wetland.

Sediment/toxicant retention: herbaceous vegetation, shrubs and flat topography in the wetlands can effectively trap sediments/toxicants from surface flows from the adjacent topography and gravel parking areas.

Nutrient removal/retention: herbaceous and shrub vegetation in the wetlands can effectively trap and utilize potential nutrients before reaching watercourses. Nitrogen fixing bacteria in wetland soils also trap nitrogen. Although with no current sources of nutrients present, this wetland has little opportunity to provide this function.

Production export: numerous tree, shrub and herbaceous plant species in the wetlands provide food, berries and seeds for wildlife. Amphibians provide food for birds and mammals.

Sediment and shoreline stabilization: Roots from herbaceous grasses and plants, shrub species and trees found in wetlands bind and stabilize soils which helps prevent erosion along steeper edges of wetlands. Although with no significant currents or shoreline waves, this wetland/watercourse has little opportunity to provide this function.

Wildlife habitat: Numerous amphibians, reptile, mammal, and bird species inhabit this wetland. The wetland and upland riparian zones adjacent to the wetland serve as wildlife habitat. Wildlife habitat is another primary function of this wetland.

This wetland did not exhibit the wetland functions of fish habitat due to the lack of significant deep water habitat areas capable of sustaining fish.

Palustrine forested Scrub-shrub Wetland/Watercourse Values

The following wetland values were exhibited by this wetland/watercourse:

Educational/scientific value: this wetland/watercourse is relatively undisturbed, contains multiple wetland classes, and is considered as valuable wildlife habitat, although with no public access on this property, this wetland has little opportunity to provide this value.

Uniqueness/heritage value: this wetland/watercourse serves an important role in the ecological system of the area, it is a typical wetland class for the area, and serves as valuable wildlife habitat.

Visual/aesthetic value: the wetland/watercourse is visible from multiple viewing locations, it contains a diversity of vegetation that turns vibrant colors during different seasons, it is considered valuable wildlife habitat, and is not significantly disturbed.

This wetland/watercourse did not exhibit the value of threatened/endangered species habitat as the site was not shown within the shaded areas on the current natural diversity database maps.

“C Series” Wetland Functions:

The following is a list of the wetland functions exhibited by this wetland and their descriptions:

Ground water recharge and discharge: Ground water recharge function is possible due to the perched water table being trapped and slowly infiltrating during dry season. This is a primary function of this wetland.

Wildlife habitat: It is possible that amphibians, reptile, mammal, and bird species inhabit this wetland. The wetland and upland riparian zones adjacent to the wetland serve as wildlife habitat.

This wetland did not exhibit the wetland functions of floodflow alteration, sediment/toxicant retention, nutrient removal/retention, production export, sediment & shoreline stabilization and fish habitat due to the lack of floodwater storage capacity, its small area, lack of dense vegetation, lack of significant deep water habitat areas capable of sustaining fish, and it is not associated with stream flows or a large body of water.

“C Series” Wetland Values

The following wetland values were exhibited by this wetland:

Educational/scientific value: this wetland is relatively undisturbed, and is considered as wildlife habitat, although with no public access on this property, this wetland has little opportunity to provide this value.

Uniqueness/heritage value: this wetland serves an important role in the ecological system of the area, it is a typical wetland class for the area, and serves as wildlife habitat.

This wetland did not exhibit the visual/aesthetic value as it is not visible to the public, and does not contain vegetation that turn vibrant colors. It does not exhibit the value of threatened/endangered species habitat as the site was not shown within the shaded areas on the current natural diversity database maps.

Potential wetland impacts

The project plans and site were reviewed to assess the potential impacts to the wetlands from the proposed parking area expansion.

On the two parcels, an expansion of the existing parking areas is proposed, one area in the northern portion of both of the lots, and one in the southern portion of lot 13A.

Northern parking area:

In order to access the uplands in the northern portion of the parcels, a 1,860 square foot direct wetland disturbance is proposed for the 12 foot wide paved access drive. This will consist of excavation and installation of two 30 inch diameter class IV concrete pipes which will be filled along the bottom with native soil material.

Within the majority of the 125 foot upland review area and remaining uplands, the 12 foot wide access drive and a 340 foot long by 60 foot wide paved parking area is proposed with a storm water treatment basin located to the south of the parking area. In the bottom of the storm water basin, a 2,850 square foot wetland mitigation is also proposed. This area is designed to have a wet bottom which will fluctuate with the existing water table and will be seeded in with New England Wetmix.

The clearing limits and E&S measures shown on the plans vary from approx. 40 feet in width to immediately adjacent to the wetlands.

The topsoil stockpile is shown a reasonable distance from the wetlands and silt fencing is shown along the southern side.

Southern parking area:

In order to access the proposed 112 foot long by 44 foot wide paved parking area, a 1,250 square foot direct wetland disturbance is proposed for the construction of the access road.

To the north of the paved parking area, a storm water treatment basin is shown, and in the bottom of the basin a 1,150 square foot wetland mitigation is proposed. This area is also designed to have a wet bottom which will fluctuate with the existing water table and will be seeded in with New England Wetmix.

Also shown on the project plans are proposed plantings of common spicebush and sweetgale shrubs along the northern edge of the storm water treatment basin, to help revegetate and stabilize the side slopes.

The clearing limits and E&S measures on the plans for the most part are depicted immediately adjacent to the wetlands.

No topsoil stockpile is shown for this small construction area so I would assume that the topsoil will be hauled off site, or stored elsewhere on site, preferably with silt fencing around the perimeter.

E&S Measures:

The submitted project plans show the proposed E&S measures around the perimeter of the clearing limits adjacent to the wetlands as silt fencing and/or staked hay bales.

It would be my recommendation that the E&S measures be installed as soon as possible after the initial timber cutting and before the stumping and topsoil removal operation. It is during this phase where the most likely opportunity will occur for erosion and sedimentation. In some areas the slopes adjacent to the wetlands are steep, and the excavation, filling and grading are proposed directly adjacent to the wetlands.

Along the clearing limits adjacent to the wetlands, I would recommend either super silt fencing or silt fencing backed by staked hay bales should be proposed and implemented. This silt fencing will also prevent reptiles and amphibians from entering the excavation areas.

I would recommend that the storm water basins be constructed first before the remaining areas so they can serve as temporary sediment basins until the parking areas are constructed.

I would also recommend that E&S inspections be conducted on a frequent basis during the land clearing/stumping/topsoil stripping phases, and prior to significant storm events.

Direct wetland impacts:

The combined direct wetland disturbance for both of the wetland crossings totals 3,110 square feet. In this area all the specifically listed wetland functions and values for each wetland will be negated.

It is my opinion however, that the proposed 4,000 square foot wetland mitigation will compensate for this loss.

Potential short term impacts:

The potential short term impacts associated with the land clearing, stumping, top soil stripping and construction would be limited to potential sediment discharges during significant storm events.

Provided that the proposed/recommended E&S measures/inspections are correctly implemented and maintained throughout the project timeframe, the disturbance directly

adjacent to the wetlands will not significantly impact the wetlands or their existing functions due to erosion and sedimentation. Once the top soils are removed, the well-drained, sandy/gravelly soils will allow for good infiltration of storm water runoff until the construction is complete.

The quick and permanent establishment of vegetation in the disturbed areas is crucial to the prevention of erosion. To minimize the potential for these impacts, E&S control measures have been incorporated into the project plans on sheet 5 of 5.

Potential long term impacts:

Wetland hydrology

I see no direct or long term impacts to the wetland hydrology as a result of the proposed access roads, parking areas or storm water treatment basins. As the access drives and parking areas are paved, storm water runoff will be an input to the existing hydrology, through some minor overland flow, but mostly through the storm water basins, as ground water recharge or as direct discharge during significant storm events after treatment.

Water quality:

Due to the incorporation of the paved parking surfaces, stone water quality trenches, storm water treatment basins, and some direct infiltration of storm water in the well-drained, sandy, gravelly soils, I see no significant or adverse impacts to the existing water quality of the wetlands from storm water discharges.

Adjacent upland wildlife habitat

Potential long term impacts to the upland habitat from the project would include the loss of a significant portion of the URA serving as riparian zones and upland wildlife habitat adjacent to the wetlands. This intrusion will force wildlife into the narrow vegetated corridor in and around the wetlands during and after the construction timeframe, and into other areas where the uplands are not disturbed. However, because this vegetated wildlife corridor is not proposed to be totally cleared and still exists in minimal widths in some areas, the wetlands and adjacent riparian zone will still provide for some wetland function and wildlife habitat.

It is my opinion that the proposed 4,000 square foot wetland mitigation will help compensate for these impacts to the upland/riparian habitat.

In summary, the design of the project implements features intended to minimize or eliminate potential impacts to the wetlands such as storm water runoff, significant loss of wetland habitat, and erosion and sedimentation associated with construction activities.

I feel these proposed measures are adequate to protect the wetlands provided that the recommended erosion and sedimentation control features are implemented and maintained throughout the excavation and reclamation timeframe.

The construction of the proposed 4,000 square foot wetland mitigation will assist in the remaining wetlands ability to provide the same wetland functions and values they currently provide.

If you have any questions concerning the site assessment or this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "J. R. Theroux", written in a cursive style.

Joseph R. Theroux
Certified Forester and Soil Scientist
Member SSSSNE, NSCSS, SSSA