

**Brooklyn Inland Wetlands Commission
Special Meeting Minutes**

The Brooklyn Inland Wetlands Commission held a special meeting on Monday April 20, 2015, 6:00 p.m. at the Clifford B. Green Memorial Center, 69 South Main Street on the following:

Call to Order: The meeting was called to order at 6:27 p.m.

Members Present: Jeff Arends, George Sipila, Melissa Labossiere and Real Gallant (arrived at 6:25 p.m.).

Absent: Erik Costa and Robert Rossi with notice. Deane Rettig without notice.

Staff Present: Jana Roberson, AICP, Land Use Administrator, Audrey Cross-Lussier, Recording Secretary.

Also Present: Bob Messier, Ernie Cotnoir, Paul Archer, Tom Rukstela, Jeff Otto, Linda Trahan, Troy and Meghan Sposato, Don Dubois, Daniel Meade, Edward Pawlak, David Roche.

Roll Call: All members present stated their name for the record.

Seating of Alternates: None.

Approval of Minutes:

1. Regular Meeting Minutes March 10, 2015.

A motion was made by Jeff Arends to approve the regular meeting minutes of March 10, 2015. George Sipila seconds this motion. No discussion held. All in favor. The motion passes unanimously.

Public Commentary: None.

New Application Acceptance: None.

Continued Applications:

Reading of Legal Notice: Chairman Gallant reads the legal notice into the record.

Public Hearings:

Continued Public Hearings:

1. 120914A Strategic Commercial Reality, Inc. d/b/a as Rawson Materials (Jeffrey Rawson President) Rukstela Road, Map 30, Lot 16 and Map 29, Lot 1, RA Zone; Creation of a Pond with removal of earth products.

Attorney Ernest Cotnoir asks the Commission to move onto the next application on the agenda as they are waiting for their hydrologist to arrive.

A motion was made by Jeff Arends to move agenda item a. Continued Public Hearings 1. Application 120914A to after b. New Public Hearings application 021015A. Melissa Labossiere seconds this motion. No discussion held. All in favor. The motion passes unanimously.

b. New Public Hearings:

Chairman Gallant reads the public hearing notice into the record.

1. 021015A Jeffrey Otto/Thomas Rukstela, east side of Mason Road, Map 23, Lot 9B, RA Zone; Removal of vegetation clogging brook, restoring stream flow to natural channel of the brook, remedying damage to area adjacent to streambed caused by livestock, maintenance of waterway incident to farming operation.

Tom Rukstela stated that Ms. Roberson had sent him information with regards to what type of appropriate native seed mix to be used. Once Mr. Rukstela purchases the seed he will seed down the outside edges.

Ms. Roberson reads into the record the additional mitigation measures proposed:

1. No further excavation within the watercourses or adjacent wetlands areas is proposed.
2. Wetlands appropriate native seed mix will be spread in the spring to help re-vegetate the disturbed areas.
3. Non-native multiflora rose will be manually removed from the wetlands areas. Upland of the delineated wetlands, multiflora rose may be removed with a brush hog or mini-excavator while keeping soil disturbance to a minimum.
4. As expenses allow, barbed wire fencing with metal poles to prevent livestock from damaging the stream banks will possibly be installed. An approximately 75' section will be left open for livestock to drink water.

To review the application, Ms. Roberson stated that this started out as a violation of alteration of a watercourse. The remedy for that was for Mr. Otto and Mr. Rukstela to apply for a wetlands permit. This was deemed to be a significant impact activity, hence the public hearing tonight and review of the proposed mitigation.

Chairman Gallant asked if the wetlands have been delineated. Ms. Roberson stated yes there was a wetlands delineation conducted from the previous subdivision around 1990. The main activity is pasturing of livestock which is a permitted use as of right. The applicants are not proposing

any additional excavation work; however, Mr. Rukstela would like to continue to remove the non-native species. A good portion of the pasture is within 125 feet as the wetlands are broad.

Chairman Gallant asked for identification of #3 of the additional mitigation. Ms. Roberson stated this is along the northern property line which is outside of the wetlands. Discussion ensued.

Jeff Arends asked if there were any written correspondence received. None were received.

A motion was made by Jeff Arends to close the public hearing on application 020915A. George Sipila seconds this motion. No discussion held. All in favor. The motion passes unanimously.

Continued Public Hearings:

1. 120914A Strategic Commercial Reality, Inc. d/b/a as Rawson Materials (Jeffrey Rawson President) Rukstela Road, Map 30, Lot 16 and Map 29, Lot 1, RA Zone; Creation of a Pond with removal of earth products.

Attorney Ernest Cotnoir, on behalf of the applicant, stated that this is a matter that has been continued a couple of times. There is an application pending which had a modest revision that has been submitted. The key areas left open were to receive evidence and testimony regarding questions of hydrology and also questions relating species within the wetlands area. Experts in both areas are in attendance, Mr. Edward Pawlak and Mr. Daniel Meade.

Ms. Roberson stated Mr. Messier mentioned there have been some site plan changes; however, the site plan changes were not received. Mr. Messier stated that it was only determined exactly what the changes were this afternoon which is only one revision to the plan. A stone 4 ft. high x 4 ft. wide berm was added with 2:1 slope to keep the amphibians out which Mr. Messier demonstrates on the site plan.

Mr. Edward Pawlak, Registered Soil Scientist and Certified Professional Wetland Scientist, Connecticut Ecosystems, LLC. addresses the Commission with regards to application 120914A. Back in 2006 Mr. Pawlak delineated the wetlands across the property. At that time notes were made of potential vernal pools based on hydrology observed. There have been no survey/investigations subsequent to that delineation until contacted recently by Bob Messier with regards to questions regarding the proposed pond construction and wetland dependent wildlife impact.

Mr. Pawlak inspected the property on November 5, 2014, reviewing an area of the property where a small wetland was delineated back in 2006. This area lies within a depression adjacent to a dirt haul road which was used in the past by a farmer as a manure storage pit underlain by a concrete base. Based upon the conditions at the time of the delineation, there were no evidence of vernal pools, Mr. Pawlak's professional judgement was that this was a low functioning wetland which would be more than compensated for by the construction of the approximately 7 acre pond. This is the only wetland impact proposed associated with the pond construction.

Mr. Pawlak discussed with Commission Members the potential impacts of this proposed pond with the adjacent wetlands nearby and within hundreds of feet. Mr. Pawlak discussed the breeding population and potential impacts on wetland dependent wildlife specifically wood frogs and spotted salamanders. Mr. Pawlak questioned if there were vernal pools near these resources. Mr. Pawlak visited the site last week and witnessed the major migration of the wood frogs and spotted salamanders had taken place with the amphibians having laid their egg masses. Mr. Pawlak looked at a total of nine (9) wetlands on the landscape which was reviewed on the site plan and demonstrated to Commission Members. Wetland #1 was completely dry last week so it is not a vernal pool. Wetland #2 contained 1-2 inches just at the very bottom, a puddle, not sufficient to maintain the hydrology of a vernal pool. Wetland #3 is a hillside slope red maple swamp. Because of the sloping wetland the surface water is not detained. There are a couple of inches of water trapped at the base of the slope against a stone wall and a dike; this is not a vernal pool. Wetland #4 is similar in character, a hillside maple swamp with an outflow watercourse making its way down to a permanent pond off site into Canterbury; this is not a vernal pool. Wetland #5 is a red maple swamp with a gradient to it so water flows through it. There were 1-2 inches of water with no egg masses. Wetlands 5A is a classic vernal pool containing wood frog and spotted salamander egg masses with water up to 2 feet deep. Wetland #6 is a vernal pool next to a corn field located to the west. This wetland contained wood frog and spotted salamander egg masses with water close to 3 feet deep. Wetland # 7 is a red maple swamp; at the northerly end is a wet meadow. There was shallow water 1-2 inches across most of it, with ground water discharge, but no water of depth or amphibians. Wetland #8 is a vernal pool with a bottom like quick sand. Mr. Pawlak was unable to walk around the entire area; however, there was a large mega-mass of wood frog eggs found with no spotted salamander eggs. This was the most productive vernal pool.

In summary, there are three vernal pools on the landscape with the proposed pond and detention/sedimentation basin. Mr. Pawlak discussed the migration distance of wetland dependent wildlife with regards to Wetlands 5A and Wetlands 6. Mr. Pawlak felt in his professional judgement the amphibians breeding in these two vernal pools would be at risk if corrective measures were not taken. Because of this Mr. Pawlak recommended to Mr. Messier to design a permanent barrier. Mr. Messier proposed a 4 ft. high berm with a 2:1 slope along the westerly side of the pond and entirely encircle the sedimentation basin. Wetland #8 the distance from the pond is 850 ft. and 1,800 ft. down to the sedimentation basin. The habitat between these two features includes mostly open fields. Mr. Pawlak feels that it is very unlikely that the amphibians breeding there would make their way down to the permanent pond. Therefore, the berm was not recommended to be constructed around the northerly limits. Mr. Pawlak feels by incorporating the barrier will deter the amphibians from breeding in the wrong places.

Mr. Arends questioned Mr. Pawlak with regards to the duration of vernal pools. Mr. Pawlak stated that some vernal pools can be semi-permanent and dry up not every year but periodically. Mr. Arends asked if there is any danger of creating a pond of such size that will affect the ability of the vernal pools to get water. Mr. Pawlak stated that the hydrologist will speak to this question.

Chairman Gallant asked Mr. Pawlak based on his field experience and research done, has he gone to sites where the hydrology has affected the vernal pools.

Mr. Pawlak stated he has done monitoring in a rock quarry (basalt rock) which went down hundreds of feet within 500 feet of a vernal pool and there had been no effect.

Ms. Roberson asked if Mr. Pawlak what the migration of the wood frog is. Mr. Pawlak stated for spotted salamanders can be 100 to 200 feet. The juvenile wood frogs can be over 1,000 feet as they disperse away from their breeding pools and likely colonize other pools. Discussion ensued.

Mr. Pawlak stated that there is an impact on Wetlands #6 and establishing restoration of some width of buffer there would certainly be a recommendation to be made. Discussion ensued.

Ms. Roberson asked Mr. Pawlak to speak about the non-vernal pool ecological communities and function of the wetlands water courses. Mr. Pawlak stated there is no direct disturbance to any of the other wetlands and will remain as they are, provided that there is no alteration of their hydrology. Discussion ensued.

Ms. Labossiere asked if the berm barrier will need any type of maintenance. Mr. Pawlak stated that based upon his experience a stone berm 4 feet high at 2:1 slope should not require maintenance.

Attorney Cotnoir introduces Daniel Meade Hydro-Geologic Consultant. Mr. Meade stated that he did not visit the site this week, however, has been there previously when multiple ponds were proposed. Mr. Meade addresses the Commission with regards to Application 120914A. The geology of the area is very classic valley filled piece of sand and gravel underplayed by till, crystal and bedrock. The ground water flow is devised by recharge from precipitation. It travels through rock, till, rapidly through sand and gravel and supports a water table which is controlled by the geology of the material and the amount of precipitation and evaporation occurring there. The area in which the pond is located has been studied by US Geological Survey, State of Connecticut. The sand and gravel deposit in the area of the proposed pond is probably in excess of 40 to 50 feet. It is hydro logically connected to any water feature that flows by it or in local which includes streams, wetlands, ponds, vernal or not. The State of Connecticut receives on the average about 48 inches of precipitation a year with cycles of dryer and wetter summers, etc. The maximum evaporation in Connecticut is about 28 inches per year. The amount of water that evaporates off a land surface through transpiration from plants or off a free water surface may vary anywhere from 28 inches down to a few fractions of an inch depending upon the soil type and the underlying sediments and the proximity location to the water table. Mr. Meade reviewed the excavation of the pond and the major effects on any water feature there would be at the time of excavation. Once the water table is hit, a bucket full of sand is taken out and it will be replaced by water. The porosity of sand and gravel generally ranks anywhere from 10 to 30%. A cubic foot of sand and gravel is approximately $\frac{1}{4}$ to $\frac{1}{3}$ of interstitial space. For a gallon of sand $\frac{1}{4}$ of that would be water. Once excavation takes place and reaches below the water table the sand and gravel will leak most of the water out on its way up, but it will have some soil moisture left in it which will be lost to evaporation or drainage out of that material off site. That will be replaced by ground water flow from 360 degrees around the pond mainly from the uphill side or away from the stream side that will seek to refill that to an equilibrium level. The equilibrium level is controlled by materials in the sand and gravel valleys if there is a stream or pond that is a water table feature where it is at the same elevation of 100 feet. Generally the slope of the water

table towards that pond will be very, very shallow. Going out 100 feet away from it you may find the water table is only one inch higher. If the material is very fine gradient material and does not transmit water, then the water table will be very much steeper going away from the pond. This would be true especially in the till covered areas surrounding the sand and gravel body. The major effects on pond and stream bottoms would be excavation during the high peak sun, July, August, and September, although June and July seems to be wetter precipitation wise which would seem to alleviate some of the effect. Generally what happens in terms of the effects of the ponds, streams, rivers, once you create a cone of draw down from excavation or pumping a well, any of the water bodies nearby will immediately release water through the bottom to try to refill that void. As time goes on this generally happens rapidly because water is flowing through the stream bottom and it carries some fine sediments. The stream bottom will clog temporarily until pressure comes down and flushes it. There is very little loss of stream flow or in terms of wetlands which generally has an organic covering on the bottom and they don't transmit water vertically through it very fast. The same would hold true with any standing water body, within hours or up to a day it would feel like it would clog the bottom so that water would be protected from draw down. Mr. Meade feels that based on this there would be very little effect during excavation. Once the pond reaches equilibrium there still may be some evaporation loss on it that would tend to deplete the pond level and have a very minor effect on stream or water bodies that have an open stream bottom. Mr. Meade's personal opinion is that the pond would represent a valuable thing as you are creating a habitat of open water with a certain depth to it which would support fish life. It would be fairly well oxygenated because of exposure to the atmosphere and the water depth would be cold and spring fed, ground water inflow coming from up gradient areas. The water would run in the high slope side, discharge through the pond down sides which would be the stream side. Water table elevation of the pond would in some effect be controlled by the water table elevation of the nearby brook. Mr. Meade feels that there would be very minimal impact after the pond is filled, some small amount of impact while the pond is being excavated.

Chairman Gallant questioned the draw down from vernal pools and any neighboring wells. Mr. Meade addressed Chairman Gallant's question.

Ms. Roberson asked what the elevation of the nearest watercourse is. Mr. Meade stated it would be the brook nearby. Mr. Meade and Mr. Messier reviewed the site plan. Discussed ensued.

Chairman Gallant asked Mr. Messier how long it will take to dig the pond down. Mr. Messier stated between 5 to 10 years. Lengthy discussion ensued regarding the level of the ground water table, borings and final reclamation post excavation.

Commission members asked that the plans be revised to reflect the level of the ground water table, borings and final reclamation post excavation. Chairman Gallant requests that Mr. Meade review the boring results.

Attorney Ernest Cotnoir asked Mr. Meade to give his qualifications for the record. Mr. Meade reviewed his credentialing for the record – a Bachelors and a Master s Degree in Geology, worked 4 years for US Geological Survey, Water Resources Division, 22.5 years for State of Connecticut Geological Survey DEP and 7 years as a private consultant Melvin and Meade, LLC

Hydro-Geologic Consultants. Specialty is Ground Water flow systems for aquifer delineation, relations of ground water to surface water flow.

A motion was made by Jeff Arends to continue the public hearing to May 12, 2015. George Sipila seconds this motion. No discussion held. All in favor. The motion passes unanimously.

c. Unfinished Business:

1. 120914A Strategic Commercial Reality, Inc. d/b/a as Rawson Materials (Jeffrey Rawson President) Rukstela Road, Map 30, Lot 16 and Map 29, Lot 1, RA Zone; Creation of a Pond with removal of earth products. Application is continued to next month's meeting May 12, 2015.

2. 020915A Jeffrey Otto/Thomas Rukstela, east side of Mason Road, Map 23, Lot 9B, RA Zone; Removal of vegetation clogging brook, restoring stream flow to natural channel of the brook, remedying damage to area adjacent to streambed caused by livestock, maintenance of waterway incident to farming operation.

Chairman Gallant asked if the Town Engineer reviewed the application. Ms. Roberson stated that Syl Pauley, Jr., PE has reviewed the application. Ms. Roberson reviewed Mr. Pauley's comments.

A motion was made by Jeff Arends to approve application 020915A Jeffrey Otto/Thomas Rukstela, east side of Mason Road, Map 23, Lot 9B, RA Zone; Removal of vegetation clogging brook, restoring stream flow to natural channel of the brook, remedying damage to area adjacent to streambed caused by livestock, maintenance of waterway incident to farming operation. With the following conditions:

1. No further excavation within the watercourses or adjacent wetlands areas is proposed.
2. Wetlands appropriate native seed mix will be spread in the spring to help re-vegetate the disturbed areas.
3. Non-native multiflora rose will be manually removed from the wetlands areas. Upland of the delineated wetlands, multiflora rose may be removed with a brush hog or mini-excavator while keeping soil disturbance to a minimum.
4. As expenses allow, barbed wire fencing with metal poles to prevent livestock from damaging the stream banks will possibly be installed. An approximately 75' section will be left open for livestock to drink water.

Melissa Labossiere seconds this motion. No discussion held. All in favor. The motion passes unanimously.

3. 021015B Mike Berthiaume, Windham Road, Map 8, Lot 21, RA Zone, Single Family Home, Septic System, Well, Driveway and Minor Grading.

Paul Archer, Archer Surveying represents application 021015B. Mr. Archer thanks the Commission for holding a special meeting to accommodate applicants.

Mr. Archer reviews the site plan with Commission Members. This is a 4.1 acre lot on Windham Road. The proposal is a single residence, septic system, well and driveway. There are two wetlands located on the property. One of the wetlands is a drainage ditch that runs along the edge of the road. The other wetlands is irregular shaped wetlands that is a low depression area. The septic system soil mottling was very good at 27 inches. There is approval from the Northeast District Department of Health. The house will be 110 feet away from the irregular shaped wetlands. The septic system is a little closer to the wetlands. Everything that is being done is down gradient from the irregular shaped wetlands. There is no activity being proposed within the wetlands, all is in the upland review area.

Ms. Roberson visited the site today to review the irregularly shaped wetland which is rocky and not a vernal pool. Ms. Roberson discussed clearing and grading of the project with Commission Members and Mr. Archer. Discussion ensued with regards to the limits of clearing, driveway contours, stockpiling area and extension of silt fence.

A motion was made by Jeff Arends to approve application 021015B Mike Berthiaume, Windham Road, Map 8, Lot 21, RA Zone, Single Family Home, Septic System, Well, Driveway and Minor Grading within the upland review area with the following conditions:

1. Prior to any clearing or grubbing activities, the limit of clearing shall be field delineated by a licensed surveyor and the applicant will call the Land Use Administrator to schedule an inspection of the delineation.
2. Prior to any land excavation activities, the silt fence will be extended 60 feet as shown on the plans by the applicant. The applicant will call the Land Use Administrator to schedule an inspection of the silt fence. Excavation activities cannot commence until the silt fence has been inspected and approved.
3. Throughout the construction period and until the disturbed soils have been stabilized with permanent cover, it shall be the responsibility of the applicant to prevent erosion and sedimentation into adjacent wetlands by installing silt fence or staked hay bales downhill of the open excavation, soil stockpile areas, and soil deposit areas.

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

New Business:

1. DR15-003 USDA Grant to eradicate invasive species, remove black birch trees with nectria canker and white ash at risk of loss due to the EAB, create early successional habitat (ESH) for N.E. Cottontail Rabbit and other species.

Don Dubois, Dubois Forestry and Land Management of Brooklyn, CT, represents the applicant Graymare Farms. Mr. Dubois is seeking a jurisdictional ruling. The property has been approved by the USDA for a grant to make certain improvements including timber stand improvements. Mr. Dubois discusses the tree removal work. This is a 56 acre parcel on Herrick Road, where 40 acres are undergoing timber stand improvement removing less than 50 cords of standing firewood trees. The black birch is infected with nectria canker. The white ash is at risk of loss due to the Emerald Ash Borer. This is a pre-commercial operation, non-commercial harvest. Mr. Dubois indicated on the site map (SC1) the portable temporary wood bridge that will be placed over an intermittent brook. There is no harvesting being done in the wetlands; all work is being done in the upland review area. There will be invasive species eradication done in the drainage, non-mechanical, being done with herbicide treatment. There will also be an early successional habitat created for the N. E. Cottontail Rabbit.

Mr. Dubois discussed briefly the Environmental Quality Incentives Program.

Mr. David Roche, All Habitat Services LLC, from Branford, CT, is an ecological management restoration firm, DEP licensed herbicide applicator. Mr. Roche stated that this is a routine process that Mr. Dubois is undertaking. Part of the timber stand management is to remove the invasive species that are in the understory because with the increased light from the harvest it will open it up and cause a proliferation of invasive species. The proposed is to remove those and release the native species and restore to premium health. Mr. Roche discussed the different types of herbicides that are used. All but one herbicide being used is labeled for aquatic use. Discussion ensued.

Mr. Dubois will provide a copy of the USDA Contract as well as the license of the herbicide applicator for the file.

A motion was made by Jeff Arends to make a declaratory ruling that the plan to conduct a timber harvest to eradicate invasive species, remove black birch trees with nectria canker and white ash at risk of loss due to the EAB, create early successional habitat (ESH) for N.E. Cottontail Rabbit and other species proposed by Don Dubois, Forester, and to remove less than 50 cords of firewood on 25 acres identified as Map 24, Lot 36 on Herrick Road is a permitted use as of right. George Sipila seconds this motion. No discussion held. All in favor. The motion passes unanimously.

2. DR15-004 Niemann Family Trust, 311 Allen Hill Rd, Map 33, Lot 79, RA Zone; Proposed Re-Subdivision no construction proposed (Re-use of existing buildings). Wetlands located in rear of property per Town soil maps.

Bruce Woodis from KWP Associates represents the applicant. The project is a re-subdivision of the Niemann property of the Self -Storage Units located on Allen Hill Road. A jurisdictional ruling is being requested. The proposed is to divide and sell the storage units to another party to own and operate. Mrs. Niemann will remain in the home. There are no wetlands within 400 feet of the building. There is no construction proposed with exception of a chain link fence.

A motion was made by Jeff Arends to make a declaratory ruling that the two lot subdivision proposed by Niemann Family Trust at 311 Allen Hill Road, Map 33, Lot 79, RA Zone; does not include any regulated activities nor is it likely to have substantial impact or affect any wetlands or watercourses. Melissa Labossiere seconds this motion. No discussion held. All in favor. The motion passes unanimously.

3. Wetlands Agent Report: Nothing to report.

Adjourn: A motion was made by Jeff Arends to adjourn the meeting at 8:55 p.m. George Sipila seconds this motion. No discussion held. All in favor. The motion passes unanimously.

Audrey Cross-Lussier
Recording Secretary