



**CONSERVATION COMMISSION**  
**Town of Greenland • Greenland, NH 03840**  
11 Town Square • PO Box 100  
Phone: 603.380.7372 • Fax: 603.430.3761  
Website: greenland-nh.com

**MINUTES OF THE CONSERVATION COMMISSION**

---

Wednesday, March 10, 2021 – 7:00 p.m. – Virtual via Zoom

Members Present: Bill Bilodeau, Laura Byergo, Rich Collins, Joe Fedora, Joe Russell, Lloyd Ziel

Members Absent: Brad Lajoie

Also Present: Courtney Johnson

---

Chair Byergo opened the Conservation Commission meeting at 7:00 p.m. It was announced a quorum was present and the meeting was being held virtually through Zoom and recorded by audio. A checklist to ensure meetings are compliant with the Right-to-Know Law during the State of Emergency was read into the record by Chair Byergo. Attendance was taken by roll call: B. Bilodeau – present, L. Byergo – present, R. Collins – present, J. Fedora - present, J. Russell – present, L. Ziel - present.

1. Reorganization of the Board

MOTION: B. Bilodeau moved to nominate J. Fedora as Vice Chairman of the Conservation Commission.

Discussion: J. Fedora respectfully declined the nomination due to commitments.

MOTION: J. Russell moved to nominate B. Bilodeau as Vice Chairman of the Conservation Commission. Second – R. Collins; roll call vote: B. Bilodeau – abstain, L. Byergo – yes, R. Collins – yes, J. Fedora - yes, J. Russell – yes, L. Ziel - yes. Five in favor, one abstained (B. Bilodeau). MOTION CARRIED

MOTION: J. Fedora moved to nominate L. Byergo as Chairman of the Conservation Commission. Second – J. Russell; roll call vote: B. Bilodeau – yes, L. Byergo – abstain, R. Collins – yes, J. Fedora - yes, J. Russell – yes, L. Ziel - yes. Five in favor, one abstained (L. Byergo). MOTION CARRIED

2. Subdivision of Land, Conditional Use Permit: 177 Winnicut Road (R10, 12A-2)

Owner: Brian and Maria Beck

Applicant: 177 Winnicut Road LLC

The owner and applicant are proposing a seven-lot subdivision and a public road.

Christopher Berry, Berry Surveying and Engineering and representing the owner and applicant, addressed the Commission. C. Berry stated that any input from the Conservation Commission may be helpful for the next round of plans. They were going to the Planning Board on Thursday, March 18, 2021. There are additional State permits that need to be finalized. A considerable amount of work has gone into the project; there is more work to be done.

The property has been at the Planning Board for Design Review in the past for a project with a much larger and more intense use. That project was an age restricted housing development. The Planning

## DRAFT: SUBJECT TO CHANGE

Board did not permit that type of use for the property. A nine-lot subdivision was submitted under Design Review; the Planning Board felt that was a much better use and layout of the property.

This property is located on Winnicut Road. The existing house has been subdivided from the remaining parcel. A corner parcel was also subdivided from the larger lot. The Winnicut River is on the backside of the property. There was a flood zone associated with the Winnicut River, which FEMA defined as Zone A. They have applied for a Letter of Map Amendment (LOMA). A flood study (Hec-Raz Analysis) was conducted along the Winnicut River by the engineer. Survey information was submitted to FEMA with cross-sections of the river and provided a hydraulic analysis of river. The actual flood zone on the property was established, which was not the location FEMA had originally indicated. The elevation of flood zone is much further down slope than shown on the FEMA flood maps.

There are wetlands located in the center of the site, starting at the road entering the property, traversing down-slope and enters into the Winnicut River. There will be on-site wells and septic. Soil types were reviewed. Test pits were noted.

A seven-lot subdivision is being proposed. The original proposal was to have the road offset from Meaghan Way. The Planning Board wanted the road to be further from Meaghan Way so there was a larger offset distance between Meaghan Way and the proposed road. In addition, the distance between the entrance of the proposed roadway and the reverse S-curve located to the south on Winnicut Road is greater. From a site distance and safety standpoint, it is more advantageous for drivers coming down that slope and through the S-curve.

C. Berry pointed out the location of the entrance onto the site. During the Design Review process, the Planning Board felt that location was one of the more minimal areas to cross to minimize the impact to the wetlands. The inland wetlands are required to have a 50 ft. wetlands buffer on the front of the property. In addition, there is a 75 ft. river setback required along the Winnicut River.

Each lot is sized according to the Zoning Ordinance and Subdivision Regulations with the proper amounts of uplands, contiguous lands, and frontage. C. Berry reviewed the topographic plan showing the project site, proposed roadway, and lots. There are steeper slopes toward the wetlands at the front of the property. The remainder of the property is gently sloped towards the Winnicut River. Each lot will have an on-site septic system. They are proposing a 4,000 sq. ft. leaching area. C. Berry also noted the reserve areas that are required by the Town and State Subdivision Regulations. Each site will have its own well; a 75 ft. protective well radius is required for all well heads.

C. Berry explained that the project requires a small wetland impact. The direct wetland impact is approximately 562 sq. ft. The front area of the property is approximately 15,000 sq. ft. of buffer impact. The buffer impact is permitted by a Conditional Use Permit approved by the Planning Board and the wetland impact is approved by NHDES.

They have started State and federal permitting as part of the larger project that was originally proposed. They have a Natural Heritage Bureau list of rare and endangered species that was a concern. They are obligated to work with them to determine the best management practices to use as part of the development site. The largest one in wetland crossings is important: sizing of infrastructures. C. Berry discussed sizing of the culvert, which will be oversized and buried ½ ft. That will create a natural bottom in the culvert. The culvert pipe is proposed as reinforced concrete due to the type of animals that utilize the culvert as passage. Headwalls are being proposed to preserve as much of the wetlands as possible.

## DRAFT: SUBJECT TO CHANGE

The impact will be less than 3,000 sq. ft. and a minor permit; it will be reviewed as a standard permit because it will service a subdivision.

Best management practices for stormwater: C. Berry reviewed the general overview of the grading plan. Stormwater will be collected by swales and stormwater basins to a gravel wetland. The gravel wetland will be placed at the lowest point (elevation). They understand the sensitivity of the Winnicut River and how it flows into the Bay. A gravel wetland system is proposed for stormwater detention and treatment. C. Berry explained that gravel wetlands have a much higher percentage of removal rates for nitrogen and phosphorous rather than a rain garden. Each cell is constructed with an overflow device and outlet control structure device which flows to a level spreader. That spreads flow out while it enters the natural wetland system. Using that device, they would be reducing flow and volume to the wetland and then to the Winnicut River.

They have found it commonplace in other communities to replace vegetation after construction to the extent practical. A small number of bushes common to wetlands and wetland buffers to re-establish the habitat between the gravel wetland system and the natural wetland buffer is proposed. They also plan to install a visual barrier to ensure future homeowners understand it is not their yard but a buffer and not to be disturbed. This information will be included in an easement for the lot.

Stormwater practice for the remainder of the project was discussed. There is a small detention cell at the center of the cul-de-sac and is released at a metered rate to a second gravel wetlands. Stormwater is then directed at the Winnicut River, which is a highly sensitive area for phosphorous and nitrogen. The detention and gravel wetland cells have high removal rates of the pollutant/nutrient loads, specifically nitrogen and phosphorus, prior to entrance into the Winnicut River.

Homeowners will be made aware there are restrictions on the lot they are purchasing. Placards will be installed along the buffer line both visually and on paper. The homes will have low impact development devices installed. There will either be stormwater drip edges or small infiltration systems for roof runoff.

They have applied for a NHDOT driveway permit. The Town and DOT have received a small traffic analysis. The Police Chief has also reviewed the plans and agreed with the analysis that there will be no noticeable impact to the traffic on Winnicut Road.

In response to a question from B. Bilodeau, C. Berry stated that homeowners would own property to the river. Homeowners will be told they cannot develop the property beyond a certain point. They may utilize their land in a passive way as allowed by the Ordinance. B. Bilodeau asked if, in their calculations, they took into consideration runoff from pavement (road, driveways, etc.) without trees and grass to absorb the water/rain. He also asked if the main road was sloped to the river. C. Berry stated there are few trees that will be removed. The main construction site is currently a large field. Each house will have a paved driveway and the road will be paved. All stormwater from the project site has been accounted for through the drainage analysis. An extensive stormwater analysis has been submitted to the Planning Board. The project is being reviewed by Altus Engineering, the Planning Board engineer. With the exception of some areas of driveways in specific locations (pointed out by C. Berry), all of the storm flow from the paved surfaces have been accounted for, captured, detained, and treated within the two stormwater cells. C. Berry explained they were more sophisticated than a dry well system; the system provides underground storm storage for anaerobic behavior but does not infiltrate like a dry well. He stated that it provides a high level of efficiency in treatment of the nutrients.

## DRAFT: SUBJECT TO CHANGE

Joe Fedora: Do the stormwater treatment areas require ongoing and future maintenance? C. Berry responded there is an operation and maintenance manual associated with the project; it has been submitted to the Planning Board and Altus Engineering for review. The manual contains information on the annual maintenance required. C. Berry pointed out that a rain garden requires more intense maintenance than the proposed system. The proposed system is more of an actual design than a rain garden. There is minor vegetation on the proposed system.

J. Fedora: If the individual lot owners own back to the river, what safeguards will exist for restrictions on that area? J. Fedora noted that there is a wildlife corridor along the Winnicut River on that property. The coastal viewer shows the corridor to be 500 ft. to 600 ft. wide in that area. The corridor on the Winnicut Road side would extend past the cul-de-sac. J. Fedora suggested a change to lots five and six, increasing the buffer from the river. If the wildlife corridor is cut down considerably in width, it is gone or severely restricts the flow of wildlife in that area. C. Berry did not have a specific response to J. Fedora's concerns. There is an Ordinance and they have done their best to respect the Ordinance to the extent practical. He did not think the applicant would consider removing two lots for a wildlife corridor that traverses the entire of the area. It would remove property rights from many individuals along that area. He respected the concern but had to do a project that would provide balance between the landowner and ecology.

C. Berry stated that the lots either meet or exceed the Town's requirements for lot size. Each lot will have its own septic and well. The flood plain was remapped and re-established; it runs much closer to the edge of the Winnicut River.

J. Russell: Will there be an HOA? C. Berry responded it was unclear at this time. The Planning Board will discuss maintenance of the stormwater systems. There may need to be an HOA to manage certain things within the subdivision. The intent is for it to become a Town road; the main infrastructure would be the Town's responsibility.

L. Byergo: There should have been a report associated with the wetland delineation. L. Byergo requested a copy of the report as well as the report from the Natural Heritage Bureau. C. Berry responded that they have not submitted a wetland permit for review by the Conservation Committee; many of these items will appear in that application. A NHB report was done but may be out of date; it will be redone and included in the wetland permit application. There will also be a vernal pool study and functions and values analysis as well as other information included for the wetland permit.

L. Byergo suggested that the Planning Board, Conservation Commission, and others may want to do a site walk. C. Berry stated the center line of the road was staked as were lot corners. They were ready to do a site walk if requested by the Planning Board.

L. Byergo reviewed the problems she found when reading the plans and that the plan shown at this meeting was easier to understand. She appreciated that the culvert was highlighted on the plans and commented that color plans are more helpful.

L. Byergo asked for further explanation of how the runoff from the road will be diverted down to the gravel infiltration system. Using the Plan and Profile, C. Berry explained the process. He also pointed out that the area planned for the gravel wetland is an unvegetated open field in the buffer. If another gravel wetland were proposed on the other side of the wetlands, woodlands would be de-vegetated; that did not seem a worthy use of the space when it could be a vegetated buffer. All of the flow is directed through swales and hard structures to the gravel wetlands.

L. Byergo clarified that the gravel wetland acts as a filtration system rather than an infiltration system. Once the water is filtered it is distributed back into the river on the higher one or into the wetlands on the lower one. She questioned how the system controlled the release of water. C. Berry pointed out, and explained, the gravel wetlands and detailed plan of the gravel wetlands, stating water is released so it disperses and does not create erosion. The systems are specifically designed in linear formats with minimum widths and prescribed lengths to ensure there is a hydraulic residence time inside the system; a certain amount of time is needed in the system or it is not effective. The systems are designed for the 100-year storm event. C. Berry estimated that the system can handle 10.3 inches of water in a 24-hour period (a 100-year storm event plus 15%).

The lot closest to the road was discussed. L. Byergo questioned the ability to put a leach field and well in that location due to the proximity to the wetland buffer. C. Berry offered to sketch it out so everything could be seen. L. Byergo noted it could be problematic in the future if the homeowner wanted to put in a pool. In addition, that side is closest to the wildlife corridor and tends to follow along the river edge. L. Byergo was not in favor of the placards discussed earlier and did not think they would work—they fall down or get torn down. She asked they consider a conservation easement; they would have the same lot sizes but it would travel with the deeds. It would also be monitored and the river edge would be protected. She would like the wetlands and wildlife passage protected.

The area is important to wildlife. L. Byergo asked that homeowners not put fencing between the houses at Lots 7 and 8. She questioned the type of structure that would be near the house next to the gravel barrier and asked for a picture because it would block access to part of the wetland. C. Berry stated it would not be a structure but rather plantings.

L. Byergo stated there was a lot of engineering to control the stormwater runoff and move it over the wetlands; it created more disturbance trying to infiltrate the water. C. Berry stated that the bottom of the gravel wetlands was denoted on the bottom of the plan. The pond structure was within the 50 ft. setback. L. Byergo stated that the engineering within the buffer was a concern. She noted that there was a lot of disturbance to the wetland that is a forested area. The disturbance between the road, the gravel and the houses would basically tear up a large portion of the wooded area. L. Byergo commented she was interested in the stormwater management plan around the houses as well as the landscape plan. She also mentioned the trees, landscaping and shrubberies for the wildlife that used that area. L. Byergo requested a picture of the gravel wetland systems and what they would look like when finished.

The amount of fill needed, in terms of square footage impact, was discussed. C. Berry stated that 562 sq. ft. would be impacted within the wetland area. L. Byergo clarified it would be the fill area plus the culvert impact and it did not include the impact of the gravel basin in the wetland area. C. Berry responded that the gravel wetland is not in the wetland area; it was in the buffer. He stated they were presenting this option to minimize their impact on the actual wetland. The plans itemized the conditional use impact area, which was approximately 15,000 sq. ft. He clarified the only area that would be impacted within the buffer is for the front one and the roadway.

L. Byergo stated they were working with a challenging spot: 3 edges of water and several tight lots. She re-emphasized her concern about the placards. J. Fedora asked C. Berry to explain the runoff systems for the houses. C. Berry explained that the houses will need to capture some of the roof runoff and are not designed to the same robust manner as the major stormwater systems. The main reason for the stormwater systems around the house was to create re-infiltration at the source of the runoff to meet groundwater recharge volume. They will be simple gutters that will be metered into a small infiltration system further away from the house. Those plans have not been designed yet.

3. Other Business

Due to the amount of work to be done, L. Byergo suggested that members break into committees of one or two people who can work closely on projects of interest without the constraints of the Right-to-Know Law. Easement monitoring and working with the intern is one package. Another would be the by-laws and trying to move that forward. The 300<sup>th</sup> Anniversary would be the third package; L. Ziel has been working with that committee. C. Johnson and R. Collins have been working on a community outreach project. L. Byergo suggested a project focused on educating residents about the wildlife corridors. The Greenland Women's Club will be inviting Peter Stickler, The Nature Conservancy, to do a presentation on wildlife corridors as a start the an education project.

4. New Summer Intern

L. Byergo has contacted Matt Tarr, UNH, regarding the summer intern. He has provided L. Byergo with two recommendations for recent graduates from his Wildlife Biology program. J. Fedora has helped interview interns in the past.

5. Berg Conservation Easement

J. Fedora questioned a paragraph on the second page of the easement agreement: "This conveyance is subject to all easements, restrictions, rights and encumbrances of record and to any facts, rights and interests or claims that are not shown by any public records". J. Russell explained that it was a catch-all recitation that goes into something that will be recorded in the land records when a full title search is done. J. Fedora clarified that there might be things not recorded on a public document that might be pertinent to the issue of access to the property, etc. Noting he had not reviewed the deed, J. Russell stated they may not have done a full survey and they are not warranting there is full access and/or there is nothing on the property that should not be there.

L. Ziel asked if a title search needed to be completed before a conservation easement was done. J. Russell responded these are similar to a quick claim deed where nothing is covenanted. L. Byergo added it was a complicated lot: bits and pieces have been divided off the lot. She was aware that at least one house lot was subdivided. L. Byergo will contact the Berg's lawyer for clarification of that statement before it goes to the Board of Selectmen. J. Russell stated it was a disclaimer that it was not representing all the other restrictions that may be on the parcel going back to the beginning. The last page in the packet was a site plan that did not show monumentation, trees, boulders, etc.

L. Byergo stated that Southeast Land Trust provided a lot of help. The Berg's lawyer worked with a survey company to provide a signable copy showing that the barn would be taken out of the easement area. The Selectmen had noted that was a potential liability.

The next step is to take the easement to the Board of Selectmen for approval. If conveyed, the Conservation Commission will hold the easement. The Conservation Commission may be registered with the State as the holder of the easement. It will increase the Commission's responsibility to do the monitoring. The easement language provides access to the Conservation Commission to do the monitoring. There is language giving the Commission access up to three times a year for monitoring. It is on a key choke point for animals trying to get under I-95.

The Conservation Commission agreed that L. Byergo should present the easement to the Board of Selectmen.

6. Approval of Minutes

MOTION: B. Bilodeau moved to approve the minutes of Wednesday, February 10, 2021. Second – L. Ziel; roll call vote: B. Bilodeau – yes, L. Byergo – yes, R. Collins – yes, J. Fedora – yes, J. Russell – yes, L. Ziel – yes. All in favor. MOTION CARRIED

7. Other Business

J. Fedora stated he walked the trail and is clear with the exception of the old pine that came down at the upper end just before the “Trail Ends” sign near Cushman Way. There are signs of a snowmobile on the trail in the same area. L. Byergo explained that leaving the tree down prevented people from accessing the trail on a motorized vehicle. J. Fedora clarified this was another tree. L. Byergo referred to the tree at the trail access on Coastal Way.

8. Adjournment

MOTION: B. Bilodeau moved to adjourn at 8:20 p.m. Second – J. Fedora; roll call vote: B. Bilodeau – yes, L. Byergo – yes, R. Collins – yes, J. Fedora – yes, J. Russell – yes, L. Ziel – yes. All in favor. MOTION CARRIED

NEXT MEETING
--------------

Wednesday, April 14, 2021 – 7:00 p.m., Zoom

Submitted By: Charlotte Hussey, Administrative Assistant