

**WINDHAM INLAND WETLANDS &
WATERCOURSES COMMISSION
MINUTES April 10, 2008**

I. Call to Order

The meeting was called to order at 7:08 P.M. Members present were Susan Johnson - Chair, Martin Brogie, Joseph Marsalisi, James McGill, and Joseph Wagner. Also present were Town Planner/Wetland Agent James Finger and Recorder Kathleen Wright.

II. New Business – DISCUSSION/POSSIBLE ACTION

1. Responses to violation Notice -- West Main St. Willimantic

Planner Finger explained that he had sent wetlands violation notices to three property owners regarding brush and debris, and they were asked to apply for a permit and take action if needed. Three property owners have responded and one property owner, the owner of 1565 W. Main St., has a plan and hopes to proceed. Mr. Jim Dutton, Principle of Dutton Associates, Glastonbury, CT, was retained by the owner of 1565 W. Main St. He displayed a map of the area. Mr. Dutton produced photographs of the problem areas, and proceeded to describe the situation that involves three pieces of property. Debris and brush have been deposited in different locations, some of which have drainage dynamics that are inter-related. This prevents proper drainage of the area.

Mr. Dutton introduced his plan, which calls for the use of hand tools to remove some of the debris in a swale. A proposed list of hand tools to be used is in the plan. He will also submit more documents on work done more recently. He described proposed efforts for mitigation. Chair Johnson asked that mitigation include consideration of at least a 50 Year Storm.

Mr. Dutton said that trees in the area will die unless the flooding is controlled. He was not able to speak with the neighbor to the North (Mattress store). He said that he had spoken with the owners of the Willimantic Realty property.

Commissioner Brogie asked where the wetland delineation came from. Mr. Dutton said they came from the approved plans for the BJ store, and for the car wash next door to the south. Planner Finger explained that he had advised Mr. Dutton that we should have wetlands updated because it is 10 years ago, and that they (neighboring properties) may not have delineated them carefully on this property. He added, that it would be important to have a soil scientist delineate the wetland and he clarified that he felt that a permit will be necessary if they are going to do any work in the wetlands as their plans indicated.

Mr. Dutton argued that he has not had to file a wetlands application in other communities where they were trying to correct or abate a problem. They are usually just directed to proceed with the corrective work.

Chair Johnson said anytime you do anything in a wetland, you have to come to see whether or not you need a permit, and then the Commission will make a determination to allow you to go ahead.

Mr. Dutton said it is not known who dumped the material. Some of it may be from when a parking lot was broken up.

Planner Finger explained that he had given them permission to remove some debris along the inside of the fence, which is away from the wetlands. A discussion ensued regarding pictures Mr. Dutton provided. Mr. Dutton then reported that Willimantic Realty has submitted a letter, but they have not retained him to do the work - although they have indicated that their maintenance people would provide assistance.

Mr. Dutton described a necessary sequence of mitigation efforts. Chair Johnson said the other property owners should be present and she said a permit couldn't be granted beyond the scope of property that you have been hired to represent. Planner Finger urged the board to permit them to remove surface brush and trash and then the Board could take a look and see to what extent excavation is necessary to re-establish a swale.

Chair Johnson said that's fine to remove superficial stuff, but she was concerned about the timeline because some debris will have to remain until everything has dried up and she saw the need for oversight by Planner Finger or the Town Engineer. Planner Finger said Mr. Dutton has a good plan but we need documentation. Chair Johnson said a fee is necessary.

Commissioner Brogie said it is a high water time and using machines will kick up silt. He advised to wait and have no activity until surface water drops. Mr. Dutton said the water will not drop and he described the conditions that cause it not to drop. Chair Johnson said she is concerned that representatives from all 3 properties must come to IWWC to make a plan and then the board can vote to issue a permit at a special meeting.

Commissioner Marsalisi asked about the objection to allow debris to be removed. Chair Johnson said things such as contaminants might be stirred up. Commissioner Brogie added that a soil scientist should delineate the wetlands and give recommendations on erosion control and vegetation, in order to leave the area in a better state than it is right now. Chair Johnson asked Mr. Dutton to speak with Planner Finger to set up a date for a

special meeting. She thanked Mr. Dutton.

2. Frog Bridge Development Company LLC for 560 Main St. Willimantic

Attorney David Markowitz represented Frog Bridge Development Co. with Richard Kenyon, of Kenyon and Cutler, Avon. Atty. Markowitz said last month we reviewed the site plan with you and discussed cleaning debris and the cleaning the building. Drawings should be in the packet. Chair Johnson asked about the proposed cleaner and the cleaning procedure.

Mr. Kenyon said staging will be set up with tarps. Only 25 - 30 gallons of cleaner will be needed to wash the building. Low pressure will be used. Mr. Kenyon thought the used cleaner will be disposed of out of state. Commissioner Brogie asked about the tarp.

Mr. Kenyon said it is commercial matting fabric that will lap up 4'. Shop vacs will be used to pick up the used solution. A man in harness will do the lowest part under the bottom floor windows, if we do it at all. The bottom of the scaffold is tilted to have positive drainage into the building. The scaffold will go around the entire building. The tarp will be taped and sealed. Mr. Kenyon could not name the contractor.

Commissioner Brogie asked if there will be ongoing inspection and logs kept. Mr. Kenyon said the contractor has massive experience. Mr. Brogie said at the last meeting we asked whether or not you are in the Stream Encroachment Channel lines of DEP. Mr. Kenyon said the lines run along edge of the face of the building and the scaffold is in the air. Commissioner Brogie asked have you spoken with DEP whether you need an Stream Encroachment Channel permit, as we discussed at the last meeting. Mr. Kenyon said we are going to make sure of that. Atty. Markowitz said we are going to be above the channel so it should not be an issue, and we can certainly check.

Chair Johnson said in order to issue the permit we must see some evidence from DEP. Atty. Markowitz said I don't think so because we are not doing any work in the river and he said the DEP by virtue of the wetlands statute has transferred that responsibility to the wetlands agencies of the Towns. Chair Johnson said that is true, but DEP is called in, in certain circumstances, and the federal government is also.

Attorney Markowitz said there is no question about that if we were doing work in the river, but we are not in the river. Attorney Markowitz will get some authority on that and send a letter to Planner Finger, and he is hoping today for a jurisdictional ruling. Commissioner Brogie said that would be a separate permit anyway, and it is Cheryl Chase at DEP who would give a jurisdictional determination letter.

Planner Finger asked about clearing overgrowth, trash, debris and sandbags on the property as well as on the land on the canal. Mr. Kenyon said they would access the peninsula through the building and that work will be done by hand, they will not plant but let the area come back naturally. Planner Finger wanted to ask about a wooden deck that looks dangerous and should be removed.

Commissioner Brogie said we are not approving this application for any activity on the peninsula. Chair Johnson said all we are here for today is a jurisdictional ruling to clean the building and to change use. Commissioner Brogie asked about storm water discharge from the parking area and said right now there is a leak-off that drains directly into the river. The applicant had mentioned using an alternative to salt and sand. The board also asked the applicant to take a look at structures that might mitigate erosion into the river. Atty. Markowitz said it was determined that the leak-off was installed by the State of CT, it is under the bridge and we don't believe there is anything we can do, we don't believe that the change of use will have an impact. A liquid used by the State of CT will be used instead of sand.

Planner Finger explained that although the applicant filed a request for a jurisdictional ruling, he explained that he thought they would need a permit because of the activities within the 200-foot buffer of the Willimantic River. He added that he had hoped that the Board would issue a permit with conditions, as a jurisdictional ruling does not give the Board the authority to impose conditions; further the island area needs to be cleaned up.

Atty. Markowitz responded that the site plan before you does contemplate that the area will be cleaned up. Planner Finger said a fee has been charged for a full application. Chair Johnson said in that case - do we want to have a vote on this to grant a permit to change the use of manufacturing to residential addressing the following concerns:

- Not use sand in the parking lot
- Clean island area
- Remove sand bags

Commissioner Wagner made a motion to approve the permit as previously outlined with addition to disallow cleaning below the first story windows. Commissioner Brogie seconded the motion. The vote was unanimous, in favor.

3. Willimantic Waste Paper Co., Inc. 185 Recycling Way, Willimantic

Mr. Mark Zessin of Anchor Engineering Services represented the applicant, the DeVivo's of Willimantic Waste Paper Co.

Mr. Zessin introduced a map and presented pictures of the site. He explained that changes have been made to the plans since the previous month and that they have submitted a report from a wetlands scientist consistent with past reports by Highland Soils on previous applications on the property. Mr. J. Ianni, the soil scientist, and he re-flagged the wetlands. These flags have been shown on the plans, and Mr. Ianni has indicated that the locations are consistent with his delineations. A 15,000 sq. ft. addition to the waste paper building - slightly larger than the previous plan is being proposed, to make the building a single stream recycling facility with high tech sorting equipment. The building will also be used for storage of bales of recycled material. Also proposed are additional ripraps at an existing outlet, which aren't really affected by this application. We pulled the mitigation area away from the wood line so there wouldn't be any grading. We show a grass berm with posts or other devices along the top. New drainage structures are proposed as we showed last time. Catch basins are basically the same layout as last time. New pavement is shown matching into existing pavement. The board looked at and discussed Mr. Zessin's pictures.

Mr. Zessin oriented the map and related the pictures to the map. Commissioner Brogie said the title block for the new plans is not signed or dated, and for our approval, our protocol requires a signature from the soil scientist. Planner Finger said Mr. Ianni did provide a letter that they modified the plans in accordance with his recommendations. Commissioner Brogie said it is atypical to accept plans without the signature, and the delineation is 5 - 10 years old. Mr. Zessin said Mr. Ianni was out twice over January and February and he is comfortable with what is shown on the plans.

Commissioner Brogie said Mr. Ianni's letter of 3-24-08 doesn't state any field visits since his review of this plan. He added that Mr. Ianni indicated that the area of wetlands may be impacted by the proposed building addition in the area of the wetlands of the Saco series - and he states there is a potential impact as a result of the project. He does not say what those impacts are and he does not provide any recommendation for any mitigation. Commissioner Brogie asserted that we need to see these potential impacts and mitigation strategies spelled out. Commissioner Brogie asked for a more detailed functions and values assessment, accompanied by data sheets.

Chair Johnson said that the application can be on the agenda of a special meeting as soon as we can so that additional data can be supplied. Chair Johnson thanked Mr. Zessin. Planner Finger will establish a date for a special meeting.

- 4. Public Hearing - Windham TSC, LLC - 476 Boston Post Rd., North Windham**
Interveners Petition - An Interveners Petition was submitted by Joan Hill, representing Joshua's Trust, regarding Windham TSC, LLC. Copies were passed to the Board.

Chair Johnson said we were here last meeting and we said we would go to a public hearing this month. In the interim, Board members as well as some other interested parties walked the property on March 22, 2008. Those who saw the site on that date were: Mr. McGill, Mr. Marsalisi, and Chair Johnson of the Commission, as well as Juan

Sanchez, John Pagini, George Logan, Warren Church, Alan Carpenter had walked the site.

The site walk consisted of having the representatives' of the Applicant point out the areas of the site, where the building, and parking areas would be located. Another site walk took place with Commissioner Brogie, Planner Finger, George Logan of REMA Ecological and his associate Sigrun Gadwa, as well as Mr. Carpenter of CPH Engineering. On that walk Mr. Logan showed the location of the monitoring wells, the limits of the proposed disturbance, the proposed detention basin, and inside the permanent bog limits. The walkers got a good look at the resource as well as construction activities and what's planned.

Attorney Leonard Jacobs of Manchester, CT, introduced himself as the representative of the applicant. He then introduced his team as well as Mr. Aubrey, who he explained was there to provide a peer review. Also Mark D'Addabbo and Dave Mieczynski of New England Realty Associates, who can answer technical questions about the operation itself. Attorney Jacobs displayed the site map, and gave an orientation – identifying the site as being located in the M-1 zone.

Attorney Jacobs acknowledged that the Board is concerned with the upland review area, and must determine if the project will harm the wetlands. When Clinton Nurseries, the previous owner of both properties, sold the land to Joshua's Trust, they reserved rights to drain surface and subsurface water onto the Joshua's Trust. It is clear to us that the front of the property, this (remainder) was intended to be developed. We have made changes in the plans at the suggestion of the Joshua's Trust and these represent feasible and prudent alternatives. We feel confident that our project will not harm the wetlands. We hired Towne Engineering for a peer review. Please consider the qualifications of our team

Alan Carpenter, Registered Professional Engineer in CT, CPH, Vernon, CT, displayed maps and plans.

- A USGS map showed the overall drainage of the area.
- A predevelopment drainage basin map showed 2 basins, one of which drains into the swamp. With the exception of a depression, the elevation of the site is definitely above the swamp area.

Chair Johnson asked about test pits in terms of elevations. Mr. Carpenter said we had 5 test borings of 20' + and all had water below the bottom of the boring on the day the borings were conducted.

- A map showed the limit of the Upland Review Area. REMA flagged the wetland.
- A map depicted the location of the building, buffers, the Upland Review Area, outdoor display area, and 95 parking spaces.
- A post development drainage map

This map identifies the entire area going to our detention basin on the southwest. We have a swale on the east side where we propose to collect runoff from the front parking lot and the outdoor display area. This drainage is to be treated prior to coming to the collection system. We are well in excess of what DEP requires for treatment of water quality volume in our forebay. The storm water area addresses quantity, the post-

development discharge will be zero. This is designed so that there will be no surface discharge in a 100 year storm.

- Aerials show open water, wetland boundary, site limit.
- Design plans

Mr. Carpenter described the design process. He showed with design maps their efforts to reduce impervious parking. The ultimate plan provides 55% impervious. Atty. Jacobs will submit copies of alternatives as part of the record if they are not already in the possession of the board and Joshua's Trust. Mr. Carpenter showed how the building's position and the outdoor display were rearranged. Truck movements were provided for so that they could be accomplished without full circulation around the building. The local applicant will maintain ownership and responsibility. The applicant is established as being a good neighbor, having paid for a dumpster and helped to clean the area. Some alterations have been requested of the tenant and there has been no ability to modify their prototype, including the front parking area, the front display area, the building footprint, the loading dock and the access from the back of the building into the outdoor display area. These are considered a corporate necessity for the function of the business.

Mr. Carpenter showed the latest plan with their accommodations for Joshua's Trust. Thirty-five parking spaces have been cut off and the client chose to pay into the park fund. He said we removed a sidewalk to save about 1000 sq. ft. of impact. Another sidewalk on the north side was reduced and with other adjustments all resulted in a net increase of 4500 sq. ft. of green space/pervious area and the saving of some trees near the outdoor display area. From what M1 allows at 90% to a site plan that provides for 55% impervious is a significant reduction. This plan was modified to allow us to store the 100-year storm without surface discharge therefore taking the pre-developed discharge out so it is all contained on site. We increased the size of the swale on the east. Mr. Logan and Ms. Gadwa will talk more about the forebay area. Mr. Carpenter said that this plan does not have any adverse impacts.

Don R. Aubrey, Registered Engineer; land surveyor; owner of Towne Engineering, and former Public Works Director of the Town Windham - Town Engineer in this locale; Bachelor of Science from UCONN and graduate work at UCONN; designed the Walmart store; has considerable experience with the hydrology and sensitivity of the bog. He submitted a report.

He gave some history of the location, and explained that he met with Mr. Beuell, owner of the property in 1984 when Clinton Nurseries wanted to purchase the site. Mr. Aubrey submitted a copy of the site plan that was approved by the Zoning Commission in 1984 when Clinton Nurseries was given permission to continue digging in the bog. Mr. Aubrey explained that Mr. Beuell showed him his process for removing peat, which he had been doing since 1956; and he used the peat only for his own purposes.

Mr. Aubrey said that in 1984 we dug test holes. We noticed that the ground water table was very low. We found that the water table pitched to Rte. 6. In my mind the water table feeds toward Rte. 6, and I have no doubt about that. In 1984 we walked the whole

perimeter and checked railroad culverts, which were blocked by beaver activity; and we saw die-out. We did site walks in the last few days. Tree frogs were active and we saw minnows. In 1984 the site was devoid of significant trees and largely open, except for blueberry bushes. He recommended healing for various areas.

The site plan needs to be a little more sensitive to shielding the bog, specifically headlights, which can easily be done with landscaping. Most of the site drains away from bog. It is important to note that - all of the site drains to the bog on the surface, but once it percolates - 90%+- drains back to Rte 6.

Mr. Aubrey said he would prefer not to see a direct discharge into the bog, and he gave extensive recommendations for the drainage system. (See report) He recommended provision for an enclosed dumpster. He recommended fencing to encapsulate the rear part of the site to prevent public access. He talked about a roof drainage system, which he highly recommended. He said most of the details in the plan are conventionally done, following best management practices. He thinks the site is special, it can heal itself, and details are important.

Chair Johnson asked what kind of fence should be used. Mr. Aubrey said a wood fence would block headlights and a high livestock fence would prevent public access. Mr. Aubrey recommended that for the first 10 years there should be no public access. Chair Johnson asked what kind of material would you use so that runoff from the roof could drain into the ground. Mr. Aubrey said in most big boxes you can put runoff easily back into the ground because there is no contaminated materials or debris, especially if you have good soils. Roof water is not a continuing degradation problem.

Commissioner Brogie disclosed the fact that he had worked with Mr. Aubrey in the past, and he stated that in no way will that influence his assessment of Mr. Aubrey's opinions.

Atty. Jacobs put a Phase I Environmental Report, a list of cleaning products, a document on DEP permission regarding drains, and an Investigation of Soil Quality in the record. Chair Johnson requested a list of all documents provided.

Mr. Logan, REMA Ecological Services, Masters in Natural Resources concentrating in conservation biology; working in this field since 1988; Professional certifications as a soil scientist, wetlands scientist, ecologist, and wildlife biologist; has worked for the Town of Waterford, as consultant for other Towns and familiar with detailed reviews. He submitted a presentation outline.

Mr. Logan then explained the existing conditions - are a 4 acre property, a former nursery, and an adjacent resource/bog/swamp, roughly 60 acres, sensitive, acidic, with mosses dominant, and a water body with some excavation. He described regeneration in previously disturbed areas. The site is open, recently brush hogged for surveying purposes to understand the hydrology. He said that when we delineated the water table, we found a perched water table. Mr. Logan submitted a document with Table 1A and 1B. Mr. Logan showed a plan C7 that shows locations of 15' pits dug on 3/20/08 to

triangulate flows of water flow and to get a better idea. Attachment B shows all test pits done by REMA. Test pits were observed by James McManus, the work was done in 1 day. Monitoring wells were installed and we observed ground water leak outs. Table 1B shows rainfall in the period prior to the tests. Mr. Logan showed the correspondences between the plan and the Tables. He thought the excavation of the pond has affected the hydrology.

Commissioner Brogie asked about vernal pool species. Mr. Logan, assisted by Ms. Gadwa, reviewed amphibians. He submitted a report on this review, as well as photographs of the research. No egg masses were found. Many peepers were heard. Regarding direct and indirect impacts, the open water body against the site makes a potential impact less sensitive. Cedar swamps are extraordinarily rare in CT. The open water body was created by man and has a lot less value than the rest of the swamp.

Chair Johnson asked if it is not a whole ecosystem. Mr. Logan said you have to look at the type of vegetation immediately next to what you are doing. There are components of the whole system that have less value and that's part of the equation when it comes to buffers.

Mr. Logan said we don't have a direct impact but we have potential impacts from both the quality and quantity of our storm water. The swamp is nutrient sensitive. Nitrogen and change in amplitude will affect it. But no matter what we do on this site, it doesn't matter because we have a closed water management system. With a little care, the water coming to this basin wouldn't affect the swamp - ever. Mr. Logan added that he was not worried about nutrients because the dilution is so great. He described the dynamics in various storm and freezing events and he said there would not be an overflow of anything contaminated into the swamp. This is verified by CPH Engineering that found that we have capacity even in the worse case scenario. We (REMA) have experience on bio-retention basins nationally and locally. We have found that data on bio-retention basins shows their effectiveness is very high. This system is highly over designed with the purpose that nothing will ever happen to the swamp with any discharge.

Sigrun Gadwa of REMA Ecological Services, Masters in plant ecology from UCONN, Bachelors from Brown University, has worked in this field since 1988, was Quinnipiac Watershed Association Executive Director, worked with REMA since 1999.

Ms. Gadwa described the vegetation and the plantings. She said we propose substantial plantings along the edge and also on Joshua's Trust property, and described the situation as it is and what is proposed, including the species of plants to be planted. The intent is to turn this into quality habitat with seed mixes and plantings. Plan sheet E1 has exact locations. The fact that the soils are so sandy will make it difficult to irrigate, so we are going with bunch grasses and native bunch grass wild flowers. All trees in parking area and on the perimeter will be drought tolerant native species. Wildlife will be able to forage. Ms. Gadwa described on a map how the area with the storm water management system will not be a source of ecological disturbance. She said the reserved parking area

will get very little use, perhaps two times a day, and will not be a source of ecological disturbance. The building itself is a shield for most of the traffic.

Mr. Logan spoke about Low Impact Development (LID). A pollutant loading analysis has been submitted. He read and submitted a conclusion.

He said that the applicant has explored alternatives and found that no other alternatives would substantially reduce impacts. The proposal is feasible and balances economic benefit with conservation. No significant adverse conditions will result from the proposal.

Commissioner Brogie disclosed that he knows REMA Ecological Services, Mr. Logan, and Ms. Gadwa, but that his review and assessment of their work will not be affected by his previous experience with them.

Joan Hill of Columbia, represents Joshua's Trust; Board Member of the Columbia Conservation Commission for 18 years; experience working on site plans to minimize impact; Board of Trustees of Joshua's Trust; currently serves on the Stewardship Committee of the Trust for the 2000+ acres owned by the Trust, established 1966.

There was a discussion on the lateness of the hour and the next meeting of the IWWC, which will be 5/8/08. Commissioner Brogie asked that Joshua's Trust not rush their presentation.

Ms. Hill thanked the Commission and thanked the applicant for help with the dumpsters. Ms. Hill said that she will submit a list of all documents, and that she will submit a general letter stating concerns and recommendations. She summarized points from that letter. She described the purposes of the Trust, some of which are: acquisition and preservation of land, promotion of research, preservation of land for education and training. She said the State of CT, the Windham Open Space Plan, and the Windham Plan of Conservation and Development have recognized the significance of this wetland. Ms. Hill will submit documents to that effect. She will submit letters from the DEP regarding species that are state listed.

The Commission's regulations point out the uniqueness of the bog by calling for a 200' buffer. She said storm water discharge from the development will likely impact the trees and sphagnum moss where germination of the cedars occurs. She said the bog today exhibits impact from development and shows signs of stress. Joshua's Trust is committed to the health of the bog with time and money, and Joshua's Trust hired a consultant in 1997 who created a management plan. Ms. Hill read his summary. A hydrologist was hired in 2002. She will submit an executive summary of that report. In 2004, an Assessment of Hydrology of Windham Atlantic White Cedar Swamp was made and this will be submitted.

She listed criteria that the IWWC looks at. Joshua's Trust feels it is likely that nutrient impact from the applicant's property will affect water chemistry and diversity of the wetland. The development will have negative impacts on Windham bog, with an irreversible and irretrievable loss of wetland resources. Employment of mitigation efforts

will have to be based on a total redesign of the plan that has been submitted, with the application of LID principles and the State's best management practices. She listed conditions that any site plan should include. (See letter) She said we feel you should deny this application because there are other feasible and prudent alternatives, which have not been considered.

Juan Antonio Sanchez of Chaplin CT, environmental educator; member and Trustee of Joshua's Trust; a steward of the bog; served on Chaplin Wetlands Commission for 11 years; Chair of Conservation Commission 10 years.

Mr. Sanchez will submit a signed letter and resume. He said the bog includes various cool, moist, microclimates, it favors northern species, there is ground fog associated with it which is an important component of the moisture regime beneficial to lichens, which are sensitive to air pollution. Mr. Sanchez has identified rare lichens in the bog. He named rare and uncommon lichen species and gave details on their historical and geographical presence in New England. Mr. Sanchez said we have to look at the whole system. If the moisture regime in the bog changes, the lichens will die off. Air quality, humidity, and dust pollution would impact the lichen community. Numerous uncommon habitat-specific plants in the bog include Leatherleaf, Mountain Holly, and Atlantic White Cedars.

He cited Critical Habitats of CT by Dr. Robert Craig and a DEP publication on the importance of the bog. In the Springtime migrations he has counted 35 or more birds, many common, but also a warbler whose numbers are plummeting nationally but increasing in CT. Any clearing of the buffer will impact the integrity of the whole system. Mr. Sanchez listed some concerns: parking, retention basins, seepage, runoff, and chemical balance, impact on the sphagnum moss where the cedars are regenerated. Over 80% of the site will be disturbed. He said different heat flows will be created which will affect the moisture regime, and lighting may affect insect species. Mr. Sanchez recommended indigenous plants for landscaping.

Mr. Sanchez asked IWWC to deny the application because alternatives are available.

Scott Horsley of the Horsley Whitten Group of Sandwich, MA, Newburyport, MA and Providence, RI, a consulting interdisciplinary environmental firm with 40 employees. Teaches at Tufts University courses on LID, wetlands management, and water resources policy. The US EPA is his primary client. He teaches a course in RI to certify designers in LID.

Mr. Horsley summarized his letter, which had been submitted. He said the site plan before the Commission is not an example of LID. He submitted an alternative conceptual site plan. He said if the site were to be developed at all, it would be mandatory to have LID, with perhaps a landmark case study development because of the sensitivity and proximity of the bog.

- Impervious Surfaces - Mr. Horsley said there is 55% impervious surface in the plan. Numerous studies currently say 15% is the magic number.

- Stormwater Management System - As designed, this plan will not work and does not meet basic standards of CT Stormwater Guidance manual.
- Bio-retention - There are no bio-retention facilities on this site plan. A bio-retention facility is typically a low profile, shallow depression in the landscape that is vegetated with a variety of different species and has a soil matrix that will provide an active root zone and treatment. They can be lined or they can infiltrate. Mr. Horsely gave more details and CT standards. He said the water table will change significantly once the site gets built.
- LID - one of the principles is to break up the drainage throughout the site. The applicant's plan is a conventional design on a sensitive site. It does not meet his or EPA's nor CT's definition of an LID site.

Mr. Horsley's recommendation is to break up the drainage using bio-retention facilities. Roof runoff will reduce the need for a large retention facility. Mr. Horsley said he had walked the site and had a productive conference call with the applicant's design team. He said Joshua's Tract did not hire us to redesign the site. He submitted a conceptual alternative design. He said mounding must be considered. His firm did a groundwater mounding analysis, since they saw none from the applicant. He submitted a diagram, which shows a cross section of the retention basin, which demonstrates how the dynamics will change. He said you do not need much to direct the flow back to the bog. This is something that must be evaluated very carefully. Do not wait for a monitoring program, but evaluate up front. The event mounding should go on top of the steady state mounding.

Mr. Horsley compared the applicant's site plan with his conceptual site plan with the same size store. Parking spaces were narrowed and made to the Town's minimum standards. LID features were added, including vegetative boxes, and the applicant was advised to work with the State of CT on a way to work out a bio-retention facility at Rte 6.

Mr. Horsley will get the numbers for impervious surfaces from his conceptual plan. He submitted CT Stormwater Guidance documents including highlighting of his points. Commissioner Brogie and Mr. Horsley discussed in detail the mounding analysis diagram. Mr. Horsley's letter includes a list of recommendations on page 4. Mr. Horsley urged IWWC to deny the application.

Ms. Hill submitted exhibits and she will send a list of them and make sure the applicant has all of them.

Dave Wagner, Professor, UCONN; Co-Director for the Center of Conservation and Biodiversity; Board member, CT Chapter Nature Conservancy, Org. of Tropical States, CT State Museum of Natural History.

Mr. Wagner said that he was at the helm of Joshua's Trust when they wrote the letter to secure the bog from Clinton Nurseries and we have been very pleased about the gift to the people of Eastern CT. He said he had discovered some of the rare species in the bog. This is a special and sensitive wetland, one of the largest examples of this wetland type in

the entire region and a rare community type in CT. Certain endangered species can only eke out an existence in this wetland type. He emphasized that these are not self-contained communities. Organisms may not get nutrients from the wetland. They forage outside the wetland. Amphibians most of the year are outside the wetland, so they need a buffer. If there is development on all sides you might as well write it off. This bog is considered an absolutely premier portfolio example by any statewide ecological assessment. Mr. Wagner disagreed with the assessment that the water body is an abomination. It is absolutely critical to organisms that need open water and sunlight.

Jane O'Donnell, PhD UCONN, 18-year resident of Windham, Woman Farmer. She said that in the Windham Plan of Conservation and Development and Windham Regional Land Use Plan 2002, this bog is mentioned over and over. She cited the Windham Regional Land Use Plan that says that despite the fact that North Windham is developed, this is an ecologically important area, and runoff and habitat encroachment are the most critical issues that could do harm. She cited the Windham POCD that says that special habitats and water protection are priority goals. She said that she is concerned that our priorities are not matching what citizens have put into these documents. She said I urge you to deny this application.

Bev York, Windham, Historian Ms. York said that on a previous occasion we were here asking IWWC to preserve the same piece of property. 30+ people testified and many letters were written. This project is encroaching or could encroach on the very same property. Ms. York's main concern is protection of the fragile swamp. A project such as this with a standard prototype might work in Nebraska, but here in CT we don't have the same amount of property, and it is next to such a fragile piece of our environment. Maybe there are other properties where it would go better. She hopes the applicant could show care for environment. The Board has the opportunity to deny it or incorporate all of these suggestions. Her first choice would be to deny it and let them find another piece of property, and her second choice would be to incorporate every protection, and she still does not believe it will work. She hopes the applicant could show how much they care about the environment by putting their project in another spot.

Hill Bullard, citizen of Windham County, member of Joshua's Trust. Mr. Bullard asked who is the ultimate fee owner that will take responsibility for long-term lease payments. Windham TLC is the fee owner.

Chair Johnson said the meeting will be continued on 5/8/08.

III. Old Business– DISCUSSION/POSSIBLE ACTION

Wetland Violation Complaint re: 363, 369 &377 Scotland Rd

Chair Johnson said the Commission members need to walk the property. The date will be set at the next meeting.

IV. Routine Business – DISCUSSION/POSSIBLE ACTION

1. Approval of Minutes - postponed

2. Miscellaneous - Dan Mullin requested a jurisdictional ruling on a temporary tie-up ramp. He explained that it will have no impact on the river. It will be there for one day and then removed. It will be a recreational use. Commissioner Brogie made a motion to approve the temporary one-day kayak slide for the Willimantic Whitewater Partnership at 28 Bridge St. Mr. McGill seconded the motion. The vote was unanimous, in favor.
 3. Correspondence – none
- V. Adjourn** - Motion to adjourn was made by Chair Johnson. Commissioner Brogie seconded the motion. The vote to adjourn was unanimous, in favor. Chair Johnson adjourned the meeting at 12:15 A.M.

Respectfully submitted,

Kathleen Wright, Recording Clerk
April 24, 2008