

**EAST LYME INLAND WETLANDS AGENCY
SPECIAL MEETING OF MONDAY 29 JUNE 2017**

FILED IN EAST LYME

CONNECTICUT

6/30/2017 AT 11:00 AM/PM
Desley A. Blais
EAST LYME TOWN CLERK

PRESENT

Members: Cheryl Lozanov, Vice Chairwomen, Phyllis Berger, Secretary, Harold Clarke, Kim Kalajainen, and Jessie Baldwin

Absent: Keith Hall, Chairman and David Pazzaglia

Staff: Gary Goeschel II, Director of Planning/Inland Wetlands Agent and Ex-officio – Paul Dagle

CALL TO ORDER: Cheryl Lozanov called the East Lyme Inland Wetlands Agency Meeting of June 29, 2017, to order at 7:08 p.m.

PLEDGE OF ALLEGIANCE - The Pledge of Allegiance was observed.

C. Lozanov introduced the members of the Commission, Recording Secretary, and Staff.

I. PENDING APPLICATIONS

MOTION (1): C. Lozanov asked for a motion to move Item II. - A. Pending Applications - 283 Boston Post Road to be first on the agenda. H. Clarke made the motion and it was seconded by P. Berger - passed (5-0-0) unanimous.

- Robert Pfanner submitted revised plans to the Commission for their review and approval. He said the zonings charts were submitted to the zoning commission. G. Goeschel read the memorandum from Victor Benni (Town Engineer) about the commercial site plan review that is dated 4/25/17 (**see attached**). C. Lozanov asked if the revised plan has been signed and stamped. R. Pfanner said it has been signed and stamped. G. Goeschel mentioned that there was no soil scientist because it demarcated by the water course. C. Lozanov asked if all plans were approved by Victor Benni. G. Goeschel said they have been and provided the memorandum to the commission dated 6/26/17 for the suggestion motions (**see attached for complete memo**).

MOTION (2): C. Lozanov asked for a motion for a complete application. P. Berger made the motion and it was seconded by K. Kalajainen - passed (5-0-0) unanimous.

MOTION (3): H. Clarke made a motion based on the Findings in the memorandum from G. Goeschel dated 6/26/17 and the RECORD before the Agency, to APPROVE the Application known as 283 Boston Post Road, Jason Pazzaglia Owner, 283 B.P.R., LLC Applicant; Application to conduct regulated activities within 100-feet of a watercourse associated with the stormwater discharge from two proposed mixed-use buildings and parking lot and the plans entitled 283 Boston Post Road, East Lyme, CT 06333, dated January 12, 2017, revised through June 1, 2017", prepared by J. Robert Pfanner, P.E. of J. Robert Pfanner & Associates", which are further subject to the following administrative requirements and required modifications to the site plan and other materials submitted in support of this application:

1. The Erosion and Sedimentation Control Plan and recommended Construction Sequence shall be followed.

2. Pursuant to the Erosion and Sedimentation Control Plan and construction sequence, notify conservation officer at least 2 days prior to construction to inspect erosion controls.
3. Silt fence and other erosion controls should including the temporary sediment traps and diversion swales be installed and inspected by the Inland Wetlands Agent and the Town Engineer prior to any site construction, land clearing or other associated construction activities.
4. In areas proposed to be loamed and seeded, a low maintenance lawn such as fescue, which requires the minimal application of fertilizers and pesticides, shall be planted.
5. The proposed Limits of Disturbance (LOD) shall be strictly adhered to throughout all phases of lot build out and construction.
6. An Erosion and Sedimentation Control Bond in the amount of \$5,500 dollars in a form satisfactory to the Town of East Lyme and the Inland Wetlands Agency, its Agent, and Town Engineer shall be posted with the Town of East Lyme.
7. The Operations and Maintenance Plan, the hydrodynamic separators shall be inspected every six (6) months in the months of April and October and said report shall be furnished to the East Lyme Inland Wetlands Agent.
8. A copy of each inspection report for the Stormwater Management Basins shall be furnished to the East Lyme Inland Wetlands Agent with 7-days of conducted said inspection.
9. Any proposed Additional work beyond this permit in the wetlands or watercourse or its 100-foot regulated area will require approval from the conservation commission or its certified agent.
10. Any changes to the site plan listed on this permit require notification to the Inland Wetlands Agent and may require commission approval- a new plan will be given to agent before work begins.
11. No site work shall commence until all applicable conditions are satisfied.
12. Notify Inland Wetlands Agent upon completion of all regulated activities for final inspection.

This approval is specific to the site development plan submitted as the application of 283 Boston Post Road, Jason Pazzaglia Owner, 283 B.P.R., LLC Applicant, Application to conduct regulated activities within 100-feet of a watercourse associated with the stormwater discharge from two proposed mixed-use buildings and parking lot and the plans entitled "Site Plan Prepared for Jason D. Pazzaglia, 283 Boston Post Road, East Lyme, CT 06333, dated January 12, 2017, revised through June 1, 2017", prepared by J. Robert Pfanner, P.E. of J. Robert Pfanner & Associates". Any change or modification in the plan or development plan layout other than those identified herein shall constitute a new application unless prior approval from the Agency or its Agent is granted.

The motion was seconded by J. Baldwin

Discussion followed. C. Lozanov suggested adding a 13th condition that As-built drawings upon completion of construction be provided to the Inland Wetland Agent as recommended by Victor Benni, P.E., Town Engineer in his

memo dated April 25, 2017 to Gary A. Goeschel II, the Director of Planning/Inland Wetlands Agent.

MOTION (4): H. Clarke Amended his motion to include the following: Item #13. As-built drawings upon completion of construction shall be provided to the Inland Wetland Agent as recommended by Victor Benni, P.E., Town Engineer in his memo dated April 25, 2017 to Gary A. Goeschel II, Director of Planning. - J. Baldwin amended his second. - passed (5-0-0) unanimous.

II. PUBLIC HEARING

- A. Twin Valley 25-Lot CDD Re-subdivision at Green Valley Roads & Spring Rock Road; Frank & Rajko Maric Owners, Real Estate Service of CT, Inc. c/o Bob Fusari Jr. Applicant. Application to conduct regulated activities within the 100-foot upland review area from wetlands and watercourses associated with the construction of a proposed subdivision road.**

G. Goeschel provided a copy of the updated site plan to the commission.

C. Lozanov invited the public to speak and asked that they raise their hands and when called come up to the podium and state their name (spelling it if necessary) and where they live.

Todd Bellucci, 10 Overlook Road, East Lyme, CT. Todd is an environmental biologist that graduated from UConn and is now working on his Masters. Because of his background, he provided some information on potential impacts. **(See attached)**

Matt Ellerbeck is a salamander conservationist who is licensed with the Ontario Ministry of Natural Resources and Forestry. He is also a partner of the Amphibian Survival Alliance (ASA) which is the world's largest partnership for amphibian conservation. He is asking that the East Lyme Inland Wetlands Agency reject the proposed 25 home development in Green Valley Lower Lake (Four Mile River) in East Lyme. This is due to spotted salamander and its egg masses (and critical breeding sites) in the area. **(See attached)**

Steven & Tina Conlin - 75 Spring Rock Road, East Lyme, CT. Mentioned that they have seen blue spotted salamander in their yard and have seen snapping turtles in the water. **(See attached).**

Susan Beeman – 11 Green Valley Lakes Road, East Lyme, CT. Has lived in their house over thirty years. Susan spoke about general observations she has made since living in the neighborhood. Her house was flooded in 2010. She has a presentation showing pictures of the neighborhood and the surrounding area. There is active beaver colony near the Green Valley Lakes bridge and there are several huts. DEEP has an extensive write-up on habits and handling them. The shoreline has changed because of the beavers. **(See attached write-up and Exhibit JJ)**

Lisa Sperry – 24 Spring Rock Road, East Lyme, CT. When she attended the April 29th public site walk, she saw vernal pools. **(See Exhibit KK)**

Harvey Beeman – 11 Green Valley Lakes Road, East Lyme, CT. Harvey sent a letter to G. Goeschel quite a while ago and has not heard anything. He asked how a rhetorical commission works – How do you approve a plan? What is the process by which the town

accepts responsibility for the 25 lot subdivision? The developmental density – have fewer houses – will have less impact. How would the emergency road benefit all of the lots? Does the Commission use independent outside sources to review plans? **(See Exhibit LL)**

Brian Lepkowski – 13 Green Valley Lakes Road, East Lyme, CT. Took the comments directly from the 12 June 2017 meeting and put a presentation together showing the commission “what concerns the public” about the comments. Wants the IWA to reject the application as we don’t know the future, and what the impact will be after it is completed. **(See Exhibit MM).**

C. Lozanov referenced the letter from Brian Schuch, Planning Commission Chairman to Keith Hall, Inland Wetlands Agency Chairman referring the Subdivision application which contains a waiver request from Section 6-10-11 of the Subdivision Regulations, for review and comments. The waiver is referring to emergency access road between lots 2 and 3. They want to eliminate full town road and put in an emergency access road. **(See attached Exhibit GG)**

C. Lozanov doesn’t see a feasible and prudent alternative plan in the plans submitted as this is the third modification. Need something that can be approved.

Jason Wescott (representing Intervenor Brian Lepkowski) introduced Steve Trinkaus, P.E. who is a licensed engineer with 35 years of professional experience that they hired. Steve has testified in many applications of this kind. S. Trinkaus spoke to a presentation he provided and brought up the highlighted items he thinks are a problem.

- Stormwater management – does not conform to East Lyme regulations.
- Stormwater management system for this project will result in increased rates of runoff.
- It has not been demonstrated by factual data and analyses that the proposed rain gardens for the roof drains of the proposed houses will actually be able to infiltrate the runoff from them.
- Subdivision regulations - yield plan. Planning committee may approve an increase in density. Perimeter buffer regulations need to be done first - Planning Commission before Wetlands Agency.

S. Trinkaus’s comments are based on the June 5th modified plans.

J. Wren provided a copy of the drainage report to the Commission.

C. Lozanov asked where the proposed contours were. G. Goeschel said they are located on sheets 1-4.

K. Kalajainen said she had a few questions and she wanted J. Wren to know that she is not an earth scientist but is a math expert. She indicated that there has been a lot of testimony and experts that have spoken, and asked as the applicant what they would do to close the gap. She asked, what new information was received that made you change the data table on page 20 in the data tables information? Her questions were not answered.

C. Lozanov asked if the public had any more questions. J. Westcott said he wants to submit a short memorandum of law. **(See Exhibit SS)**

S. Trinkaus was asked what the two major impacts were, meaning hard to wetlands. He answered as follows:

- Water quality – metals and hydrostatics
- Increased pollutants
- Increased runoff volumes
- Fertilization of lawns

Primary adverse reasons

- The two storm water catch basins;
- Cannot say whether the septic systems will be an issue – need to evaluate further after looking at the updated plans.
- Lot 3 is a concern wetlands/soils to wetlands.

J. Westcott submitted a report on behalf of S. Danzer who could not be here tonight. (see Exhibit TT).

T. Harris said he did not know this report existed until just now and will not be able to rebut it tonight because Mr. Danzer was not present to cross-examine. G. Goeschel said that this public hearing could continue on 7/10/17.

G. Goeschel asked S. Trenkaus what information would the applicant need to submit in order for the commission to determine the impact from the septic systems. He responded that he needed downgrade test holes, 25' and anything applicant needs to complete, don't have plans for most of the lots only a few.

J. Wren explained what has changed in the revised drawings that were submitted to the town on Friday 6/23/17 and were available to the public.

- Zero wetlands direct impact.
- Developer has reached out to property owners and had a meeting to discuss concerns and answer their questions.
- Talked with owners that abut lot 25 to address their concerns. This communication with the neighbors will continue. I have worked with S. Trinkaus in the past and have a good working relationship with him.
- Worked with Health District (Kim White) who is the Registered Sanitarian and she said all 25 lots are suitable.

Two Major revisions are:

- Numbers are the same they are just tabulated differently.
- Drainage calculations take into account ultimate buildout based on a 2400 square foot print.
- Two soil test sites per lot were verified.
- The impact has not changed.
- The lots will be developed over several years – not right away.
- .06 spread out on wetlands are on upland review lots 3, 4, and 5. 99.9 are on East Lyme Conservation Land. The land is preserved and/or protected forever.

J. Baldwin is concerned about the stormwater quality and catch basins.

B. Russo said the state protected species are in the DEEP database. The database does not show every location of the species. He doesn't believe blue-spotted salamanders are in the vernal pools. He has been doing this for over 25 years and has not seen a blue spotted

salamander in that area.

Kristen Chantrell – 13 Green Valley Lake Road, East Lyme, CT – Met with Bob to discuss issues. She doesn't feel that the applicant is working with the community.

Brian Lepkowski – was contacted by Real Estate Company for the application. If road was moved they would lose money.

G. Goeschel mentioned they received a letter from the Planning Commission to Keith Hall in regards to this application. (see Exhibit GG).

B. Fusari – He is willing to work with the community. The development will look like the rest of the neighborhood. He handed out his business cards to the people in the meeting.

J. Wren – Look at overall area – spring rock was building 30 years ago. Different time – different way – over 100 lots upstream of this site and that Ms. Chantrell just provided testimony that she tested the water in Green Valley Lakes and said it was safe to swim in.

MOTION (5): K. Kalajainen moved to adjourn the meeting and left the meeting. There was no second. Motion failed.

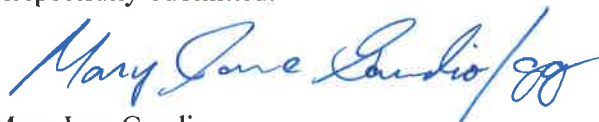
Craig Grimond of the Niantic Sportsman's Club - asked about the continuance of the public hearing and the 35-days allowed to conduct it. At the last meeting it was thought that the commission was holding the public hearing under an extension of time from the applicant.

G. Goeschel stated he received clarification from Town Council that because the public hearing opened on June 12, 2017, which was within the statutory 65-days to open the hearing, the Commission has 35-days from that date to conduct the hearing which must close by July 17, 2017.

C. Lozanov – stated the Commission will continue the public hearing on 7/10/17, our next scheduled meeting. Once this hearing is closed the Commission will have to make a decision. No new or additional information can be submitted once the hearing is closed.

MOTION (6): H. Clarke moved to adjourn the meeting. Seconded by P. Berger – Motion passed (4-0-0) unanimous.

Respectfully Submitted:

A handwritten signature in blue ink that reads "Mary Jane Gaudio" followed by a stylized flourish.

Mary Jane Gaudio
Recording Secretary

Town of East Lyme

P.O. DRAWER 519

NIANTIC, CONNECTICUT 06357



Public Works Department
William A. Scheer, P.E., L.S.

860-691-4101
FAX 860-739-6930

To: Middle School Sidewalk Construction Bidders, East Lyme, CT

From: Bill Scheer, P.E., Dep. Director of Public Works

Date: July 29, 2017

RE: Construction Summary

Construction Sequencing

1. Notify in advance Middle School for construction work.
2. Install orange construction safety fence at end of each work area, if required per Town engineer.
3. Ample barrels, orange construction safety fence, and construction signs shall be provided by contractor.
4. Town will stake out limits of sidewalk.
5. Remove one length of wood guiderail. Store and salvage for Town.
6. Excavate for 5" thick sidewalk and monolithic sidewalk at two locations where it meets pavement.
7. Form and install sidewalk sloping away from road at 2% max. and handicap ramp away from road at 1:12 max. per details.
8. Picture frame and broom finish per details.
9. Cover with poly for two days.
10. Install tactile pavers per details. Pavers to be furnished by Town.
11. Saw cut 2' back from end of sidewalk.
12. Fill with processed gravel and compact in 6" lifts to bottom of existing asphalt.
13. Town of East Lyme will patch pave.
14. Remove barrels, orange construction safety fence and construction signs when construction is complete and area is stabilized.

Construction Notes

1. Contractor shall field verify and protect the actual location of all utilities. Perform "Call Before You Dig" at 1-800-922-4455.
2. There are no permits required for this project.
3. Grass area across the street can be used as staging.
4. Town of East Lyme will perform Construction Stakeout including grade stakes.
5. All incidental items such as traffic control, barrels, signage, etc. shall be included in the lump sum bid cost.

Bids shall be received by Thursday, July 13, 2017 and read out loud at 2 PM in the office of the East Lyme Town Engineer. This shall be considered the bid form. The bid shall be awarded based on the lowest lump sum price and experience with similar projects.

Deadline for construction completion shall be a date agreed upon with the Town prior to August 14, 2017.

See attached for Bid Form and Insurance Requirements.

Town of East Lyme


P.O. DRAWER 519

NIANTIC, CONNECTICUT 06357



Town Engineer
Victor A. Benni, P.E.

860-691-4112
FAX 860-739-6930

To: Gary A. Goeschel II, Director of Planning
From: Victor Benni, P.E., Town Engineer 
Date: April 25, 2017
Re: 283 Boston Post Road
Commercial Site Plan Application Review

Information submitted by the Applicant which was considered in this review:

- (Site Plan Drawing Set) 283 Boston Post Road, East Lyme, CT, 06333, Prepared for Jason D. Pazzaglia, January 17, 2017, 4-Sheet Drawing Set, by: J. Robert Pfanner & Associates, P.C.
- Landscape Plan, Mixed Use Project, Residential/Business, 283 Boston Post Road, East Lyme, CT, Date: 02/08/17, Rev 1: 04/17/2017, Sheet: L101, by: Peter J. Springsteel Architect, LLC.
- Drainage Report, Location: 283 Boston Post Road, East Lyme, CT, Prepared for Jason D. Pazzaglia, April 7, 2017, Prepared by: J. Robert Pfanner & Associates, P.C.
- Pollution Prevention & Stormwater Quality Management, 283 Boston Post Road, East Lyme, Connecticut, Sections 1 thru 4.

This office has reviewed the above referenced information and has the following comments:

1. Recommend that the Applicant provide the Wetlands Agent with an As-built drawing upon the completion of construction. The As-built drawing should include the site improvements associated with the proposed development and the locations of all underground utilities and all the components of the stormwater treatment system.
2. The *Drainage Report* verifies that the stormwater management system has been designed to treat the first inch of runoff; better known as the Water Quality Volume (WQV). The *Drainage Report* also indicates that the infiltration system has been sized to minimize the peak flows off site to the pre-development rates and volumes; with no increase in peak volume for the 2, 10, & 25 year design storms.
3. The *Pollution Prevention & Stormwater Quality Management* plan (the Plan) provides both structural and housekeeping practices which are intended to minimize and/or improve stormwater runoff quality. The Plan provides Best Management Practices (BMPs) for the management & maintenance of roof runoff, litter control, landscaped areas, driveways, parking lot & sidewalk sweeping/vacuuming, de-icing chemical use & storage, handling & stockpiling of snow, and stormwater treatment facilities. The housekeeping practices mentioned in the Plan will be incorporated into the site management plan and adopted by a landscape management firm to be retained by owners/operators of 283 Boston Post Road.
4. An Erosion and Sedimentation bond in the amount of \$5,000 is recommended by this department for the installation of the erosion & sedimentation control measures.

Town of

P.O. Drawer 519

**Department of Planning &
Inland Wetlands Agency**

*Gary A. Goeschel II, Director of Planning /
Inland Wetlands Agent*



East Lyme

**108 Pennsylvania Ave
Niantic, Connecticut 06357**

Phone: (860) 691-4114

Fax: (860) 860-691-0351

Memorandum

To: East Lyme Inland Wetlands Agency

From: Gary A. Goeschel II, Director of Planning/ Inland Wetlands Agent

Date: June 26, 2017

Re: 283 Boston Post Road, Jason Pazzaglia Owner, 283 B.P.R., LLC Applicant, Application to conduct regulated activities within 100-feet of a watercourse associated with the stormwater discharge from two proposed mixed-use buildings and parking lot.

Upon review of the above referenced application, the proposed site development plan entitled "Site Plan Prepared for Jason D. Pazzaglia, 283 Boston Post Road, East Lyme, CT 06333, dated January 12, 2017 revised through June 1, 2017", prepared by J. Robert Pfanner, P.E. of J. Robert Pfanner & Associates and several meetings with the Applicant's engineer and Town staff (Town Engineer, Public Works Director, Deputy Director of Public Works, Water & Sewer Utilities Engineer, Zoning Official, Deputy Fire Marshal, and myself) I offer the following:

1. The above referenced application was received on March 13, 2017. The Agency had 65-days to render a decision (May 17, 2017). However, the Agency's meeting of May 1, 2017 was canceled and the matter was scheduled for discussion on June 13, 2017. The matter was not discussed at the June 13, 2017 meeting and was tabled for discussion.
2. In accordance with Section 7, Application Requirements, of the Inland Wetlands Regulations the applicant has provided the all the information required by Section 7.5 and the necessary additional information required by Section 7.6, including a proposed alternative and an operations and maintenance plan, stormwater management plan, erosion and sedimentation control plan, and site development plans. As such, the application appears to be complete.

As such, based upon my review of the above referenced application and the record before the Agency with respect to this application, I offer the Agency the following findings and suggested motion for discussion:

FINDINGS

Whereas: The Agency may find this application to be in conformance with the Inland Wetlands Regulations of the Town of East Lyme and more specifically based on the following findings:

Whereas: Town staff provided the Agency with comment concerning this application's compliance with local requirements and regulations as well as received testimony from the Applicant. The Public Hearing was continued to the Agency's April 11, 2016.

Whereas: The Application submitted includes all the information required pursuant to Section 7.5 of the East Lyme Inland Wetlands and Watercourses Regulations and includes site plans and engineering reports. As such, the Application submitted in accordance with Section 7.1 of the East Lyme Inland Wetlands Regulations is complete.

Whereas: There is no direct impact on the wetlands or the watercourse as the majority of the construction activities will be conducted outside of the 100-foot upland review area from inland wetlands and watercourses. Therefore, there are no irreversible and irretrievable loss of wetlands or watercourse which would be caused by the proposed regulated activity.

Whereas: The project has been designed to protect the wetlands and watercourses as the building structures, driveways, and drainage structures are designed to be situated outside of the wetlands and located in the upland review area as well as the public utilities which are being installed within existing upland areas.

Whereas: Mitigation measures to minimize and mitigate potential impacts from the creation of new impervious surface on the site and to protect the wetlands and watercourses, stormwater management structures such as hydrodynamic separators are being proposed which will pre-treat and control runoff, promote groundwater recharge, and reduce thermal pollution.

Whereas: Impacts are mitigated by the implementation of temporary erosion and sedimentation controls as well as stormwater controls throughout all phases of construction.

Whereas: The upland review process does not forbid activity based solely on proximity to wetlands. Rather, the upland review process merely provides a basis for determining whether activities will have an adverse impact on the adjacent wetland or watercourse, and if necessary, regulating them.

Whereas: Pursuant to Section 10.5 of the East Lyme Inland Wetlands and Watercourses Regulations, for the purpose of those Sections (1) "wetlands and watercourses" includes aquatic, plant or animal life and habitats in wetlands or watercourses, and (2) "habitats" means areas or environments in which an organism or biological population normally lives or occurs.

Whereas: Pursuant to Section 10.5 of the East Lyme Inland Wetlands and Watercourses Regulations, a municipal inland wetlands agency shall not deny or condition an application for a regulated activity in an area outside wetlands or watercourses on the basis of an impact or effect on aquatic, plant, or animal life unless such activity will likely impact or affect the physical characteristics of such wetlands or watercourses.

Whereas: Although the proposed construction would pose a substantial intrusion into the upland area, there is no evidence in the record to support a likely adverse impact on the wetlands and watercourse from the proposed upland intrusion.

Whereas: The record before the Agency contains no evidence that the impacts on the wetland and watercourse are adverse and would likely impact or affect the physical characteristics of such wetlands or watercourse.

Whereas: There are no other prudent and feasible alternatives yielding a 4,410-square foot mixed-use building located on land properly zoned for this use that would eliminate or further reduce the potential

for wetlands impacts. As the proposed activity is of limited duration with no direct or likely adverse impacts to the wetlands or watercourse, it is the preferred alternative.

SUGGESTED MOTION

Based on the above Findings and the RECORD before the Agency, I move to APPROVE the Application known as 283 Boston Post Road, Jason Pazzaglia Owner, 283 B.P.R., LLC Applicant, Application to conduct regulated activities within 100-feet of a watercourse associated with the stormwater discharge from two proposed mixed-use buildings and parking lot and the plans entitled 283 Boston Post Road, East Lyme, CT 06333, dated January 12, 2017 revised through June 1, 2017", prepared by J. Robert Pfanner, P.E. of J. Robert Pfanner & Associates", which are further subject to the following administrative requirements and required modifications to the site plan and other materials submitted in support of this application:

1. The Erosion and Sedimentation Control Plan and recommended Construction Sequence shall be followed.
2. Pursuant to the Erosion and Sedimentation Control Plan and construction sequence, notify conservation officer at least 2 days prior to construction to inspect erosion controls.
3. Silt fence and other erosion controls should including the temporary sediment traps and diversion swales be installed and inspected by the Inland Wetlands Agent and the Town Engineer prior to any site construction, land clearing or other associated construction activities.
4. In areas proposed to be loamed and seeded, a low maintenance lawn such as fescue, which requires minimal application of fertilizers and pesticides, shall be planted.
5. The proposed Limits of Disturbance (LOD) shall be strictly adhered to though out all phases of lot build out and construction.
6. An Erosion and Sedimentation Control Bond in the amount of _____dollars in a form satisfactory to the Town of East Lyme and the Inland Wetlands Agency, its Agent, and Town Engineer shall be posted with the Town of East Lyme.
7. The Operations and Maintenance Plan, the hydrodynamic separators shall be inspected every six (6) months in the months of April and October and said report shall be furnished to the East Lyme Inland Wetlands Agent.
8. A copy of each inspection report for the Stormwater Management Basins shall be furnished to the East Lyme Inland Wetlands Agent with 7-days of conducted said inspection.
9. Any proposed Additional work beyond this permit in the wetlands or watercourse or its 100-foot regulated area will require approval from the conservation commission or its certified agent.
10. Any changes to the site plan listed on this permit require notification to the Inland Wetlands Agent and may require commission approval- a new plan will be given to agent before work begins.
11. No site work shall commence until all applicable conditions are satisfied.
12. Notify Inland Wetlands Agent upon completion of all regulated activities for final inspection.

This approval is specific to the site development plan submitted as the application of 283 Boston Post Road, Jason Pazzaglia Owner, 283 B.P.R., LLC Applicant, Application to conduct regulated activities within 100-feet of a watercourse associated with the stormwater discharge from two proposed mixed-use buildings and parking lot and the plans entitled "Site Plan Prepared for Jason D. Pazzaglia, 283 Boston Post Road, East Lyme, CT 06333, dated January 12, 2017 revised through June 1, 2017", prepared by J.

Robert Pfanner, P.E. of J. Robert Pfanner & Associates". Any change or modification in the plan or development plan layout other than those identified herein shall constitute a new application unless prior approval from the Agency or its Agent is granted.

The applicant/owner shall be bound by the provisions of this Application and Approval.

Inland Wetland Meeting Notes

INTRODUCTION:

- Todd Bellucci
- 10 Over Brook Rd, East Lyme
- Bachelor of Science, Environmental Science and Biology UConn.
- Masters, Environmental Planning and Management, Johns Hopkins University
- Held many environmental and ecological positions including for CT DEEP
- Currently work in the Chemistry Field
- Always noticed biodiversity and species richness of Twin Valley Lakes area
- Walk every day, see many species of amphibians, reptiles, and birds.
- See many vernal pools around neighborhood during late winter to early summer.
 - Red flag when developer said in application that there were no known vernal pools on 80+ acre site.
- I am aware that the commission needs to assess all direct and indirect impacts to wetlands and watercourses, including short term and long term impacts.
 - Although the developer has taken actions to minimize the direct impacts to wetlands, there are still many indirect and long-term impacts that need to be addressed.
 - Going to address concerns involving chemical, physical, and biological impacts to wetlands and watercourses of the Twin Valley Lakes area if this development does go through.
- I would like the wetlands commission to consider these impacts and determine the need for a more in-depth evaluation of the site to be conducted before continuing with

this project.

- If interested, I can provide sources for all topics that I will go over.

HYDROLOGIC CHANGES:

- The increase in impervious cover and compaction of soils upland of these wetlands will dramatically increase the rate and volume of storm water runoff compared to its pre-development levels. Many studies have determined that these increases are typically by one to two orders of magnitude. The increased amount of runoff created from these roofs, driveways, sidewalks, footing drains, and catch basins can potentially overwhelm the wetlands and inhibit their function of flood attenuation. This has the potential to lead to increased water level fluctuations within the wetland (meaning the difference in the minimum and maximum water levels during the wetland's hydroperiod). This increased amplitude in water level fluctuation can negatively impact both the plant and animal communities as well as the wetland's overall function of acting as a wildlife habitat. Many studies have shown that there is a consistent decline in overall biodiversity and often an increase in invasive species that can result from this (Cooke and Azous, 1993; Owen, 1999). Most wetland plant species are closely adapted to specific wetland hydro periods and are not tolerant of major water level changes. However, invasive plant species tend to dominate the wetland community as they are often more tolerant of hydrologic change. This negative correlation is also seen in amphibian populations in wetlands.

WATER QUALITY STRESSORS:

-There are three main water quality stressors of concern that I would like to discuss.

1) Pollutant Accumulation in Wetland Sediments:

- Stormwater runoff carries with it many different pollutants, including hydrocarbons and metals such as cadmium, copper, lead, nickel, and zinc. Research has shown that vehicle emissions are a dominant source for many metals of concern, but the construction of roads can also create metal pollutants (EOA, Inc., 2001). Assuming that each of the 25 homes will have 2 vehicles, there will be approximately 50 new vehicles in the upland area. With the increase of vehicle traffic, there will be a corresponding increase in vehicle pollutant runoff. When metals and hydrocarbons in storm water runoff enter wetlands, they eventually accumulate in wetland sediments. Even though there are catch basins in the proposed development area, soluble metals will not be filtered out and will accumulate in the wetlands and watercourses below. Pollutants trapped in wetland sediments can re-enter the water phase or migrate downward into the groundwater. The primary concern with metals and hydrocarbons are their potential toxicity and bioaccumulation in aquatic organisms and plants. Pollutants trapped in sediment may enter the food webs either through uptake by plants or aquatic organisms. This will cause chronic toxicity and can lead to death. In general, symptoms of metal toxicity include vulnerability to disease, stunted growth, and alterations of the food web for bottom dwelling organisms. Also, due to the fact that many amphibians breathe and absorb materials through their skin via osmosis, they are

extremely susceptible to pollutant accumulation in wetlands. Because of this reason, amphibians are used as bio indicators, since they will be the first to show signs of the effects of toxicity when they are exposed.

2) Nutrient enrichment

- As we know, nitrogen and phosphorus are essential nutrients in a wetland ecosystem, but when present in excess concentrations, they can become a severe stressor. There will be an increased nutrient load from the upland development due to 25 septic system leach fields, the potential for those septic systems to fail or leak, and the application of fertilizer if homeowners apply it on their properties. Septic systems cannot reduce the amount of nitrogen in the effluent stream and rely on soil percolation for denitrification. In addition to this, the nutrient load generated upland of the wetlands is also going to be influenced by the amount of turf and impervious cover. Studies have shown that turf and impervious cover generate more runoff during storm events and that the total nutrient load discharged to a wetland from developed areas can increase by a factor of 5 to 20 when compared to undeveloped landscapes. In this scenario, invasive nutrient-tolerant plant species can outgrow and out-compete native species, thereby changing the wetland structure.

Due to all of these factors, natural nutrient removal by these wetlands may become overloaded by 25 septic systems. This is likely to result in downstream eutrophication including algal blooms, decreased water clarity, anoxia, and fish kills. Nutrient enrichment typically includes the overloading of nitrates, phosphates, ammonia, and total suspended solids. These stressors will alter the chemical and biological processes of the

wetlands needed to assimilate nutrients and retain organic matter and sediment.

3) Chloride discharges

- It's no surprise that with the construction of this new road and the 25 homes, there will be road salt applied during the winter and early spring months. The chloride from this road salt will at first be retained in snowmelt, but will eventually make its way into the nearby wetlands. Chloride is extremely soluble in water, so there is virtually no way to remove it once it gets into surface waters. Even though the proposed drainage basins will receive the majority of road runoff, chloride is ionically bonded to water and cannot be removed without an ion exchange mechanism.

- Chloride moves freely through surface and groundwater, and due to its accumulation and persistence, poses a severe risk to the ecological and functional health of these wetlands. Many plant species are sensitive to high chloride levels and may dieback or fail to germinate under these conditions. Studies show that chronic concentrations of chloride as low as 210 mg/l have been found to be harmful to some forms of aquatic life. Chloride levels exceeding 1,000 mg/l can have lethal and sublethal effects of a wide range of aquatic plants and invertebrates. In addition to this, chloride interferes with a plant's ability to regulate water absorption, leading to dehydration.

- Chloride can also combine with heavy metals (from roads and cars) in wetland soils, rendering them more water soluble and more available for uptake by plant roots, thereby increasing plant uptake of toxic metals.

Literature suggests that urban wetlands receiving excessive chloride will experience reduced biodiversity, a loss of sensitive species, and an increase in salt tolerant invasive species.

- Vernal pools tend to accumulate chloride in the bottom where it cannot easily be flushed. Road salt has also been found to have toxic effects on wood frog tadpoles typified by lower survivorship and increased physical abnormalities (Sanzo and Hecnar, 2006).

CONCLUSION:

- In conclusion, I would like to stress again to the Inland Wetlands Commission that these water quality stressors and hydrologic changes are a very real threat to the health of the wetlands and watercourses of the Twin Valley Lakes area. Although the original analysis of the proposed development neglected to find direct impacts that would be detrimental to the environment, there are many indirect and long term impacts that need to be addressed. There are many complex factors incorporated into the Twin Valley Lakes area and it's proposed development. I think I speak for everyone when I say that there should be an Environmental Impact Evaluation done on the Twin Valley Lakes development or some other kind of special complex development study that is independent of the developer. This study should also include the location of vernal pools on the site and whether or not they are significant vernal pools (meaning how productive they are to the organisms that utilize them). As we know, there are Blue Spotted Salamanders, Eastern Spadefoot Toads, and Fairy Shrimp in south eastern Connecticut (all of which are listed as Endangered in the State of CT) that should at least be determined to not be in the area before

destroying the habitat. Many amphibian species, such as spotted salamanders and wood frogs, breed and complete their life cycle in wetlands and vernal pools, but spend the majority of their lives in nearby forests in leaf litter and underground. Although the proposed development does not claim to directly impact these wetlands, the upland habitat for these amphibians will be destroyed. Many amphibian species also travel between different vernal pools and wetlands. Therefore, this proposed upland development can create a potential eco-barrier that can genetically isolate amphibian populations, making their gene pool more and more homogenous. This will make their populations more susceptible to disease and lead to the dominance of recessive alleles. Having a complex development study or Environmental Impact Assessment done will at least ensure that the proposed development will not severely degrade these wetlands and that all impacts will be properly minimized.

Thank you

To Those In Attendance,

My name is Matt Ellerbeck and I am a Salamander Conservationist whom is licensed with the Ontario Ministry of Natural Resources and Forestry. I am also a Partner of the Amphibian Survival Alliance (ASA), which is the world's largest partnership for amphibian conservation.

The Amphibian Ark also featured me as one of their Amphibian Ambassadors. Additionally, I am a board member for the Foundation for the Conservation of Salamanders (FCsal).

I am writing today to ask individuals and the East Lyme Wetlands Agency to reject the proposed 25 home development in Green Valley Lower Lake (Four Mile River), in East Lyme. This is due to the presence of the Spotted Salamander and its egg-masses (and critical breeding sites) in the area.

According to Connecticut's Department of Energy and Environmental Protection, Connecticut's spotted salamander population appears to be undergoing a long-term decline, not only because of the loss of its vernal pool breeding habitats, but more so due to the reduction of upland habitat surrounding aquatic breeding sites. Spotted salamanders are declining in urbanized and fragmented habitats throughout the northeastern United States, mainly because they prefer undisturbed habitats and are less tolerant of areas with human encroachment and development. Because spotted salamanders migrate together in large numbers during the early spring breeding season, many individuals are killed by vehicles as they cross roads. Most wetland regulations prescribe a 50- to 100-foot wide forested buffer around vernal pools. This buffer is to maintain water quality. Maintaining the amphibian diversity of a vernal pool requires 500 feet or more of primarily forested habitat surrounding breeding pools.

Therefore, the halting of this development is paramount to the protection of these already declining animals. As standard buffers and mitigation practices alone would be insufficient to conserve them.

Spotted Salamanders show a high tendency to use the same breeding pools year after year for breeding. Therefore the loss of any vernal pools (even small ones) can mean the elimination of the next generation of salamanders as mature individuals will have no place to breed or lay eggs. Egg masses are attached to submergent vegetation, small branches, or directly on the pond bottom. Therefore, observing masses can be tricky, and the sighting of one or two masses can indicate that many more are actually present. Therefore, the protection of even small vernal pools are of great importance to the overall population.

Spotted Salamanders prey on mosquitoes, and are extremely beneficial to humans by limiting these pests and the diseases they spread (West Nile, Zika, etc).

Furthermore, the Four-toed Salamander, which is also found in the proposed area preys on ticks. This again benefits humans, as it eliminates these parasites, which can spread diseases like Lyme.

Due to the benefits they provide and the threats that they face, I strongly implore everyone to act in favor of these salamanders.

Thank you.



Ex "HH"

IMAGES FROM THE AREA

Ex "IT"

THE WATER TABLE IS HIGH

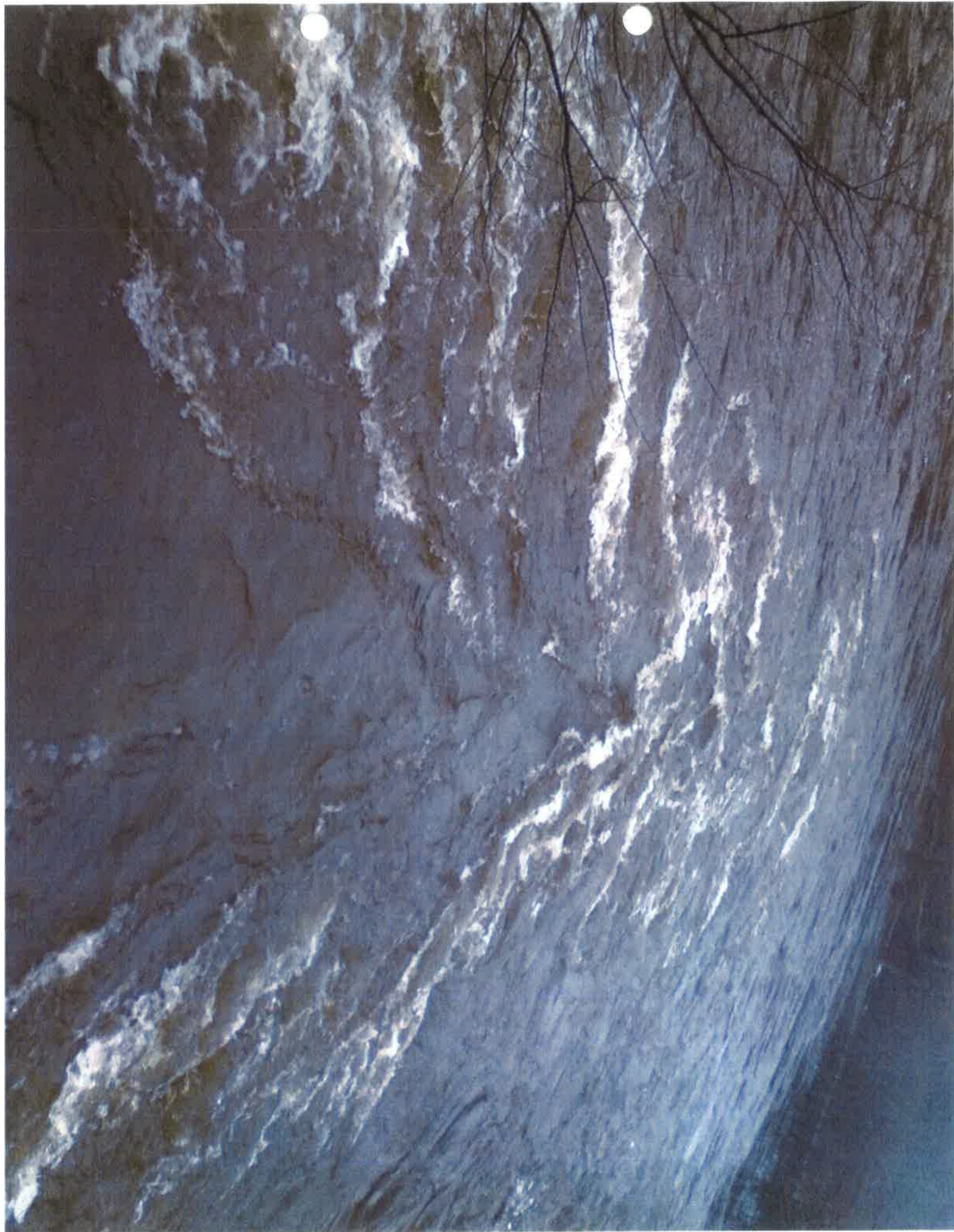
- Numerous residents have said that their properties and the proposed property is very wet. People along the river on both of the lakes have had flooded basements from extreme rainfall events and from beavers damming up the culverts. Until recently we have been in a drought and yet still neighbors have had issues with ponding on their properties. These images are examples from neighbors on Green Valley and Spring Rock.









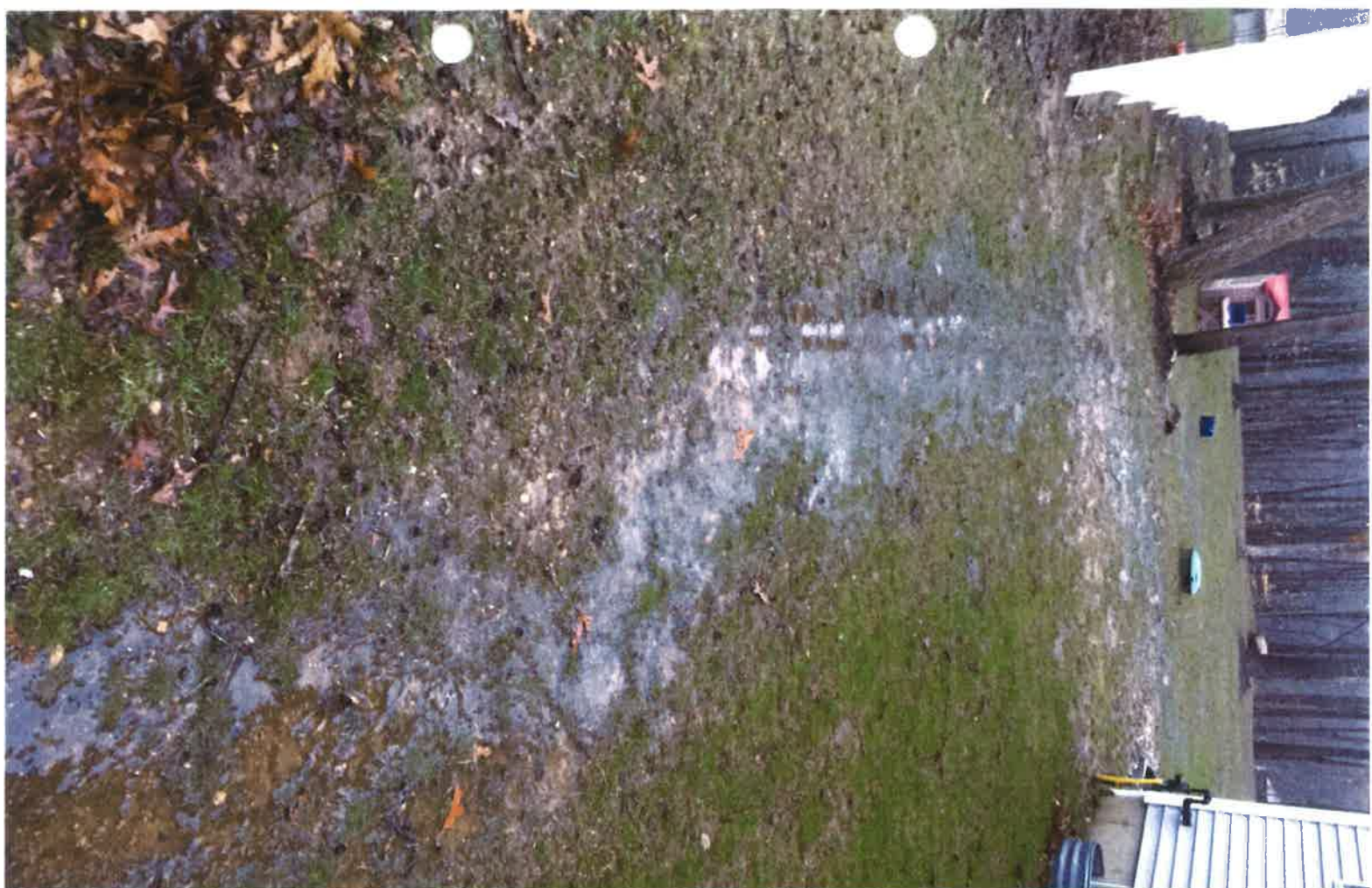












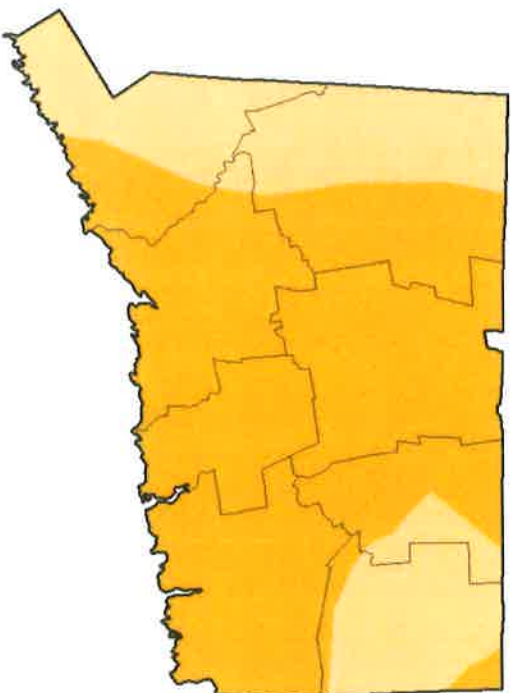


**ANIMALS LIVE
HERE AND THEY
MATTER**

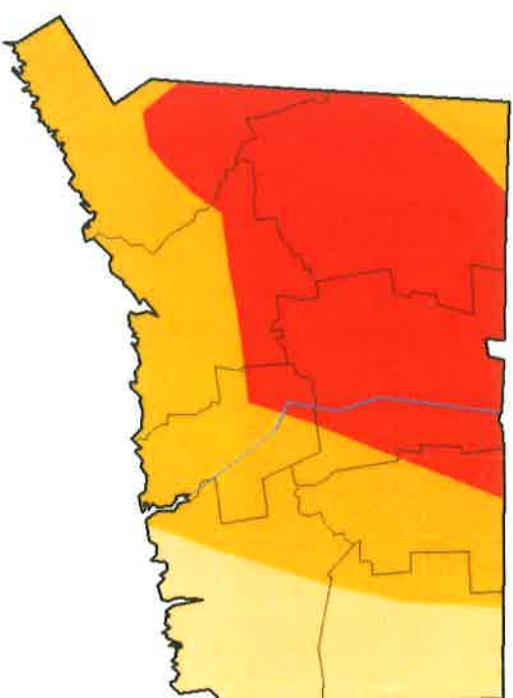


We see turtles laying their eggs in our yard as do the majority of our neighbors. To reach our property they travel uphill from the water to lay their eggs. With the location of the proposed road many of these turtles will die either by being run over or by falling in catch basins.

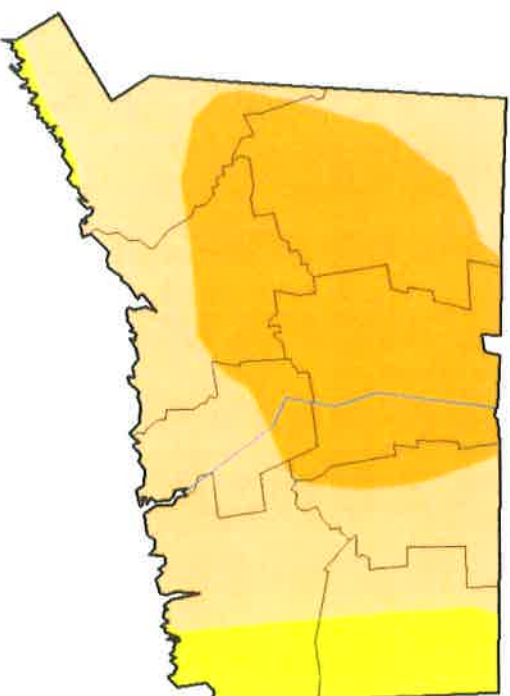
September 27, 2016



December 27, 2016








March 21, 2017



United States Drought Monitor

Intensity:

- | | | | |
|---|---------------------|---|------------------------|
|  | D0 Abnormally Dry |  | D3 Extreme Drought |
|  | D1 Moderate Drought |  | D4 Exceptional Drought |
|  | D2 Severe Drought | | |

<http://droughtmonitor.unl.edu/>



VERNAL POOLS AND EGG MASSES



The herpetologist (*Dennis Quinn*) looked at the vernal pool photos and said that the cloudy egg masses are from spotted salamanders.



SPOTTED SALAMANDER

Vernal Pool Indicator 1

FROM CT DEEP:

The herpetologist (*Dennis Quinn*) identified the salamander as a spotted salamander not a blue-spotted salamander. He said that the “blue” spotting was strange and aberrant.



WOOD FROG

Vernal Pool Indicator 2

Also found on the
proposed site



**FOUR-TOED
SALAMANDER**



**POSSIBLE REDBACK
SALAMANDER**

EX II

**THE INFORMATION
CONTAINED IN THE NATURAL
DIVERSITY DATABASE**

(species location information and related details)

IS BY NO MEANS COMPREHENSIVE.

We receive data regarding listed species locations from many different sources, including universities conducting research, conservation organizations (Audubon, etc.), scientists with particular expertise (herpetologists, botanists, ornithologists, etc.), as well as from our own staff, other state agencies, and the public. It can come out of research projects, or incidental observations. We have a form available online that is filled out when a listed species is observed, and the data from that form is entered into the database, and queried when we receive a request. **We do not have the staff available to go out and conduct comprehensive surveys** all over the state, and certainly there are also private lands access/trespassing issues that would need to be resolved before anyone conducts surveys on private lands.

My name is Susan Beeman. I live at 11 Green Valley Lakes Road and am an abutter of the property being discussed.

I'm here because having been associated with this property for over 30 years I have had the opportunity to observe these wetlands over time.

My understanding is that we are all here to determine the development of property and its impact on existing wetlands.

Ex "JJ"

There is a lot of specific scientific data being discussed but I thought it might be helpful for the commission to hear my general observations to add to their body of knowledge as they make their decision regarding the development of this property.

I think we can all agree that Wetlands are a product of nature and as such their parameters will ebb & flow over time.

Arbitrary Calculations based on statistical analysis and empirical evidence will have greater or lesser validity depending on environmental factors including weather, and wildlife.

We have all seen the impact of storm Sandy or of Katrina in New Orleans where steps were taken to safeguard from flooding, to no avail. It seems that extremes in weather events are becoming more and more common. The 100 year events that we planned for in the past appear to occur more frequently.

Where the properties in question are being defined by such precise calculations, I ask that the commission consider that the wetlands have and will change, perhaps beyond the calculations presented.

My home has been flooded twice.
Once as recently as March 2010.

We had water in the basement and lost many items due to water damage.

The water was coming up through the basement floor and it took several days for it to drop below basement level.

I have seen the water behind me rise and fall during different seasons and have experienced flooding in both our front and back yards. (**651a, 651b, 652, 702**)

I have a picture of the green valley lakes road bridge indicating rapidly flowing water under the bridge. (**705, 707**)

Beavers: One aspect that has not been discussed thus far is the location of an active beaver colony in the water behind our property.

There is ample visual proof of beaver's huts and a beaver dam located downstream of the green valley lakes road bridge. **(158,159, 161, 162, 164, 2531)**

DEEP has published an extensive fact sheet on beavers. In this factsheet DEEP describes living with beavers and states "there must be efforts to realize the benefits of the wetlands these animals create and enhance."

As we all know, Beavers can be found in rivers, streams, lakes, farm ponds, swamps & other wetland areas

Beavers feed on leaves, roots, shoots, twigs, and outer bark of trees and shrubs.

A dome or tepee shaped lodge is constructed by beavers out of sticks and mud within the wetland, upstream from the dam.

There are several lodges located in the pond area abutting the property under discussion

Activity is concentrated in the vicinity of the lodge and dam, but if necessary beavers may travel **several hundred feet from the water in search of food or materials for lodge and dam maintenance.**

Beaver ponds and their associated wetlands **provide habitat** for a wide variety of animals such as insects, spiders, frogs, salamanders, turtles, fish, ducks, rails, bitterns, and owls. Dead standing trees killed by flooding provide preferred nesting habitat for colonies of great blue herons and cavity nesting birds such as the wood duck.

I have seen much of this wildlife in the pond behind our house.

We have lost 12-15 trees over time on the shoreline of our property due to beaver.

Beaver ponds also filter and trap sediments and excess nutrients, serve as water storage and recharge areas, and provide opportunities for wildlife observation.

According to the DEEP, Wetlands are dynamic systems that change over time

I have observed these changes over thirty years and have evidence of chewed and downed trees and have seen beaver come to the shore to get materials.

Because of the contribution of beavers to the wetlands, the wildlife division encourages landowners to develop a tolerance and appreciation of beavers.

As I'm sure the commission is aware, The installment of any water control device at a culvert or modification of a beaver dam in any way including breaching or removal are considered regulated wetland activities and **must be approved by the local inland wetland commission. All installations require regular maintenance.**

The proposed property is being built adjacent to an active beaver pond that has changed over the last 30 years. There is a high probability that the beaver over time will impact the wetlands and the wildlife within and around it. Conversely development of the wetlands, including the upland review area, could adversely impact the beaver colony, which we need to maintain to benefit the wetlands.

Although the beavers are nature's engineers, they don't use calculators.

I ask the commission to consider my observations regarding weather impacts and the beaver colony as they make their decision regarding the development of this property.

Thank YOU

June 12, 2017

Attention Town of East Lyme Inland Wetland Agency:

I am writing in regard to the proposed Twin Valley Lakes subdivision off of Green Valley Lakes Road in East Lyme. The developer, members of the Agency, and citizens toured the site April 29, 2017, and observed a vernal pool in the area slated for development. At least four spotted salamander egg masses were found in this vernal pool. According to the Web site for the Connecticut Department of Energy and Environmental Protection, this species is in decline because of "reduction of upland habitat surrounding its aquatic breeding sites, as well as road mortality" (http://www.ct.gov/deep//cwp/view.asp?q=325784&deepNav_GID=1655). The developer's current plan includes building a road and cul de sac between two protected wetlands areas, one of which contains the vernal pool. This all is within a short distance of the pool, and DEEP notes that "500 feet or more of primarily forested habitat surrounding salamander breeding pools" is needed to "maintain the amphibian biodiversity of a vernal pool" (http://www.ct.gov/deep//cwp/view.asp?q=325784&deepNav_GID=1655). I ask the commissioners to carefully consider this information when reviewing the proposed subdivision.

Sincerely,



Lisa Sperry

24 Spring Rock Rd.

Ex "K.K."

Thank you for opportunity to speak to the commission. My name is Harvey Beeman and I live at 11 Green Valley Lakes Road.

I spoke previously at the public hearing on 6/12 to inquire as to my letter which had been mailed 4/24/17 as reflected in meeting minutes. My previous letter dated 4/24 has now been entered into commission review package. In that letter I raised six topics for your consideration, I will highlight them as follows;

1. How can the commission act on the applicants request to build a road without knowing the impact of the entire project. How can an evaluation of alternatives which minimize the impact to this area be performed without knowing how many of the potential lots will be approved by zoning and subsequently built upon. And without knowing the final design and demands of individual septic systems.
2. Why is Twin Valley being considered a re-subdivision? The original Green Valley Lakes subdivision was completed approximately 40 years ago. Although the applicant indicated that this land was always planned to be developed and that this is the final phase of that plan, the fact is that this land was set aside 40 years ago due to wetland concerns and has been vacant ever since. Now after 40 years and with improved environmental regulations aimed at preserving wetlands and improving water quality, the commission is being asked to conclude that there will be no impact on the environment.
3. The third point was aimed at development density. The applicant has maliciously laid out 25 potential house lots on the only non-wetland available within this 90 acre tract. Has an alternative of fewer house lots been considered? Perhaps 10 or 15 would have less impact on the wetlands and watercourse. It is also noted that of the 25 lots, 4 lots

EX "LL"

appear to be substantially or completely in a flood zone. As can be seen from the photos presented, this waterway is variable and subject to frequent changes in elevation.

4. What is the process for the town to accept responsibility for Twin Valley Road? In the applicants presentation it was indicated that some infrastructure such as the emergency road and the holding pond would be the responsibility of an owners group. How is an owners group established and how can the commission be ensured that required continued maintenance is performed over the long term? How would the proposed emergency road benefit all lots if the disaster were beyond lots 3 and 19? The remaining lots would all be isolated. How does lot 25 fit into the proposed subdivision? There are no plans for utilities or road access to this lot, it is not on the proposed Twin Valley town road and there are no details as to how it will join Green Valley Lakes Road.

5. The fifth point requested evaluation of increased surface paving (roads, driveways and lawns) on runoff during periods of heavy rainfall and periods of snowmelt.

6. The last point was whether the commission uses independent outside resources when evaluating the application. Are the applicant's surveys and calculations accepted without verification? One particular question is how will the requirement that not more than fifty (50) percent of the open space shall consist of wetlands, watercourses or steep slopes be confirmed? Review of the plans makes it difficult to find much open space which is not wetlands, watercourse or steep slope. The applicant has indicated that one side of the wetlands (on the side beyond Spring Rock Road) was not surveyed since the

proposed activity did not impact this wetland. The applicant also did not delineate the steep slope area abutting the rod and gun club. How were the wetland and steep slope areas treated with respect to compliance with the 50 percent requirement?

Thank you for your time and consideration.

East Lyme Inland Wetlands Agency

Special Meeting
26 June 2017

What we have heard...

- "There are no direct wetlands impacts proposed."
- "The design of the subdivision took into account the existing wetlands..."
- "Activities within an upland review (area) are allowed unless there is a direct adverse impact on wetlands."
- "If the Commission is to deny the application for the permit to conduct a regulated activity in an upland review area, it must determine that the proposed activity will have a likely adverse impact on a wetland or watercourse... supported by substantial evidence."
- "All we are doing is building a road and creating lots and any infrastructure improvements (i.e. utilities, drainage, and basins)."

What concerns the Public...

- "There are no direct wetlands impacts proposed."

Although there are no direct wetlands impacts proposed, the removal of vegetation and the activities involving filling, excavating, clear cutting, clearing, grading or any other alteration in the proposed subdivision acreage will result in significant impact on the aquatic, plant, animal life and habitats in the upland review area and wetlands.

What concerns the Public...

- "The design of the subdivision took into account the existing wetlands..."
- "Activities within an upland review (area) are allowed unless there is a direct adverse impact on wetlands."

The impact of the design of the road and planned subdivision in the upland review area in very close proximity to existing wetlands and the direct adverse impact on the wetlands in the future are not known at this time.

What concerns the Public...

- "If the Commission is to deny the application for the permit to conduct a regulated activity in an upland review area, it must determine that the proposed activity will have a likely adverse impact on a wetland or watercourse... supported by substantial evidence."

Due to size and amount of the proposed activity in the upland review area, the entire character of the upland review area would be affected and the adverse impact on the nearby wetlands would be likely, expected and significant.

The substantial evidence needed to support this claim would not be known or available until sometime after the proposed activity is completed.

What concerns the Public...

- "All we are doing is building a road and creating lots and any infrastructure improvements (i.e. utilities, drainage, and basins)."

What appears on the surface to be a simple project, potentially will result in a significant detrimental impact on the wetlands.

What the Public requests...

- The East Lyme Inland Wetland Agency to **reject** the application for the permit to conduct regulated activities within 100 ft of the upland review area from wetlands and the construction of a proposed subdivision road on the basis that the proposal will result in **significant impact** on the aquatic, plant, animal life and habitats in the upland review area and wetlands that is not known or quantifiable at this time.

Ex "MM"

Town of

P.O. Drawer 519

**Department of Planning &
Inland Wetlands Agency**

*Gary A. Goeschel II, Director of Planning /
Inland Wetlands Agent*



East Lyme

**108 Pennsylvania Ave
Niantic, Connecticut 06357**

Phone: (860) 691-4114

Fax: (860) 860-691-0351

June 26, 2017

Keith Hall, Chairman
Inland Wetlands Agency
Town of East Lyme
PO Box 519
Niantic, CT 06357

**RE: Sec. 8-26(e) of the Connecticut General Statutes (CGS) East Lyme Planning
Commission Referral for Twin Valley 25-Lot CDD Re-subdivision at Green Valley
Lakes Road & Spring Rock Road; Frank & Rajko Maric Owners, Real Estate
Service of CT, Inc. c/o Bob Fusari Jr. Applicant.**

Dear Chairman Hall,

Pursuant to Sec. 8-26(e) of the Connecticut General Statutes (CGS), I correspond to provide notice of the above referenced application for a 25-lot re-subdivision of approximately 97.3± acres, Zoned RU-40 at Spring Rock Road and Green Valley Lakes road, East Lyme, Assessor's Map 14.0 Lot 45, together with a waiver request from Section 6-10-11 of the East Lyme Subdivision Regulations and to refer the application for your Agency's review and a report with your final decision as it involves land regulated as an inland wetlands or watercourse under the provisions of Chapter 440.

The Planning Commission will be conducting a public hearing on the above application on July 11, 2017 at 7:00 p.m. at the East Lyme Town Hall. As such, please forward any comments you may have to me as soon as possible. If you have any questions please do not hesitate to contact me at (860) 691-4105, or via email at ggoeschel@eltownhall.com. I thank you in advance for your attention to this matter.

Sincerely,

Brian Schuch, Chairman
East Lyme Planning Commission

BS/jld

Page ____

148 Conn.App. 91 (Conn.App. 2014)

____ A.3d ____

THREE LEVELS CORPORATION ET AL.

v.

**CONSERVATION COMMISSION OF THE TOWN
OF REDDING**

No. AC 34298

Court of Appeal of Connecticut

February 11, 2014

Argued October 17, 2013

Appeal from Superior Court, judicial district of Danbury,
Schofield, J.

[148 Conn.App. 93] Peter S. Olson, for the appellant
(defendant).

Neil R. Marcus, with whom was Barbara M. Schellenberg,
for the appellees (plaintiffs).

DiPentima, C. J., and Gruendel and West, Js.

OPINION

GRUENDEL, J.

The defendant, the Conservation Commission of the Town of Redding (commission), [1] appeals from the judgment of the Superior Court sustaining the appeal of the plaintiff Three Levels Corporation [2] from its decision to deny the plaintiff's application for a license to conduct regulated activities pursuant to the Inland Wetlands and Watercourses Act (act), General Statutes § 22a-36 et seq. The commission's principal contention is that the court improperly sustained the appeal because substantial evidence in the record supports its findings that (1) the proposed activities presented a significant adverse environmental impact on the Saugatuck River and its associated wetlands system, and (2) the plaintiff's application was incomplete due to the plaintiff's failure to submit adequate information on the impact of the proposed activities on the river and wetlands. The commission further claims that the court improperly intimated that the commission lacked jurisdiction to regulate stormwater

impacts on wetlands and watercourses due to a lack of regulations thereon. We affirm in part and reverse in part the judgment of the Superior Court. [3]

[148 Conn.App. 94] At all relevant times, Reeda B. Harsche owned a 14.19 acre parcel of land located in a residential zone and known as 626 Redding Road in Redding (property). The property contains 1.75 acres of inland wetlands. [4] Specifically, it features a vernal pool on the northeastern portion of the property and wetlands on the southeastern portion of the property. The property also is adjacent to floodplain wetlands and the Saugatuck River, which are located to the west of the property. [5] The Saugatuck River is a tributary to a major public drinking water supply and is a Class AA stream under the Connecticut water quality standards, as adopted by the Department of Energy and Environmental Protection (department).

The plaintiff is a prospective purchaser of the property and Harsche's authorized agent in the proceedings before the commission. In July, 2006, the plaintiff filed an application with the commission for a license to conduct certain regulated activities in connection with the proposed construction of a ten unit housing development on the property. [6] In its December 19, 2006 decision, the commission unanimously denied that application and the plaintiff appealed to the Superior Court, which dismissed the appeal.

Page 95

Three Levels Corp. v. Conservation Commission, Superior Court, judicial district of Danbury, Docket No. CV-07-4006860-S (April 24, 2008). In its memorandum of decision, the court noted that although the plaintiff's application listed only one "regulated activity [that] consisted of the placement of one subsurface waste disposal or septic system and related earth disturbing activities associated therewith within 500 feet of the high water line of a vernal pool. . . [t]he project also involved the construction and operation of individual septic systems for each house and a community water supply system. The commission found that the application actually involved numerous other regulated activities, including "the construction and operation of subsurface waste disposal systems, drainage systems and earth disturbing activities associated with the construction of ten proposed dwellings and driveways located upgradient and in close proximity to highly valuable wetlands and the Saugatuck River." "In dismissing the appeal, the court found that (1) the plaintiff's application was incomplete due to the plaintiff's failure to submit "requested information regarding the effect on the wetlands and watercourses of activities

Ex "SS"

conducted upgradient from [the specified] wetlands and watercourses"; and "an updated vernal pool study." and (2) the plaintiff had failed to prove that a feasible and prudent alternative did not exist. Accordingly, the court sustained the decision of the commission.

On July 30, 2008, the plaintiff filed a second, and virtually identical, application with the commission. In the "anticipated regulated activities" portion thereof, the plaintiff once again stated: "The location of sealed pipes serving a subsurface waste disposal structure and related earth disturbing activities associated therewith within 500 . . . feet of the high water line of a vernal pool as regulated pursuant to Section 2.23c of the [Redding Inland Wetlands and Watercourses] Regulations.";

Page 96

In the portion of the application asking applicants to "[d]escribe and diagram . . . potential alternatives to the proposed regulated activities," the plaintiff simply wrote, "N/A.";

The commission held a public hearing on the application over the course of four evenings between November 18, 2008 and January 6, 2009. Following the culmination of its deliberations on February 17, 2009, the commission voted unanimously to deny the plaintiff's application. It thereafter published a written decision containing detailed findings. The commission found that the proposed regulated activities did not present a significant adverse environmental impact on the wetlands located on the northeastern and southeastern sides of the property. The commission then found that the proposed regulated activities and other site development "occur upgradient of and in the vicinity of the Saugatuck River, which is classified as a Class AA stream, and its associated wetlands system. . . . The Saugatuck River and the associated wetlands system, located on the western portion of the property and the adjacent property, are high value wetlands resources, and as such, the commission has reviewed the proposed regulated activities to determine if they are likely to have an impact on such resources Based on the foregoing, it is hereby moved that the Application for License to Conduct Regulated Activities be and hereby is denied";

The commission proceeded to articulate four distinct grounds on which it was denying the application. First, the commission found "that the application proposes insufficient pretreatment facilities for stormwater prior to infiltration and ultimate discharge into the wetlands and Saugatuck River, and [the commission] therefore finds that the proposed regulated activities are likely to have a significant adverse environmental impact on

Page 97

the western wetlands and the Saugatuck River."; Second, the commission found "that the soils on the site lend themselves to an extremely high rate of infiltration and groundwater mitigation, such that there will be insufficient time of travel to achieve adequate water quality renovation of stormwater and septic effluent prior to discharge into the western wetlands and Saugatuck River, and [the commission] therefore finds that the proposed regulated activities are likely to have a significant adverse environmental impact on the western wetlands and the Saugatuck River."; As to each of those two grounds, the commission noted that it had heard expert testimony from four expert witnesses and that it found that of its consulting engineer, James MacBroom, [7] to be "most credible."; The commission thus stated that it "chooses to rely on the expert testimony and conclusions presented" by MacBroom.

As a third ground, the commission found that "[d]espite repeated requests by the commission and Mr. MacBroom, the [plaintiff] has failed to present adequate information concerning the following subjects to allow the commission to conduct a sufficient review of the potential impacts of the proposed regulated activities: (a) The impact of the proposed regulated activities on the Saugatuck River; (b) The impact of pathogens from septic effluent on the wetlands and the Saugatuck River; and (c) The relationship between the 100 and 500 year flood lines of the Saugatuck River and the elevations of the proposed septic systems. . . . [T]he commission

Page 98

finds that the application presented to it is incomplete in these respects, and it can therefore not determine whether these issues might present a significant adverse environmental impact to the western wetlands or the Saugatuck River.";

The fourth and final ground for the commission's denial of the plaintiff's application concerned potential alternatives to the proposed regulated activities. It stated: "The commission is unable to conclude that there are no feasible and prudent alternatives to the proposed regulated activities which would cause less or no environmental impact to the wetlands or Saugatuck River. The commission finds that there may be feasible and prudent alternatives to the proposed regulated activities, and the [plaintiff] should investigate one or more of the following alternatives to determine whether the property can be developed with less or no environmental impact to the wetlands and the Saugatuck River: (a) Reduce the number of proposed structures and/or the size of the proposed septic system so as to provide room for additional pretreatment facilities for

stormwater in key areas prior to discharge into the wetlands and the Saugatuck River and to increase the natural infiltration of stormwater thereby reducing the amount of stormwater which must be controlled and redirected; (b) Relocate or consolidate all or a portion of the proposed development, so as to provide room for additional pretreatment facilities for stormwater in key areas prior to discharge into the wetlands and the Saugatuck River; (c) Develop the property pursuant to the existing zoning code so as to use traditional single-family septic systems rather than community septic systems, thereby reducing the potential discharges into the wetlands and the Saugatuck River.';

From that decision, the plaintiff timely appealed to the Superior Court. On September 22, 2011, the court

Page 99

issued its memorandum of decision sustaining the plaintiff's appeal. In so doing, the court reviewed and rejected each of the four distinct grounds articulated by the commission in its written decision. The court thus ordered that '[t]he matter is remanded to the commission for further consideration of any conditions that should be attached to the issuance of the permit to conduct the regulated activity.'; (Internal quotation marks omitted.)

The commission thereafter filed a petition for certification to appeal pursuant to General Statutes § 8-8 (c). We granted the petition, and this appeal followed.

I

The commission's principal contention is that the court improperly sustained the plaintiff's appeal because substantial evidence in the record supports the commission's findings that (1) the proposed activities presented a significant adverse environmental impact on the Saugatuck River and its associated wetlands system, and (2) the plaintiff's application was incomplete due to the plaintiff's failure to submit adequate information on the impact of the proposed activities on the river and wetlands. The standard of review applicable to such claims is well established. 'In challenging an administrative agency action, the plaintiff has the burden of proof. . . . The plaintiff must do more than simply show that another decision maker, such as the [Superior Court], might have reached a different conclusion. Rather than asking the reviewing court to retry the case de novo . . . the plaintiff must establish that substantial evidence does not exist in the record as a whole to support the agency's decision. . . . In reviewing an inland wetlands agency decision made pursuant to the act, the reviewing court must sustain the agency's determination if an examination of the record discloses evidence that supports any one of the [148

Conn.App., 100] reasons given. . . . The evidence, however, to support any such reason must be substantial; [t]he credibility of witnesses and the determination of factual issues are matters within the province of the administrative agency. . . . This so-called substantial evidence rule is similar to the sufficiency of the evidence standard applied in judicial review of jury verdicts, and evidence is sufficient to sustain an agency finding if it affords a substantial basis of fact from which the fact in issue can be reasonably inferred. . . . The reviewing court must take into account [that there is] contradictory evidence in the record . . . but the possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency's finding from being supported by substantial evidence. . . .'; (Citations omitted; internal quotation marks omitted.) *Samperiv. Inland Wetlands Agency*, 226 Conn. 579, 587–88, 628 A.2d 1286 (1993).

As our Supreme Court has explained, the substantial evidence standard 'is a compromise between opposing theories of broad or de novo review and restricted review or complete abstention.'; (Internal quotation marks omitted.) *Lawrence v. Kozlowski*, 171 Conn. 705, 713, 372 A.2d 110 (1976), cert. denied, 431 U.S. 969, 97 S.Ct. 2930, 53 L.Ed.2d 1066 (1977). The substantial evidence standard 'has been described as a test that is highly deferential and permits less judicial scrutiny than a clearly erroneous or weight of the evidence standard of review. . . . *New England Cable Television Assn., Inc. v. Dept. of Public Utility Control*, 247 Conn. 95, 118, 717 A.2d 1276 (1998). Plainly, then, substantial evidence and clearly erroneous are not synonymous standards. See *Dickinson v. Zurko*, 527 U.S. 150, 153, 119 S.Ct. 1816, 144 L.Ed.2d 143 (1999) (clearly erroneous standard stricter than substantial evidence standard); *Case v. Morrisette*, 475 F.2d 1300, 1307 n.35 (D.C. Cir. 1973) (substantial evidence and clearly erroneous

Page 101

not synonymous); *W.R.B. Corp. v. Geer*, 313 F.2d 750, 753 (5th Cir. 1963) (same), cert. denied, 379 U.S. 841, 85 S.Ct. 78, 13 L.Ed.2d 47 (1964). . . .

'The distinction between the clearly erroneous and substantial evidence standards is not an academic one. The clearly erroneous standard of review provides that [a] court's determination is clearly erroneous only in cases in which the record contains no evidence to support it, or in cases in which there is evidence, but the reviewing court is left with the definite and firm conviction that a mistake has been made. . . . *Considine v. Waterbury*, 279 Conn. 830, 858, 905 A.2d 70 (2006); see also *United States v. United States Gypsum Co.*, 333 U.S. 364, 395, 68 S.Ct. 525, 92 L.Ed. 746 (1948). The substantial evidence standard is even more deferential. Under the substantial evidence standard, a

reviewing court must take into account [that there is] contradictory evidence in the record . . . but the possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency's finding from being supported by substantial evidence *Tarullo v. Inland Wetlands & Watercourses Commission*, 263 Conn. 572, 584, 821 A.2d 734 (2003). Significantly, substantial evidence is something less than the weight of the evidence. *Rogers v. Board of Education*, 252 Conn. 753, 768, 749 A.2d 1173 (2000). The substantial evidence standard imposes an important limitation on the power of the courts to overturn a decision of an administrative agency . . . and [provides] a more restrictive standard of review than [the] clearly erroneous [standard of review]. . . . *Sweetman v. State Elections Enforcement Commission*, 249 Conn. 296, 331, 732 A.2d 144 (1999)."; (Footnotes omitted; internal quotation marks omitted.) *Brunswick v. Statewide Grievance Committee*, 103 Conn.App. 601, 611–12, 931 A.2d 319, cert. denied, 284 Conn. 929, 934 A.2d 244 (2007). Because that standard "permits less judicial scrutiny"

Page 102

than the clearly erroneous standard of review: *New England Cable Television Assn., Inc. v. Dept. of Public Utility Control*, *supra*, 247 Conn. 118; "[t]he term 'substantial evidence' appears to be something of a misnomer."; *Brunswick v. Statewide Grievance Committee*, *supra*, 612 n.11. With that standard in mind, we turn to the commission's specific claims.

A

The commission maintains that the record contains substantial evidence, in the form of MacBroom's expert testimony, to support its finding that the proposed regulated activities are likely to have a significant adverse environmental impact on the western wetlands and the Saugatuck River. In response, the plaintiff argues that MacBroom's testimony failed to identify any specific adverse environmental impact that would result. On the record before us, we agree with the plaintiff.

"Determining what constitutes an adverse impact on a wetland is a technically complex issue"; *River Bend Associates, Inc. v. Conservation & Inland Wetlands Commission*, 269 Conn. 57, 78, 848 A.2d 395 (2004); frequently necessitating resort to expert testimony. Although the commission in the present case heard from multiple experts, it expressly found "most credible"; and chose to rely on the expert testimony of MacBroom, as was its exclusive prerogative. [8]; It is well [148 Conn.App., 103] established that credibility and factual determinations are solely within the province of the commission . . . and the commission is not required to believe any witness, even an expert"; (Citation omitted; internal quotation marks

omitted.) *Unistar Properties, LLC v. Conservation & Inland Wetlands Commission*, 293 Conn. 93, 123, 977 A.2d 127 (2009). For that reason, in determining whether the commission's findings were supported by substantial evidence, the court was obligated to defer to the commission's assessment of the credibility of the expert witnesses. See *Gardiner v. Conservation Commission*, 222 Conn. 98, 108, 608 A.2d 672 (1992).

MacBroom provided expert testimony during the December 16, 2008 public hearing on the sufficiency of the erosion and soil control measures proposed by the plaintiff's activities on the property. He stated in relevant part: "[One] area of discussion concerns very limited soil erosion control plans As you know, the proposed project is adjacent to a very high quality wetland system which is adjacent to the Saugatuck River which is a Class AA river and is [a] tributary to [a] major drinking water supply reservoir, and so it's really imperative that we do every (inaudible) effort we can to protect the reservoir, the river and the adjacent wetlands from the possibility of physical or chemical or biological contamination. In this particular case, the erosion control efforts to try to prevent no physical material, topsoil, sand, material from excavation, [and] material from future activities from getting into the wetlands and getting into the (inaudible) system and right now, at the downstream perimeter of the active construction zone, the plan only shows a single row of silt fence, which is a very minimal type of protection. It certainly, in my opinion, is not sufficient to avoid having *some type* of adverse impact on the wetlands due to sediment and erosion materials getting into the wetland, the pond and the rivering system." (Emphasis

Page 104

added.) He further testified that the likelihood of that adverse impact "is very strong"; MacBroom described the plaintiff's erosion and soil control plan as "minimal"; and emphasized that "there's no permanent sediment basins, no stormwater detention ponds, no grass swales and no way to easily maintain the inside infiltration perimeter of the infiltration units.";

MacBroom also opined that the underground infiltration system proposed by the plaintiff has "a very high failure rate"; since "there isn't any way to easily maintain [it]"; He testified that "the stormwater infiltration units are too close to the proposed buildings, " which "makes the basins very hard to maintain."; He continued: "I don't think people would like to have their front yard dug up every few years if the basin needs to have maintenance. It's a system that basically is going to be unmaintainable without having great inconvenience to the neighborhood. The theory is that if something is hard to maintain and expensive to maintain, generally they tend not to be

maintained. If it's not maintained, and this is a hypothetical, then you would have adverse impact on the wetland system both from excessive runoff and from the lack of removal of the impurities that tend to be taken out by the infiltration system.';

In addition, MacBroom assessed the adequacy of the temporary sediment basins proposed by the plaintiff during the excavation of the proposed buildings. He stated: 'Now, they're at the base of a top of a hill where if you're familiar with drainage systems, water always goes downhill so you always have to put the sediment control systems at the bottom of the hill, not at the top of the hill. So, how and why these temporary sediment basins would be effective remains somewhat obscure simply because of their geospatial location to be diplomatic. . . . [F]ill material will not be draining into them. Most of the fill material is placed on the down gradient side of the virtual sediment basins . . . and

Page 105

so the sediment is not likely to reach the basins and is more than likely to discharge into the wetlands area.';

In his January 28, 2009 letter to the commission, [9] MacBroom summarized his 'outstanding concerns'

Page 106

regarding 'the final revised application and plans' presently before the commission. He noted that '[o]ur previous review letters and public hearing testimony discussed a broad array of topics, of which the focal point has been the probable impact of the project upon adjacent designated inland wetlands and watercourses, including drinking water sources. Although the development activities are not within the wetland boundaries, the project's wastewater effluent, stormwater runoff, and sediment loads will move downgradient into the regulated area. The [plaintiff] has gradually added measures that only partially mitigate short-term impacts to the wetland. The stormwater drainage system is a particular concern because its design focuses upon peak flow rates and flood issues by storing and discharging parking lot water into the subsoil (connected to the aquifer), with minimal water quality protection. There are no surface water treatment measures (sediment basins, grass swales, buffer zones) to treat runoff prior to infiltration, just a small manhole sediment trap with low efficiency. There are no measures for biological treatment or nutrient removal. Therefore, these materials will go into the soil and probably the wetland.

'The proposed stormwater infiltration galleys are subsurface and cannot be effectively maintained without full removal. Since they are in a front yard only 12

Page 107

feet from a building, periodic removal and replacement is unlikely. . . . The 2004 Connecticut Stormwater Quality Manual . . . considers underground infiltration to be a secondary practice 'due to limited field performance data.' Among the reasons listed for limited use are undocumented field longevity, potential failures, susceptibility to clogging by sediment, risk of ground water contamination, and unsuitability for stormwater runoff from land uses or activities with the potential for high sediment or pollution loads.

'The proposed wastewater disposal system consists of conventional septic tanks and subsurface leaching fields, on a large scale due to the project density. It has been determined that the system appears to meet the Public Health Code, but its environmental impact upon the designated wetlands is uncertain. . . . On larger lots, the impact of chemicals is considered to be minor due to low concentrations. We do not know what the chemical impact of concentrating so many wastewater systems in a small area will be. On this proposed project, no definitive proof of its impact, or non-impact, has been provided.'; MacBroom's letter concluded that 'the proposed project is likely to have a significant adverse impact upon the adjacent designated inland wetlands and the Saugatuck River.'; The commission, as sole arbiter of credibility, was free to credit and rely on that expert testimony.

The plaintiff nevertheless asserts that MacBroom's expert testimony failed to establish with sufficient certainty that adverse environmental impact. The plaintiff relies on *River Bend Associates, Inc. v. Conservation & Inland Wetlands Commission*, *supra*, 269 Conn. 57, *Estate of Casimir Machowski v. Inland Wetlands Commission*, 137 Conn.App. 830, 49 A.3d 1080, cert. denied, 307 Conn. 921, 54 A.3d 182 (2012), and *AvalonBayCommunities, Inc. v. Inland Wetlands & Watercourses Agency*, 130 Conn.App. 69, 23 A.3d 37, cert. denied.

Page 108

303 Conn. 908, 32 A.3d 961, 962 (2011), in support of its contention that MacBroom failed to precisely identify 'the specific, adverse impact that he believed would result.'; A review of that authority, therefore, is necessary to properly evaluate the commission's claim in this appeal.

Like the present case, *River Bend Associates, Inc.*, involved an application to conduct regulated activities in connection with the construction of a housing development on property containing inland wetlands and watercourses. See *River Bend Associates, Inc. v. Conservation & Inland Wetlands Commission*, *supra*, 269 Conn. 61 & #8211;62. The defendant commission denied that application, finding, inter

alia, 'that the proposed development would sever the site from a much larger interconnected ecosystem in the region, thereby adversely affecting the on-site wetlands and wildlife; that it likely would cause excessive sedimentation in the wetlands and watercourses; and that it possibly could cause pesticide mobilization that could detrimentally affect the wetlands and watercourses.' (Footnote omitted.) *Id.*, 63–64. The Superior Court dismissed the plaintiffs' appeal, holding that there was substantial evidence to support the denial of the plaintiffs' application. *Id.*, 65. On appeal to our Supreme Court, the plaintiffs claimed that the Superior Court improperly applied the substantial evidence test by failing to require that there be specific evidence in the record showing that the plaintiffs' activities would in fact adversely impact the wetlands or watercourses and by failing to require that the decision to deny the application be supported by more than a possibility of adverse impact. *Id.*, 69–70.

Our Supreme Court agreed with the plaintiffs, holding that '[e]vidence of general environmental impacts, mere speculation, or general concerns do not qualify as substantial evidence.' *Id.*, 71. The court noted that although the commission had 'found that the plaintiffs' [148 Conn.App., 109] proposed plan to remediate soil contamination on the property through soil mixing 'may increase pesticide mobility and result in . . . greater pesticide transport . . . into wetlands and watercourses,' 'it nevertheless remained that the commission 'made no specific finding of any actual adverse impact to any wetlands or watercourses.' (Emphasis altered.) *Id.*, 76–77. The court similarly discounted the commission's reliance on the expert testimony of a project environmental engineer 'that while the vast majority of elements would be removed by the storm water management system, 'over 36 [percent] of nitrogen, copper, and zinc would not be removed by the stormwater control devices and would flow into the wetlands and watercourses.' ' *Id.*, 80. The court explained that the expert's statement 'does not meet the substantial evidence test because it does not provide a substantial basis in fact that any specific harm to the wetlands or watercourses will occur from the dispersal of these elements into a wetland or watercourse.' (Emphasis added.) *Id.*, 81. *River Bend Associates, Inc.*, thus instructs that the substantial evidence standard requires evidence of specific, actual harm to the environment, rather than general impact thereto.

In *AvalonBayCommunities, Inc. v. Inland Wetlands & Watercourses Agency*, *supra*, 130 Conn.App., 76, this court applied that precept to a denial of a permit due to, inter alia, inadequate erosion control measures that created 'the significant likelihood of construction phase and post-development erosion and sedimentation of materials into both the regulated setback, the wetlands and Pumpkin Ground Brook.' (Internal quotation marks omitted.) On

appeal, the Superior Court determined that although the record substantiated the finding 'that some sediment and siltation will enter the brook and its associated wetlands despite the use of the control measures proposed by the plaintiff,' the

Page 110

defendant inland wetlands and watercourses agency 'never moved beyond speculation in order to establish' an actual adverse effect thereof. (Internal quotation marks omitted.) *Id.*, 77. This court agreed with that determination. In so doing, we rejected the defendant's claim that the mere entry 'of any amount of sediment or siltation into a wetlands or watercourse automatically would be deemed to be an adverse impact.' *Id.*, 77 n.8. To the contrary, we held that the record contained 'no evidence as to the amount of sediment and siltation that would enter or the harm to the wetlands or watercourse that would result from that amount, due to the plaintiff's activities at the site. Given the record before the defendant, we conclude that the concern regarding potential pollution from sediment and siltation does not rise above speculation. Accordingly, the record does not contain substantial evidence because there is no specific finding of any actual adverse impact to any wetlands or watercourses. . . . The defendant could not simply assume that the entry of sediment and siltation would adversely affect the wetlands and watercourse without evidence that it would in fact do so.' (Citation omitted; footnote omitted; internal quotation marks omitted.) *Id.*, 78.

At issue in *Estate of Casimir Machowski v. Inland Wetlands Commission*, *supra*, 137 Conn.App., 833, was the efficacy of a detention basin located 'immediately upslope of a wetland area.' In rejecting the plaintiff's appeal, the Superior Court concluded that 'the proposed detention pond would be built on a steep slope and that 'any failure' of the basin would 'clearly impact' the wetlands on the property and further exacerbate already severe downstream flooding conditions.' *Id.*, 834. On appeal to this court, the plaintiff argued that 'there is no specific evidence in the record that the fill needed for the project or the location of the detention basin in the upland review area would, in fact, adversely

Page 111

impact the downslope wetland. . . . [T]he court simply assumed that (1) the detention basin would likely fail and (2) that such failure would adversely affect the downslope wetlands without any evidence in the record to support either assumption. . . . [T]he commission's expert referred only to a potential impact, but that there was no opinion that an adverse impact was likely should the detention basin fail, or, moreover, that a failure of the detention basin was

reasonably likely to occur.' (Emphasis omitted.) *Id.*, 838.

This court agreed with the plaintiff, concluding that 'the evidence . . . regarding both the prospect of a failure [of the detention basin] and the potential impact such a failure would have on the wetlands is speculative in nature.' *Id.*, 841. We stated that the case was 'analogous to *River Bend Associates, Inc.*, in that there was no evidence before the commission that the activity proposed by the plaintiff would have an adverse effect on the wetlands. Our careful review of the record reveals that there was no evidence supporting a likelihood that the detention basin would fail because of its location or otherwise. There also was no evidence *specifically indicating what effect, if any, a failure of the detention basin would have on the downslope wetlands.* Evidence submitted by the commission's experts referred only to potential damage to wetlands and mentioned the possibility that the detention basins would fail. . . . Evidence regarding potential impacts to wetlands in the event of a failure of the detention basin does not in itself amount to substantial evidence.' (Emphasis altered; footnotes omitted.) *Id.*, 839–40.

On our review of the record before us, we agree with the plaintiff that MacBroom's expert testimony, although detailed, suffers a similar infirmity. Although he articulated numerous concerns and critiques of the plaintiff's proposed activities, he did not identify any specific, actual harm that was likely to occur to the

Page 112

wetlands or the Saugatuck River. See *River Bend Associates, Inc. v. Conservation & Inland Wetlands Commission*, *supra*, 269 Conn. 81. The substantial evidence test is not met by a general statement by an expert that 'some type' of adverse impact is likely to result from the proposed regulated activities. [10] See *id.*, 71; *Estate of Casimir Machowski v. Inland Wetlands Commission*, *supra*, 137 Conn.App., 839–40; *AvalonBayCommunities, Inc. v. Inland Wetlands & Watercourses Agency*, *supra*, 130 Conn.App., 78. Absent evidence that identifies and specifies the actual harm resulting therefrom, a commission cannot find that the proposed activities will, or are likely to, adversely impact wetlands or watercourses.

We note that the commission argues that the foregoing precedent improperly shifted the burden from the applicant to the commission in such proceedings. In its reply brief, the commission alleges specifically that, in *Estate of Casimir Machowski*, this court 'improperly ignored established precedent which places the burden on the applicant to demonstrate that it is entitled to [148 Conn.App., 113] the permit it seeks.' [11] At oral argument, counsel for the commission asked us to revisit that authority. We decline to do so. As an intermediate

appellate tribunal, this court is not free to depart from or modify the precedent of our Supreme Court. See *Hartford Steam Boiler Inspection & Ins. Co. v. Underwriters at Lloyd's & Cos. Collective*, 121 Conn.App., 31, 48–49, 994 A.2d 262, cert. denied, 297 Conn. 918, 996 A.2d 277 (2010). Furthermore, '[a]s we often have stated, this court's policy dictates that one panel should not, on its own, reverse the ruling of a previous panel. The reversal may be accomplished only if the appeal is heard en banc.' (Internal quotation marks omitted.) *FirstConnecticutCapital, LLC v. Homes of Westport, LLC*, 112 Conn.App., 750, 759, 966 A.2d 239 (2009). We thus decline the commission's invitation to reconsider that precedent.

B

The commission also found, as an independent basis for denying the plaintiff's application, that the plaintiff's

Page 114

application was incomplete. In its decision, the commission stated in relevant part that '[d]espite repeated requests by the commission and Mr. MacBroom, the [plaintiff] has failed to present adequate information concerning the following subjects to allow the commission to conduct a sufficient review of the potential impacts of the proposed regulated activities: (a) The impact of the proposed regulated activities on the Saugatuck River; (b) The impact of pathogens from septic effluent on the wetlands and the Saugatuck River; and (c) The relationship between the 100 and 500 year flood lines of the Saugatuck River and the elevations of the proposed septic systems. Accordingly, the commission finds that the application presented to it is incomplete in these respects, and it can therefore not determine whether these issues might present a significant adverse environmental impact to the western wetlands or the Saugatuck River.'

A commission is entitled to deny an application before it due to incompleteness. See, e.g., *Ventres v. Inland Wetlands & Watercourses Commission*, 25 Conn.App., 572, 574, 595 A.2d 914 (inadequate plan for erosion and sediment control is valid reason for denying wetlands permit), cert. denied, 220 Conn. 921, 597 A.2d 344 (1991). The Redding Inland Wetlands and Watercourses Regulations (Rev. 1999) (regulations) [12] contain specific requirements regarding this issue. Section 5.7 of the Redding Inland Wetlands and Watercourses Regulations provides in relevant part that '[a]fter an initial review by the Commission and/or its consultant(s) of the submitted application, the applicant may be required to provide one or more items of information that are listed in the Appendix and/or other items of information necessary for the Commission to fulfill

its obligations pursuant to the Act. . . .'; Subsection (a)

Page 115

of that section similarly provides that '[a]t any time during the review of the application, the Commission may require the applicant to submit additional information about the proposed activities.'; Redding Inland Wetlands and Watercourses Regs., § 5.7 (a). The regulations expressly authorize the commission to deny an application due to incompleteness: 'Any application deemed incomplete, due to the initial submittal or an applicant's failure to provide additional information as required pursuant to Section 5.7, may be denied by the Commission or withdrawal by the applicant.'; *Id.*, § 5.8.

The record before us contains evidence substantiating the commission's determination that it lacked adequate information to determine the impact of the proposed activities on the western wetlands or the Saugatuck River. In his September 16, 2008 letter to the commission, MacBroom explained that, at the request of the commission, he had reviewed the plaintiff's revised application. He noted that he had 'not found any new information on the impact of the wastewater disposal systems on downgradient inland wetlands and the pond nor the impact on the Saugatuck River, which is a tributary to a drinking water reservoir. Using the [plaintiff's] new estimate of the recharged ground water mound, the effluent travel time to the wetland should be recomputed and compared with standard assumption on bacteria life spans. . . . The [plaintiff's] comments on compliance with the Public Health Code and the Connecticut Department of Environmental Protection Guidelines seem to confuse human health protection versus environmental protection. We are concerned about water quality, wetland impacts, and drainage impacts, not just minimum code requirements that lead to minimum performance. The USEPA On-site Wastewater Treatment Systems Manual (February 2002) is an excellent reference on performance-based design. For example, what is the new nitrogen load on

Page 116

the pond and will ammonia toxicity occur or eutrophication?'; MacBroom concluded his review by stating that 'the proposed development is likely to have an impact upon downgradient wetlands, but the magnitude of said impact has never been quantified. There has been a lot of speculation but little analysis.';

Approximately two months later, MacBroom sent another letter to the commission regarding his review of 'additional information pertaining to the proposed project'; on the property. He noted that '[t]he initial plans have gone through several cycles of review, comment, and

revisions, leading to the current proposal. The project is located in a public water supply shed and would have its own on-site water supply and waste-water disposal. Key inland wetland-related issues are the potential impact of wastewater disposal, soil erosion, and stormwater runoff upon the receiving wetlands and watercourses.'; MacBroom then made several comments on the revised proposal, stating in relevant part: 'Surface water runoff pollutants, such as oil and gas drippings, salt and deicers, fertilizers and pesticides, will be discharged into the subsurface infiltration units with minimal pretreatment. Reports in the literature indicate a high failure rate for infiltration systems unless carefully protected from excess sediment loads that potentially clog the soil. . . . The qualitative impact of stormwater recharge and accumulative impact of sewage effluent and infiltrated stormwater on receiving wetlands has not been addressed. . . . We concur that the predicted nitrate-nitrogen concentration sewage effluent reaching the pond complies with drinking water standards of 10 mg/l. However, the impact of the effluent on the pond and its ecosystem has still not been addressed.';

At the public hearing held on November 18, 2008, the plaintiff's representatives responded to MacBroom's concerns. Wayne Jacobsen, a professional engineer,

Page 117

expressed his disagreement with MacBroom 'that the infiltration system has minimal pretreatment. We disagree with [him] that the chambers will be significantly impacted by sediment and [he is] wrong about the lack of details for the treatment.'; When Jacobsen then discussed certain aspects of the proposed system, commission member Frederick Schroeder stated: 'Let me just ask you one thing. We've had an expert tell us that this is inadequate. You've just gone on and on about why you think it's adequate, but you know, we're faced with one expert versus another. Just listen to me, hear me out. Are you going to put this in detail, in writing? I mean this kind of oral presentation against, is not sufficient I don't think.'; When the plaintiff's attorney, Neil Marcus, then opined that MacBroom's second letter did not acknowledge certain drawings submitted by the plaintiff a month earlier, Schroeder responded, 'Or [MacBroom] may not think they're adequate.'; To that, Marcus replied, '[b]ut he has to tell us what's not adequate on it. He just says we haven't addressed them. That's what worries me.';

On December 11, 2008, MacBroom sent the commission a letter regarding 'additional correspondence'; that he had reviewed, including certain documents furnished by the plaintiff and the tapes of the November 18, 2008 public hearing. MacBroom again articulated his opinion that the record before the commission was incomplete, stating in

relevant part: "The following issues mentioned in my November 17 [2008] letter have not been resolved to my satisfaction The qualitative accumulative impact of stormwater recharge and impact of sewage effluent (other than pathogens) on the wetland have not been addressed or resolved. . . . In conclusion . . . the plans [submitted by the plaintiff] do not have a complete soil erosion and sediment control plan."

[148 Conn.App. 118] MacBroom expanded on that opinion in his testimony before the commission during the December 16, 2008 public hearing. He stated that the plaintiff's plan contained "very limited soil erosion control plans [T]he erosion control efforts to try to prevent no physical material, topsoil, sand, material from excavation, [and] material from future activities from getting into the wetlands and getting into the (inaudible) system and right now, at the downstream perimeter of the active construction zone, the plan only shows a single row of silt fence, which is a very minimal type of protection. It certainly, in my opinion, is not sufficient to avoid having some type of adverse impact on the wetlands due to sediment and erosion materials getting into the wetland, the pond and the rivering system. The [plaintiff's] position that [it has] indicated in previous correspondence was that more details would be provided at a later time if and after the project is approved at which time [it] would apply to the [department] for . . . a stormwater permit. From a conservation point of view, it takes it out of [the commission's] hand. It means that neither [the commission's consultants] nor the public nor the commission has a chance to review the full details of the erosion control plan. If something would postpone that to some later date, which is outside the purview of this public hearing and outside the purview of the commission, I strongly recommend that that material be part of the plan or that it is not sufficient and is not provided that the plan not be approved. My opinion is because of that (inaudible), the plans are incomplete and the impact of the project is indeterminate. So, there is a likelihood of having an adverse impact on the wetlands system which cannot be documented, cannot be measured, but that likelihood is very strong."

MacBroom also opined that "the qualitative cumulative impact of stormwater recharge and the impact of [148 Conn.App. 119] sewage effluent which also discharges into the soil on the wetland has not been addressed or resolved other than pathogens which is the most obvious concern with virus or bacterial travel and [the plaintiff's expert] has addressed that in terms of pathogen travel times However, the impact though of modern chemicals that are used in discharge into sewage disposal systems . . . has not been addressed. We've suggested that several times now." In response to a question by Schroeder, MacBroom stated that the plaintiff's plan complied with the regulatory

recommendations for dealing with pathogens. He continued: "The second part of [your] question dealt with the chemical additives, particularly household cleaners and solvents, petroleum products that they use and whether or not these will (inaudible) and that has not been addressed, and when you have a very porous (inaudible) soil as you have at this site, the coarse sand and gravel is actually good in terms of infiltration and capacity, but provides less filtration of those materials than would a fine (inaudible) soil." The plaintiff's attorney then asked MacBroom a series of questions, at one point inquiring, "so the only issues really are the stormwater issues that are still open?" MacBroom replied, "That and the cumulative impact of wastewater effluent and stormwater on the preceding water which is the wetland and the pond system downstream." The following colloquy then transpired:

"Marcus: Are you familiar with the information that [the plaintiff's expert] Russ Slayback presented to the commission the last couple of meetings?

"MacBroom: Yeah. That was very helpful to address the pathogen and (inaudible) and nitrogen (inaudible).

"Marcus: So, what in the state approved plans, state approved septic systems won't protect the wetlands? What are we worried about that we need to design for?

[148 Conn.App. 120] "MacBroom: "The state system for on-site sewage disposal systems really is protecting human health, not environmental health, so they talk about the impact on drinking water, the impact on pathogens and viruses. They do not talk about the impact of household cleaners and solvents and things like ammonia. They don't talk about things, other types of products that we know now go into septic systems. Things like medicine, and if you're aware of some communities in Connecticut that are having problems with medicine going through septic systems or sewage disposal systems so, from a wetlands point of view, our interest [is] a little bit different. We're not a health protection agency, we're a wetland protection organization.

"Marcus: So, what's the standard that we're designing for in Redding, because I mean every site in Redding. You have wetlands all over the place. What's the standard that we need to design for?

"MacBroom: For most design standards that the commissions establish . . . are saying that the applicant is going to claim it has no impact on the wetland system, you should demonstrate it and that hasn't been done.

"Marcus: So . . . the way to do that [is to] actually put in a system and monitor it?

"MacBroom: You look at the concentration of various (inaudible) you may have within your waste stream. You

look at what type of renovation you may have in the soil mantle. What type of renovation you may have in the septic system itself. What kind of dilution you have. It's the same type of process that [Slayback] went through with pathogens, but you do it for other chemicals.';

In his public hearing testimony later that evening, Piotr Parasiewicz, an environmental engineer, echoed MacBroom's concern. He stated in relevant part that

Page 121

because the plaintiff is 'proposing high density development that is not recommended by the state and specifically in the area close to water supply reservoirs . . . I would expect that a project like this would incorporate the latest stage of modeling and of science, the most precise models that will address all these questions. That will increase our certainty and evidence in fact . . . so as a very first thing that I would expect to happen in a project like this will be a solid groundwater model that will mathematically at least describe water to water flows in the projected areas. . . . What will happen to the temperature of this water? What will happen to the quality, the chemical quality of this water? I haven't seen any model like that in the [plaintiff's] plan. That's a major shortcoming. . . . I agree with . . . MacBroom that there is no convincing analysis that there will be no impact on the Saugatuck River.';

At the January 6, 2009 public hearing on the plaintiff's application, the plaintiff's representatives attempted to address the various concerns raised by MacBroom and others. Jacobsen noted that MacBroom 'did talk about some chemical additives like cleaners and solvents, etc. I think that the people that live at [the plaintiff's proposed housing community] are going to be under the same constraints as the people who live in the rest of Redding. What solvents can you use in your house, and what impact does your use of those solvents have on the watershed? That becomes a personal decision in each one of your households. There is no law governing what you can or can't use, and just because we have an affordable housing development . . . shouldn't change the treatment of the residents in that particular development. If the town, and I think I've heard [Marcus] propose that the town exercise more control over what people do in a general sense, we're doing what everybody else is doing in those terms.';

[148 Conn.App. 122] Slayback likewise testified that 'MacBroom raised questions that [the plaintiff] did not address the combined effect of the septic systems and the stormwater infiltration system on the groundwater and on the wetlands that are downgradient from that. . . . Most organic contaminants that are from petroleum products or their ilk are attacked and remediated in the soil. It's called

natural attenuation. The natural bacteria in the soil attack those contaminants. There are other contaminants that are very persistent in the subsurface and they're only subject to dilution. I've described to you in the past the nitrate dilution formula that applied to the design flow from the septic systems. That same dilution would apply to those contaminants. I've calculated that if you just took the infiltration occurring on the area that I used for the septic system dilution, 12 acres of the 14 plus acres of the site, that there would be an average of about 23,000 gallons a day of dilution for any contaminant that you were concerned about. When you look at the rest of the watershed of the site, which I didn't do for the septic systems, but you have that whole hillside that's owned by the Redding Land Trust and will never be developed, you end up with about 100,000 gallons a day. The soils there are not [as] pervious as the soils on the site because they are of a different geologic character, but there's a larger area of lower unit value of infiltration and that comes out to about a grand total of 100,000 gallons a day of dilution. . . .

'[MacBroom] referred to recent research by [the Environmental Protection Agency] and by other agencies as spoken to trace amounts [of] pharmaceuticals, cosmetic products, [and] other things that have shown up both in groundwater and in surface water from common household products. The products that any of us in our lives use on an everyday basis, and some of it ends up in our septic systems and whatever, including

Page 123

things like aspirin and Tylenol, that we excrete the part that our bodies don't absorb, and it becomes part of the waste stream. The research shows that these constituents are found at really trace levels at the parts per billion level, and I've just taken an example of a persistent chemical that is discharged to a septic system at 50 parts per billion, and if you just look at the dilution resulting from the entire flow of the septic system, that's reduced to about 12 parts per billion on the 12 acres of the site. That's the dilution I referred to previously as 23,000 gallons a day, and if you look at the overall watershed, including the Redding Land Trust property, it gets down to about 2 parts per billion. That's the best I can do in answering his question about how you deal with the combined effect of stormwater infiltration and the sewage infiltration on the groundwater and on the wetlands to the south. (Inaudible). I've only considered in that the infiltration and the groundwater flow. I have not considered the further dilution of overlay and runoff which comes from the entire site.';

During the public comment portion of the January 6, 2009 hearing, the commission heard from Christopher Kimball, a resident of Redding. A month earlier, Kimball had sent the commission a letter concerning the impact of chemicals on

the wetlands and watercourses of Redding, stating in relevant part: "Biologic contaminants are not the only source of watershed degradation. Liquid and water soluble chemicals, such as detergents, can spoil watersheds. Septic system regulations and designs are intended primarily to prevent biological contamination. Their performance in reducing pollution from liquid and water soluble chemicals is questionable, particularly with the high permeability and short flight times at the [property]."; Following Slayback's testimony, Kimball stated that "[i]t's nice to know that all organics or most of them or some of them decay in going through the underground water. I think it'd be

Page 124

nice to have an objective professional view as to exactly what the risks are of chemicals going through the underground water. . . . [Slayback] took as a number 50 parts per billion. . . . [T]he Sierra Club recommends 10 parts, less than 10 parts per billion for arsenic. . . . I'm not claiming that everyone is going to be dumping arsenic in or anything like that, but what I'm saying is it doesn't take much to get to the 50 parts per billion levels of pollutants. Of course everyone puts stuff in, so what you get is not part of a refinery where you have a very diluted 50 parts per billion coming out. You're getting a soup of all this stuff, but my point is, if you take .14 of a teaspoon . . . and dump it in the sink and flush it down and everyone flushes everything so that the whole septic system is running at full capacity, you then get 50 parts per billion. . . . [I]t's not hard to get levels of the order of 50 parts per billion by putting stuff in the septic system.";

In his January 28, 2009 letter to the commission submitted following the close of the public hearing; see footnote 9 of this opinion; MacBroom summarized his review of the plaintiff's application and his "outstanding concerns." He stated in relevant part that "[o]n larger lots, the impact of chemicals is considered to be minor due to low concentrations. We do not know what the chemical impact of concentrating so many wastewater systems in a small area will be. On this proposed project, no definitive proof of its impact, or non-impact, has been provided.";

During their deliberations, the commission members discussed the issue of chemical impact and the adequacy of the plaintiff's presentation with respect thereto. Chairman David R. Pattee stated that MacBroom had noted that the impact on the wetlands and watercourses was "unknown because he doesn't have any information about the chemical constituents and the concentrations and things of that sort. Now, I know [148 Conn.App. 125] we did hear a little comment [at the January 6, 2009 hearing] about 50 parts per billion, but you know, we've heard that 50 parts per billion is like a teaspoon full. I don't know about anyone else, but when I put something down my sink, it's

not usually a teaspoon." Commission member Victor DeMasi concurred with that assessment:

"DeMasi: You know [Pattee], I don't appreciate those comments [from the plaintiff's experts] simply because as an etymologist, okay, silkworm moths emit pheromones, and they have shown that one molecule of that pheromone is effective at like 10 to 15 miles, so this dilution factor is, we know from other areas of scientific investigation that we don't really know what dilution factors (inaudible).

"Pattee: Right, and we don't know what the daughter products of some of these compounds might be. I've worked in chemical factories where they've made all kinds of stuff, and while the parent product is toxic at level x, when that product breaks down into you know, 5 or 6 secondary type daughter products, those are much more lethal by a factor of 10 to 100.

"DeMasi: Look what chlorine does with ozone depletion. One chlorine atom can take out (inaudible) oxygen atoms or something.

"Pattee: So, I think [MacBroom's] statement about the chemical impact is certainly a reasonable one because we don't have any information for him to really study as the technical expert to help us understand that and his last statement says that this project is likely to have a significant adverse impact on the adjacent wetlands and river (inaudible) on various issues over the years. [MacBroom is] certainly a well recognized expert in the state.

"DeMasi: He's advocating skepticism, and [the plaintiff's] people are telling us firmly, and they have no real clue themselves.";

[148 Conn.App. 126] The commission thereafter voted unanimously to deny the plaintiff's application, finding, inter alia, that it lacked adequate information to determine the impact of the proposed activities on the "western wetlands or the Saugatuck River." The aforementioned testimonial and documentary evidence substantiates that finding. In response to a query by the plaintiff's attorney during the December 16, 2008 public hearing, MacBroom advised the plaintiff to "demonstrate" that no adverse impact from chemicals would occur by employing the very same testing "process that [Slayback] went through with pathogens, but you do it for other chemicals." In his January 28, 2009 letter to the commission, MacBroom summarized his review of the plaintiff's application and opined that, with respect to "the chemical impact of concentrating so many wastewater systems in a small area" adjacent to the western wetlands and the Saugatuck River, "no definitive proof of its impact, or non-impact, has been provided." The commission expressly credited that expert testimony, as was its exclusive prerogative.[13]

See *Huck v. Inland Wetlands & Watercourses Agency*, 203 Conn. 525, 540–41, 525 A.2d 940 (1987). There thus exists substantial evidence in the record before us that 'the information that the plaintiff did produce was inadequate for the commission to determine whether there would be an adverse impact'; *Unistar Properties, LLC v. Conservation & Inland Wetlands Commission*, *supra*, 293 Conn. 113; to the wetlands and the Saugatuck River.

In its memorandum of decision, the court's analysis of the incompleteness issue consisted of the following: 'The commission now raises . . . issues of incompleteness which are inconsistent and contrary to the

Page 127

weight of the evidence. The record is replete with evidence and testimony as to the impact of the regulated activity upon the Saugatuck River. Indeed, the whole application and the entirety of the return of record concerns the impact on the Saugatuck River and the surrounding wetlands. To claim otherwise is disingenuous at best. The court also finds recurring reference both in testimony and evidence to pathogen renovation. Accordingly, the court finds [this reason for the commission's denial of the plaintiff's application] to be arbitrary and against the weight of the evidence.' For two distinct reasons, we are troubled by that analysis.

First, it reflects a misunderstanding of the applicable legal standard. [14] In entertaining a challenge to a finding of an inland wetlands agency, the metric applied by a reviewing court is not whether 'the weight of the evidence' supports the finding. As our Supreme Court repeatedly has explained, the substantial evidence test 'is something less than the weight of the evidence' standard. (Internal quotation marks omitted.) *Rogers v. Board of Education*, *supra*, 252 Conn. 768; see also *Sanperi v. Inland Wetlands Agency*, *supra*, 226 Conn. 588; *Huck v. Inland Wetlands & Watercourses Agency*, *supra*, 203 Conn. 541. Under the substantial evidence standard, a 'reviewing court must take into account [that there is] contradictory evidence in the record . . . but the possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency's finding from being supported by substantial evidence . . . ' (Internal quotation marks omitted.) *Tarullo v. Inland Wetlands & Watercourses Commission*, *supra*, 263 Conn. 584. Furthermore, the substantial evidence test 'permits less judicial scrutiny';

Page 128

than the clearly erroneous standard of review. *New England Cable Television Assn., Inc. v. Dept. of Public Utility Control*, *supra*, 247 Conn. 118; *Brunswick v. Statewide Grievance Committee*, *supra*, 103 Conn.App.

611. Accordingly, if the record contains any evidence tending to substantiate the commission's finding in a given instance, that determination must stand under the substantial evidence test.

Second, the court's one paragraph analysis contains no mention of the chemical impact of the plaintiff's proposed regulated activities on the Saugatuck River and accompanying wetlands, despite the fact that it (1) was a significant concern articulated throughout the pendency of the plaintiff's application, (2) caused MacBroom to opine in his final letter to the commission that the plaintiff had failed to provide any 'definitive proof of its impact, or non-impact. ' and (3) was discussed in detail during the commission's deliberations as a basis to deny the plaintiff's application. '[I]n an appeal from a decision of an inland wetlands commission, a [reviewing] court must search the record of the hearings before that commission to determine if there is an adequate basis for its decision. . . . Even if the agency's reasons for denying an application are merely speculative, the reviewing court must search the record for reasons to support the agency's decision . . . and, upon finding such, uphold that decision regardless of the language used by the agency in stating its reasons for the denial.' (Citation omitted; internal quotation marks omitted.) *Manatuck Associates v. Conservation Commission*, 28 Conn.App. 780, 784, 614 A.2d 449 (1992). The record discloses evidence that the plaintiff failed to present information on the chemical impact of the proposed regulated activities sufficient for the commission to determine whether it would adversely impact the wetlands and Saugatuck River.

[148 Conn.App. 129] Under our decisional law and § 5.8 of the regulations, the commission is empowered to deny an application due to incompleteness. The commission exercised that authority in the present case. Because the commission's finding of incompleteness is supported by substantial evidence in the record, the court improperly sustained the plaintiff's appeal.

II

The commission also claims that the court improperly intimated that the commission lacked jurisdiction to regulate stormwater impacts on wetlands and watercourses due to a lack of regulations thereon. In its memorandum of decision, the court initially stated that it 'is not persuaded by the plaintiff's argument that the commission was without jurisdiction to deny the application on the ground of pretreatment facilities for stormwater when it failed to adopt regulations specifically relating to stormwater.' The court proceeded to review §§ 2.23 and 2.24 of the regulations, opining that they 'are generally vague, contain no reference to stormwater, provide no guidelines for compliance and are akin to . . . an enabling clause.' It

further noted that § 2.26 of the regulations, which defines a significant impact activity. . . . Most troubling to the commission, the court then stated that . . . Redding has promulgated regulations conferring jurisdiction over stormwater et al., it has not established any standards specifically addressed to stormwater. Consequently, applicants must proceed in the dark or rely on other sources and experts to establish and meet requirements. However, given the court's ruling, the court need not address this issue.;

The commission contends that the court rendered an improper advisory opinion in contravention of established precedent. By contrast, the plaintiff maintains that the foregoing statements constitute mere dicta,

Page 130

arguing that the court did not decide 'any claim regarding the validity of the regulations, and certainly did not rule in favor of the [plaintiff] on this issue.;

Although we agree that the court did not definitively decide the issue, it nevertheless remains that a question of 'the subject matter jurisdiction of an administrative agency . . . can be raised at any time'; *Ross v. Planning & Zoning Commission*, 118 Conn.App., 55, 60, 982 A.2d 1084 (2009); and, once raised, that question must be resolved by a reviewing court. *See Wucik v. Planning & Zoning Commission*, 113 Conn.App., 502, 506–507, 967 A.2d 572 (2009), and cases cited therein. We therefore address the merits of the claim advanced by the plaintiff before the Superior Court and, at least partially, adopted by the court when it suggested that the commission lacked jurisdiction to regulate stormwater impacts on wetlands and watercourses due to the lack of 'any standards specifically addressed to stormwater.;

'Whether the [Superior Court] properly concluded that the commission had jurisdiction over the activities proposed by the plaintiff involves a legal question involving statutory interpretation, over which our review is plenary.;

AvalonBayCommunities, Inc. v. Inland Wetlands Commission, 266 Conn. 150, 158–59, 832 A.2d 1 (2003). The governing statutory scheme is contained in the act, § 22a-36 et seq. The purpose of the act 'rests upon a specific legislative finding that [t]he inland wetlands and watercourses of the state of Connecticut are an indispensable and irreplaceable but fragile natural resource with which the citizens of the state have been endowed, and that [t]he preservation and protection of the wetlands and watercourses from random, unnecessary, undesirable and unregulated uses, disturbance or destruction is in the public interest and is essential to the health, welfare and safety of the [148 Conn.App., 131] citizens of the state. . . . Accordingly, the broad legislative objectives underlying the

[act] are in part to protect the citizens of the state by making provisions for the protection, preservation, maintenance and use of the inland wetlands and watercourses by minimizing their disturbance and pollution . . . [and by] protecting the state's potable fresh water supplies from the dangers of drought, overdraft, pollution, misuse and mismanagement by providing an orderly process to balance the need for the economic growth of the state and the use of its land with the need to protect its environment and ecology in order to forever guarantee to the people of the state, the safety of such natural resources for their benefit and enjoyment [and for the benefit and enjoyment] of generations yet unborn. . . . In order to accomplish these objectives, it is the public policy of the state to require municipal regulation of activities affecting the wetlands and watercourses within the territorial limits of the various municipalities or districts.;

(Citations omitted; internal quotation marks omitted.) *Red 11, LLC v. Conservation Commission*, 117 Conn.App., 630, 638–39, 980 A.2d 917, cert. denied, 294 Conn. 918, 984 A.2d 67 (2009).

In accordance with this policy and purpose, General Statutes § 22a-41 (a) sets forth specific criteria that must be considered by a wetlands commission in determining whether an application for a wetlands permit should be granted. Specifically, a commission is directed to consider: '(1) The environmental impact of the proposed regulated activity on wetlands or watercourses; (2) The applicant's purpose for, and any feasible and prudent alternatives to, the proposed regulated activity which alternatives would cause less or no environmental impact to wetlands or watercourses; (3) The relationship between the short-term and long-term impacts of the proposed regulated activity on wetlands or watercourses and the maintenance and enhancement

Page 132

of long-term productivity of such wetlands or watercourses; (4) Irreversible and irretrievable loss of wetland or watercourse resources which would be caused by the proposed regulated activity . . . and any mitigation measures which may be considered as a condition of issuing a permit for such activity including, but not limited to, measures to (A) prevent or minimize pollution or other environmental damage, [or] (B) maintain or enhance existing environmental quality . . . (5) The character and degree of injury to, or interference with, safety, health or the reasonable use of property which is caused or threatened by the proposed regulated activity; and (6) Impacts of the proposed regulated activity on wetlands or watercourses outside the area for which the activity is proposed and future activities associated with, or reasonably related to, the proposed regulated activity which are made inevitable by the proposed regulated activity and which may have an impact on wetlands or watercourses.;

(Emphasis added.)

In *Prestige Builders, LLC v. Inland Wetlands Commission*, 79 Conn.App. 710, 831 A.2d 290 (2003), cert. denied, 269 Conn. 909, 852 A.2d 739, 740 (2004), this court addressed the issue of a commission's authority under the act to regulate activities in areas adjacent to wetlands or watercourses. We explained that "[t]he authority for a commission to regulate outside of [wetlands and watercourses] is governed by [General Statutes] § 22a-42a (f) . . ."; *Id.*, 718. Section 22a-42a (f) provides: "If a municipal inland wetlands agency regulates activities within areas around wetlands or watercourses, such regulation shall (1) be in accordance with the provisions of the inland wetlands regulations adopted by such agency related to application for, and approval of, activities to be conducted in wetlands or watercourses and (2) apply only to those activities

Page 133

which are likely to impact or affect wetlands or watercourses." The statute reflects "that one of [the act's] major considerations is the environmental impact of proposed activity on wetlands and water courses, which may, in some instances, come from outside the physical boundaries of a wetland or water course." (Internal quotation marks omitted.) *Prestige Builders, LLC v. Inland Wetlands Commission*, *supra*, 721. For that reason, "[o]ur courts consistently have recognized the authority of an inland wetlands commission to regulate activities in areas adjacent to wetlands and watercourses that would affect or impact such wetlands or watercourses." (Emphasis omitted.) *Id.*, 720. The commission in the present case thus possessed the authority to regulate the plaintiff's proposed activities insofar as they impacted the Saugatuck River and adjacent wetlands.

At the same time, *Prestige Builders, LLC*, instructs that "a commission, under § 22a-42a (f), must first enact a formal regulation" before it can exercise its authority to regulate activities in such areas. *Id.*, 720. Redding did precisely that in enacting the regulations. Section 1.4 of the Redding Inland Wetlands and Watercourses Regulations provides that the commission "shall enforce all provisions of the [act] and shall grant, grant with modifications, or deny licenses for all regulated activities affecting inland wetlands and watercourses in the Town of Redding pursuant to Sections 22a-36 to 22a-45, inclusive, of the Connecticut General Statutes." The regulations define "regulated activity" in relevant part as "[a]ny activity within the Town of Redding, the likely effect of which will have a significant impact on the existing condition of *any* of the wetlands or watercourses of the State." (Emphasis added.) Redding Inland Wetlands and Watercourses Regs. § 2.23 (e). The regulations likewise define "significant impact

activity" [148 Conn.App. 134] in relevant part as "any activity, including, but not limited to . . . activities which may have a major effect or significant impact on the area for which an application has been filed or on another part of an inland wetland or watercourse." (Emphasis added.) *Id.*, § 2.26. Furthermore, the regulations set forth "detailed parameters"; *id.*, § 8.3; to guide the commission and place "the burden [on] the applicant to establish that the proposed regulated activities are consistent"; therewith. *Id.*, § 8.2. Pertinent to the present discussion is § 8.2 (f) of the regulations, which specifies the following: "Impacts of the proposed regulated activity on wetlands or watercourses outside the area for which the activity is proposed and future activities associated with, or reasonably related to, the proposed regulated activity which are made inevitable by the proposed regulated activity and which may have an impact on wetlands or watercourses." (Emphasis added.) *Id.*, § 8.2 (f). Those formal regulations authorized, and hence conveyed jurisdiction to, the commission to regulate the plaintiff's proposed activities insofar as they impacted the adjacent wetlands and river.

The plaintiff nevertheless argued in its brief to the Superior Court that the commission lacked jurisdiction because it "has not adopted any regulations concerning pretreatment facilities for stormwater." The plaintiff did not provide citation to a single Connecticut decision, and its argument consisted of abstract assertion, rather than application of controlling precedent. The sole authority referenced was a secondary source, which the plaintiff cited for the proposition that a commission "has no power to review regulated activities until it enacts regulations for that purpose in its regulations." See R. Fuller, 9 Connecticut Practice Series: Land Use Law and Practice (3d Ed. 2007) § 11.4, p. 334. We believe that the plaintiff misunderstands the stated principle. Consistent with the teaching of *Prestige Builders, LLC*

Page 135

a commission may not exercise authority over a particular activity unless and until it promulgates a regulation that encompasses the activity. See *Prestige Builders, LLC v. Inland Wetlands Commission*, *supra*, 79 Conn.App. 720. That general requirement is met in the present case by the enactment of the aforementioned provisions authorizing the commission to regulate activities affecting adjacent wetlands and watercourses. The regulations further provide, in relevant part, that "significant impact" activities subject to regulation by the commission include "(b) *Any* activity which substantially changes the natural channel or may inhibit the natural dynamics of a watercourse system . . . (c) *Any* activity which diminishes or has the potential to diminish the natural capacity of an inland wetland or watercourse to support desirable fisheries, wildlife, or other biological life; or to prevent flooding, to supply or store

water, to protect the quality and quantity of groundwater contained in an aquifer, to perform the recharge process for aquifers, to assimilate waste, to facilitate drainage . . . (d) *Any* activity which causes or has the potential to cause substantial turbidity, siltation or sedimentation in a wetland or watercourse system . . . (e) *Any* activity which causes or has the potential to cause a substantial change in the flow of a natural watercourse or groundwater levels . . . (f) *Any* activity which causes or has the potential to cause contamination or pollution of a wetland or watercourse.''; (Emphasis added.) Redding Inland Wetlands and Watercourses Regs., § 2.26. The activities specified in those provisions plainly encompass the impact of stormwater and its treatment, or lack thereof, on a wetland or watercourse.

Neither the plaintiff nor the Superior Court provided any authority, and we have not discovered any, indicating that a municipal inland wetlands agency, in promulgating such regulations, must provide specific

Page 136

'';guidelines for compliance.''; as suggested in the court's memorandum of decision. Rather, our case law contains countless decisions in which the applicable standards are established through expert testimony before a commission. See, e.g., *UnistarProperties, LLC v. Conservation & Inland Wetlands Commission*, *supra*, 293 Conn. 120; *River Bend Associates, Inc. v. Conservation & Inland Wetlands Commission*, *supra*, 269 Conn. 80; *River Sound Development, LLC v. Inland Wetlands & Watercourses Commission*, 122 Conn.App. 644, 658–60, 2 A.3d 928 (2010).

Moreover, the commission, in its appellate brief, states that 'the regulations are quite similar to the Inland Wetlands and Watercourses Model Municipal Regulations promulgated by the [department]. . . . These model regulations serve as the basis for the wetlands regulations in numerous Connecticut cities and towns. The model regulations, like the Redding regulations, do not contain the 'standards for the particular applications to specific categories of wetland jurisdiction'; that the [Superior Court] sought. Instead, both the model regulations and the Redding regulations allow the question of whether a proposed activity will have a significant adverse environmental impact on wetlands or watercourse to be left to the expert testimony presented to the commission.''; We concur with that assessment. Certainly those model regulations are pertinent to any analysis regarding the adequacy of a municipality's regulations on a given matter.[15]The fact that the model regulations, like the Redding regulations, do not articulate detailed guidelines for compliance with respect to stormwater treatment further persuades us that the plaintiff's jurisdictional contention is without merit.

[148 Conn.App. 137] The regulations in the present case expressly authorize the commission to regulate the plaintiff's proposed activities insofar as they impacted the adjacent wetlands and Saugatuck River. The regulations also identify specific activities likely to have a significant impact thereon, which encompass the impact of stormwater treatment on a wetland or watercourse. We therefore reject the plaintiff's jurisdictional challenge to the commission's ability to regulate the proposed activities with respect to that impact.

III

As a final matter, the commission argues that, after sustaining the plaintiff's appeal, the court improperly remanded the matter to it 'for further consideration of any conditions that should be attached to the issuance of the permit' to conduct the regulated activity.''. In light of our conclusion in part I B of this opinion that the court improperly sustained the plaintiff's appeal, we need not address the merits of that claim. We do note, however, that this court rejected a similar claim challenging the issuance of an identical remand order in *AvalonBayCommunities, Inc. v. Inland Wetlands & Watercourses Agency*, *supra*, 130 Conn.App. 89–90.

The judgment is reversed with respect to the commission's finding of incompleteness and the case is remanded to the Superior Court with direction to render judgment dismissing the plaintiff's appeal.

In this opinion the other judges concurred.

Notes:

[1] The commission is the inland wetlands agency of the town of Redding. See Redding Inland Wetlands and Watercourses Regs. (Rev. 1999), § 1.4. Pursuant to General Statutes §§ 22a-36 to 22a-45, it is the entity charged with regulating the use of inland wetlands in that municipality.

[2] Also named as a plaintiff in this action is Reeda B. Harsche, the owner of the property in question. For purposes of clarity, we refer in this opinion to Three Levels Corporation as the plaintiff and Harsche by name.

[3] In hearing appeals from decisions of an inland wetlands agency or conservation commission, the Superior Court acts as an appellate body. See General Statutes § 22a-43.

[4] General Statutes § 22a-38 (15) defines wetlands in relevant part as: 'land, including submerged land . . . which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and flood-plain by

the National Cooperative Soils Survey

[5] General Statutes § 22a-38 (16) defines watercourses in relevant part as: "[R]ivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon this state or any portion thereof";

[6] Section 2.28 of the Redding Inland Wetlands and Watercourses Regulations (Rev. 1999) defines "regulated activity": in relevant part as "any operation within or use of a regulated area involving removal or deposition of material, or any obstruction, construction, alteration, contamination or pollution of such regulated area, which is likely to impact or affect wetlands or watercourses. . . .";

[7] At the public hearing on December 16, 2008, MacBroom introduced himself as a consulting engineer who had "been a consultant to the [commission] for about twenty years I'm a graduate of the University of Connecticut Bachelors and Master degree [programs] in engineering. I have thirty-six years of practice. I'm a registered professional engineer in about four or five states. I work all over the eastern part of the country. On a national level, I'm a member of the American Society of Civil Engineers Sedimentation Committee and a member of the American Rivers . . . Science and Technical Advisory Committee.";

[8] In finding that the proposed activities were likely to have a significant adverse environmental impact, the commission stated in relevant part: "[T]he commission chooses to rely on the expert testimony and conclusions presented by Mr. MacBroom that the lack of adequate pretreatment facilities for stormwater prior to infiltration and ultimate discharge into the western wetlands and Saugatuck River is likely to have a significant adverse environmental impact thereon. . . . [T]he commission chooses to rely on the expert testimony and conclusions presented by Mr. MacBroom that the high rate of infiltration and groundwater migration present on the site, when combined with the amount of effluent produced by the community septic systems and the lack of adequate pretreatment facilities for stormwater prior to infiltration and ultimate discharge into the western wetlands and Saugatuck River, is likely to have a significant adverse environmental impact thereon.";

[9] Although this letter was received after the close of the public hearing and approximately one month prior to the commission's deliberations on the matter, it remains that MacBroom served as a consultant to the commission in the proceeding before the commission. As explained in *Norooz v. Inland Wetlands Agency*, 26 Conn.App. 564, 569, 602 A.2d 613 (1992), "[o]ur law clearly prohibits the use

of information by a municipal agency that has been supplied to it *by a party* to a contested hearing on an ex parte basis." (Emphasis altered.) This court then discussed a number of cases from our Supreme Court that "have approved the consideration of information by a local administrative agency supplied to it by its own technical or professional experts outside the confines of the administrative hearing." *Id.*, 570, citing *Holt-Lock, Inc. v. Zoning & Planning Commission*, 161 Conn. 182, 184 & #8211;85, 286 A.2d 299 (1971); *McCann v. Town Plan & Zoning Commission*, 161 Conn. 65, 77 & #8211;78, 282 A.2d 900 (1971); *Kyserv. Zoning Board of Appeals*, 155 Conn. 236, 249 & #8211;51, 230 A.2d 595 (1967); *Yurdinv. Town Plan & Zoning Commission*, 145 Conn. 416, 420 & #8211;21, 143 A.2d 639, cert. denied, 358 U.S. 894, 79 S.Ct. 155, 3 L.Ed.2d 121 (1958).

The court in *Norooz* proceeded to discuss the contours of the proper use of extra record analysis of evidence already in the record, focusing on "the nature and content of the extra record information relied on by an administrative agency"; (Citation omitted.) *Id.*, 573. It then concluded: "The proper inquiry for a reviewing court, when confronted with an administrative agency's reliance on non record information provided by its technical or professional experts, is a determination of whether the challenged material includes or is based on any fact or evidence that was not previously presented at the public hearing in the matter." *Id.*, 573 & #8211;74. Finally, the court applied that inquiry to the facts at hand. First, it noted that "[n]either the trial court nor the plaintiffs have identified any fact or evidence relied on in those [communications] which was not already evidence of record in the administrative proceedings." *Id.*, 574. Second, the court's review of the record of the administrative proceedings indicated that the communications by the agency's technical or professional experts outside the confines of the administrative hearing were "limited to a review of, a comment on and an opinion concerning evidence of record." *Id.* In addition, the court stressed that there was "no indication or suggestion . . . that facts not already of record in the lengthy administrative proceeding were considered by [the town engineers] in forming [their] conclusions and recommendations to the agency." *Id.* As a result, the court concluded that the agency properly relied on those ex parte communications. *Id.*

Consistent with that authority, the regulations in the present case provide in relevant part that the commission "is not precluded from consulting with its own experts after the close of the public hearing on information already in the record of the public hearing." Redding Inland Wetlands and Watercourses Regs. (Rev. 1999), § 8.5. Because there is no indication in the record before us that MacBroom's January 28, 2009 letter is anything other than

a commentary on the evidence submitted during the public hearing nor does the plaintiff so claim; the commission properly could rely on that letter in contemplating the merits of the plaintiff's application.

Furthermore, moments prior to the close of the public hearing, commission members inquired as to whether the plaintiff had furnished MacBroom with copies of the revised plan and other materials that it submitted to the commission earlier that day. The plaintiff's attorney replied that '[t]he stuff that's dated today has not been sent to [MacBroom]. We will do it though. We'll do it first thing in the morning.' That testimony plainly contemplates MacBroom's review of those materials following the close of the public hearing.

[10] MacBroom testified during the public hearing that there would likely be 'some type of adverse impact on the wetlands due to sediment and erosion materials getting into the wetland, the pond and the rivering system.' Under *AvalonBayCommunities, Inc. v. Inland Wetlands & Watercourses Agency*, *supra*, 130 Conn.App. 78, such testimony does not constitute substantial evidence for a commission to find an actual adverse impact to wetlands or watercourses.

MacBroom further opined that in the 'hypothetical' situation in which the underground infiltration system was not maintained, 'then you would have [an] adverse impact on the wetland system both from excessive runoff and from the lack of removal of the impurities that tend to be taken out by the infiltration system.' That opinion is deficient in two respects. First, it is no different than the testimony in *Estate of Casimir Machowski* that the detention basins at issue potentially could fail: *Estate of Casimir Machowski v. Inland Wetlands Commission*, *supra*, 137 Conn.App. 839-40; and, hence, amounts to mere conjecture. Second, MacBroom's hypothetical does not identify any specific harm to the wetlands or watercourses likely to result in the event that the infiltration system was not maintained.

[11] In its reply brief, the commission states: 'An applicant for an inland wetlands permit has the burden of proving that it has met the statutory prerequisites for a permit. . . . The applicant must further demonstrate to the local inland wetlands agency that its proposed development plan, insofar as it intrudes upon the wetlands, is the only alternative that is both feasible and prudent. . . . Here, the [Superior Court] failed to cite to even a single piece of evidence presented by [the plaintiff] to the commission that would have demonstrated that it had met the statutory prerequisites for a permit. As in [*Estate of Casimir Machowski*], [the Superior Court] limited its memorandum of decision to a criticism of the expert testimony relied upon by the commission in reaching its decision. This is a

shortcut which improperly shifts the burden on to the commission to demonstrate that a permit should not have issued, rather than place the burden on the applicant to demonstrate that it was entitled to a permit. An appropriate analysis would have required that [the plaintiff] demonstrate, by competent expert evidence, that (a) the proposed activities would not have a significant adverse environmental impact on the wetlands and watercourses and (b) if they did, that there were no feasible and prudent alternatives to the proposed activities which would have had less environmental impact.' (Citations omitted.)

[12] Hereinafter, all references to the regulations in this opinion are to the 1999 revision of the regulations.

[13] 'Local agencies are granted broad discretion because they are the closest to the circumstances and conditions which create the problem and shape the solution.' (Internal quotation marks omitted.) *Ventres v. Inland Wetlands & Watercourses Commission*, *supra*, 25 Conn.App. 574.

[14] 'Whether the substantial evidence test was applied properly by the trial court in its review of the [commission's] decision is a question of law over which our review is plenary.' *River Bend Associates, Inc. v. Conservation & Inland Wetlands Commission*, *supra*, 269 Conn. 70.

[15] The Inland Wetlands and Watercourses Model Municipal Regulations promulgated by the department are available at <http://www.ct.gov/deep/lib/deep/water/inland/wetlands/modelregsfinalof4thedition.pdf> (last accessed January 29, 2014).



STEVEN DANZER, PHD & ASSOCIATES LLC

Wetlands & Environmental Consulting

WWW.CTWETLANDSCONSULTING.COM

203 451-8319

WETLAND BOUNDARIES • POND & LAKE MANAGEMENT • CONSTRUCTION FEASIBILITY CONSULTATIONS • ENVIRONMENTAL STUDIES

Date: June 26, 2017

Re: Twin Valley Sudivision

By: Steven Danzer Ph.D.

- Soil Scientist – Certified Nationally by the Soil Science Society of America (#353463).
– Registered with the Society of Soil Scientists of Southern New England.
- Professional Wetland Scientist - PWS #1321, Society of Wetland Scientists.
- Arborist - CT DEEP License S-5639.
- Ph.D. - Renewable Natural Resource Studies.

The following supplemental comments are offered for the consideration of the Wetlands Agency to address several issues that emerged during the public hearing of June 12, 2017.

1. Wetland Agency's jurisdiction regarding vernal pools:

During the public hearing of 6/12/17, the Applicant's professional team openly questioned the jurisdictional authority of the Wetland Agency in relation to vernal pools. I offer several factors for consideration regarding the Applicant's contentions:

- a. Vernal Pools do qualify as wetlands since they are a waterbody, and as such are included under the Watercourse portion of the Wetland definition. To cite Section 2.1 of the East Lyme Wetland Regulations: "Watercourses" means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs, and ***all other bodies of water***, natural or artificial, ***vernal*** or intermittent, public or private..." (Emphasis added in bold italics).
- b. Both the applicant's expert and I agree that the primary vernal pool area under discussion (the area located north of the proposed cul-de-sac) is in fact located within the boundary of flagged wetlands.
- c. The most notable function of any vernal pool area is to provide habitat to amphibian species, some of those species being rare or unique.

Preventing impact to, or impairment of, a wetland's ***ecological communities and functions*** is explicitly stated as a principal concern of the Wetland Agency under Sections 7.6(d) and 7.6(e) of the Regulations, as well as under Section 2.1(3) (Significant Impact definition).

2. Vernal pools in the eastern wetland complex:

During the public hearing of 6/12/17, the Applicant's expert disclosed that amphibian egg masses, an indicator of vernal pool activity, were found in several places within the eastern wetland complex, rear of lots 1-9.

The location of these vernal pool areas needs to be formally depicted within the application materials. This depiction is needed for the Agency to understand and evaluate any potential impacts to these areas due to the subdivision design.

The Agency has the ability to request this information under Section 7.6(d) of the Regulations. Without this information, the application is incomplete.

3. Fragmentation of the ecological corridor between the wetlands:

During the public hearing of 6/12/17, The Applicant's wetland expert stated that the proposed location of the cul-de-sac was desirable because the proposed cul-de-sac did not fragment the small upland corridor between the wetlands that fringe the Four Mile River and the wetlands that contain the vernal pool complex.

It should be noted, however, that the proposed cul-de-sac *does* in fact fragment another corridor not mentioned by the Applicant's experts: the upland corridor between the wetlands that contain the vernal pool complex, and the wetlands located south of the proposed cul-de-sac. The wetlands located south of the cul-de-sac are more substantial in size than depicted on the plans since they extend off site. (The site plan sheets are limited to the property itself).

If the Applicant truly wishes to avoid fragmentation to this ecologically valuable landscape, then the cul-de-sac, the adjacent water quality basin, and lots 10-13 should be eliminated from the current site plan.

4. Subdivision design:

It is understood, based upon the oral representations by the Applicant's experts at the public hearing of 6/12/17 that contrary to certain statements and representations within the written application materials *that the actual design of the subdivision itself is now in fact offered and submitted to the Agency for consideration.*

This acknowledgment by the Applicant allows the Agency to step back, and ask a more fundamental question germane to this application: How many lots can this site support without adversely impacting the wetland resources? What is the best layout?

Based upon factors discussed in my previous written and oral testimony, and upon factors discussed in the above sections of this report, my conclusion is that to prevent substantial irreversible damage to the wetland resources in the region north of the cul-de-sac, the Applicant minimally needs to remove the proposed cul-de-sac, the adjacent water quality basin, and lots 10 through 13 from the site plan.

Furthermore, more geographically precise information is needed regarding the quality and functions of the wetlands located east of lots 1-9. This information is needed to understand and evaluate any potential impacts due to those lots, some of which may need to be eliminated or adjusted as well. Lacking this information, the application is incomplete.