1. Meeting Materials

Documents:

JUNE 9, 2017 AGENDA PACKET.PDF
JUNE 9, 2017 MEETING AGENDA.PDF
Board of Selectmen Meeting
Friday, June 9, 2017
11:00 a.m.
Town Hall Meeting Room

AGENDA

1. Welcome and Pledge of Allegiance

2. Approval of Minutes
   a. Board of Selectmen Regular Meeting on May 30, 2017

3. First Selectman’s Updates – Peter J. Tesei

4. Old Business
   a. Recertification and validation of the actions taken by the Board of Selectmen at
      its May 30, 2017 meeting including:
      1) Approval of May 11, 2017 Board of Selectmen meeting
         minutes. Vote: 3-0-0.
      2) Establishment of a committee to review a proposal to add
         the Board of Education to Section 66 of the Town Charter.
         In particular, the establishment of a committee to consider
         a requirement that any change to the mode of selection,
         composition, rights, powers, privileges or duties of the
         Board of Education require a referendum. Vote: 2-1-0.
      3) Request to Approve second amendment to the Bruce
         Museum Management Agreement - Bruce Cohen. Vote: 3-
         0-0.
      4) Request to modify Section 14-5, Schedule II of the
         Greenwich Municipal Ordinances – Bruce Cohen. Vote: 3-
         0-0.
      5) Request to modify section 14-7.6, Schedule VIIA of the
         Greenwich Municipal Ordinances – Bruce Cohen. Vote: 3-
         0-0.
      6) Request to add modification of section 14.4, Schedule I
         of the Greenwich Municipal Ordinances to the agenda. Vote:
         3-0-0.
      7) Vote on requested modification of section 14.4, Schedule I
         of the Greenwich Municipal Ordinances. Vote: 3-0-0.
      8) Vote to move into Executive Session. Vote: 3-0-0.
9) Vote to approve settlement of Docket No. HHB CV 16-6034442S - Parcel No. 01-2515/S for a tax credit of $5,647. Vote: 3-0-0.
10) Vote to approve settlement of Docket No. HHB CV 16-6034461S - Parcel No. 12-1010/S for a tax credit of $3,309. Vote: 3-0-0.
11) Vote to approve settlement of Docket No. HHB CV 16-6034460S - Parcel No. 06-3903/S for a tax credit of $20,515. Vote: 3-0-0.
12) Vote to approve settlement of Docket No. HHB CV 16-6034312S - Parcel No. 01-2522/S for a tax credit of $8,282. Vote: 3-0-0.
13) Vote to approve settlement of Docket No. HHB CV 16-6034316S - Parcel No. 03-1413/S for a tax credit of $2,356. Vote: 3-0-0.
14) Vote to approve settlement of Docket No. HHB CV 16-6034313S - Parcel No. 12-1020/S for a tax credit of $988. Vote: 3-0-0.
15) Vote to approve settlement of Docket No. FST CV 16-5015743S - Parcel No. 06-1807/S for a tax credit of $2,700. Vote: 3-0-0.
16) Vote to approve settlement of Docket No. HHB CV 16-6034461S - Parcel No. 12-1010/S for a tax credit of $3,309. Vote: 3-0-0.
17) Motion to adjourn. Vote: 3-0-0.

5. New Business
   b. Anderson Road closure and detour for construction of a new water pump station - Kovaes Construction Corp.
   c. Establish a 25 mph speed limit on Echo Lane – Traffic Operations Coordinator Melissa Evans.

6. Appointments and Nominations

7. Executive Session
   a. Pending Litigation

8. Adjourn

[Signature]
Peter J. Tesei
First Selectman
Town of Greenwich
Board of Selectmen
Meeting May 30, 2017
10:00 A.M.
Town Hall Meeting Room

APPROVED MINUTES

1. The meeting opened at 10:10 A.M. with an announcement from First Selectman Peter J. Tesel that the meeting start would be delayed until 11:40 a.m. in order to comply with the Freedom of Information Act requirement that there be 24 business hours from the posting of the meeting with the Town Clerk until the meeting start.

The meeting was called to order at 11:40 a.m. with the Pledge of Allegiance.

a. Attendance:
   I. First Selectman Peter J. Tesel - Present
   II. Selectman John Toner - Present
   III. Selectman Drew Marzullo - Present

The First Selectman greeted and welcomed attendees commenting that it was a Public Meeting of the Board of Selectmen who reserve the right to call on people to propose questions and make comments.

2. Approval of Minutes
   a. Minutes of the Regular Board of Selectmen meeting held on 5-11-2017 were moved for approval as amended by Mr. Toner, seconded by Mr. Marzullo. The motion passed unanimously.

3. First Selectman’s Updates
   a. Mr. Tesel explained that the First Selectman’s updates provide an opportunity to spotlight many organizations that enrich the Greenwich community and highlight the breadth of services offered.
   b. On May 12, the YMCA of Greenwich held its Oyster & Pearl gala at the Greenwich Polo Club at Conyers Farms. The honorees were Randy and Cathy Weisenburger and Michael Chambers.
   c. On May 16, the First Selectman’s Diversity Advisory Committee held its annual meeting and announced the winners of its 8th annual Diversity Writing Contest. The students’ entries reflected a deep recognition of and commitment to combat the adversity faced by many of our students on all levels.
   d. On May 17, The Greenwich Girl Scouts held its annual recognition dinner for the Gold, Silver & Bronze Award recipients and graduating seniors at the St. Lawrence Society.
   e. Also on May 17, the Rotary Club of Greenwich held its 2017 Citizens of the Year Award celebration. Mary Hull was recognized for her work as the founder and executive director of Greenwich Clean & Green and Charles Hilton was honored for his design work of the 9-11 Memorial at Cos Cob Park and the Rotary Pavilion at Byram Park.
   f. On May 20, the First Baptist Church of Greenwich celebrated its 120th anniversary with a luncheon at the Hyatt Regency Greenwich. It was followed by a special service on Sunday, May 21.
   g. On May 21, Mr. Tesel attended the Mezuzah Installation at the Greenwich Reform Synagogue. It a symbolic end to the construction of the congregation’s new home on
Orchard Street.

h. Also on May 21, the Greenwich Tree Conservancy and the Greenwich Parks & Recreation Department celebrated the opening of the expansion of the Arboretum at Bruce Park.

i. Last Tuesday – May 23, Mr. Tesei explained that he had the honor of signing a sister city agreement with the District Chief of Shangcheng District, Hangzhou, China. Dr. Chengtao Jin was a guest here in Greenwich as part of a delegation led by Tao Guo, who is the secretary general of the Zhejiang International Hedge Fund Talent Association in Hangzhou. He also said the Sister City agreement should lead to business, educational and cultural exchanges between the two municipalities. Mr. Tesei also thanked the Bruce Museum for providing an abbreviated tour to the Hangzhou delegation, as well as Museum Board of Directors member Fred Brooks for his invitation to host the group to tour his collection of Chinese artworks.

j. Also on May 23, the culmination of many years of work, the new Greenwich Fire Department headquarters was officially dedicated with a ribbon cutting ceremony. Several former First Selectmen were attendance including Lolly Prince, Dick Bergstresser, John Margenot and Roger Pearson, as well as members of the Board of Estimate and Taxation and the Representative Town Meeting who supported the project.

k. The Silver Shield Association honored several of its members on the evening of May 24. Officer Andrew Greco was the 2016 Silver Shield Association Officer of the Year. Also honored for their work were Sgt. Shockley, Det. Libasci, Det. Perusse, Officer Tar, Officer Swift, Officer Wallace.

l. Also On May 24, Mr. Tesei attended the 20th anniversary and benefit for the Friends of Autistic People. Long-time Greenwich resident and fashion designer Tommy Hilfiger and his wife Dee were honored at the event.

m. This past weekend, there were several Memorial Day events attended by Mr. Tesei and Mr. Toner, including the Cos Cob VFW Post 10112 ceremony at the Strickland Road Memorial; the Byram Veterans Association parade, the Ninth District Veterans Association and Glenville Volunteer Fire Co. annual parade, the American Legion Post 29 dockside service at the Indian Harbor Yacht Club, the Byram Veterans memorial at the monument at McKinney Terrace; the Sound Beach Volunteer Fire Department parade in Old Greenwich and the Chickahominy memorial ceremony at Hamilton Avenue School.

n. Mr. Tesei noted that he drove to New Britain on May 25 to attend the Siting Council’s hearing on Eversource’s revised plan to build a new substation and power system from Cos Cob to central Greenwich. It is because of that hearing, that the Board of Selectmen’s meeting was rescheduled to today (May 30), Mr. Tesei explained. The Siting Council took 10 minutes to render its decision allowing Eversource to submit a revised plan. The Council has scheduled a field review of the proposed route for 2 p.m. July 13; a public hearing to be held at 6:30 p.m. July 13 with an evidentiary hearing to be held in New Britain on July 25.

o. Mr. Tesei said that he would be attending an informational meeting at the Rye Brook Village Hall on Wednesday night (May 31) about the privatization of Westchester County Airport.

p. Mr. Toner reported that he attended a Commission on Aging seminar about Greenwich becoming more Age Friendly and Dementia Friendly.

4. Old Business
   a. Establishment of a committee to review a proposal to add the Board of Education to Section 66 and 67 of the Town Charter. In particular, the establishment of a committee to consider a requirement that any change to the mode of selection, composition, rights, powers, privileges or duties of the Board of Education require a referendum.

Mr. Tesei said that there was a solicitation of opinion from the Board of Education in reference to the changing Section 38 of the Charter as requested by Selectman Marzullo.
and that it was received May 26. Mr. Tesei read the letter from Board of Ed Chair Mr. Peter Sherr (which is attached at the end of these minutes).

Mr. Tesei also said that at the last Selectmen’s meeting, the board voted to appoint committee members who agreed to serve – Bill Finger, Barry Rickett, Brian Peldunas and Peter von Braun – as well as to find someone to fill the vacancy created by the passing of Joan Caldwell. Mr. Tesei said that Alexis Voulgaris, RTM District 6 member who is an unaffiliated voter, agreed to serve on the committee. Her appointment would reflect a diverse and broad perspective of the community, Mr. Tesei said. He noted that as of April 30, 2017, the Town’s voters were 36% unaffiliated; 35% Republican; 27% Democrat and 2% other. He said that the Committee membership of 2 Republicans, 2 unaffiliated voters and 1 Democrat comes closest to reflecting the Town’s electorate. He also said that the Committee is to review a proposal to review Sections 66 and 67 of the Charter.

Mr. Tesei made a motion to appoint the committee and it was seconded by Mr. Toner.

Mr. Marzullo said he wanted to make two motions. Mr. Tesei said that his item was on the agenda and that there would be a vote on the motion. Mr. Marzullo responded that his motions would affect Mr. Tesei’s motion. Mr. Marzullo explained that he was going to suggest the Selectmen table the action because the Board of Education voted not to change the composition of its Board. Mr. Marzullo said cited opposition to the changes by Democrat Laura Erickson, Republican Barbara O’Neill and PTAC President Mike Trogni and describe it as a bipartisan vote of the Board of Education. Mr. Marzullo also said he will question the composition of the Charter Revision Committee if Mssrs. von Braun and Peldunas are running for the Board of Education. He also said he prefers that the Board of Selectmen not form the Committee and bring the issue before the RTM.

Mr. Tesei said that the Board of Education voted on an opinion on Section 38 of the Charter but that Section 38 is not before the Board of Selectmen. The question is whether the electorate should be involved in the decision to change the Charter and the composition of the Board of Education, Mr. Tesei said. He said the question that needs to be answered is whether 113 of the 230 members of the RTM versus 33,000 registered voters decide on whether to make any changes. He described it as a very tedious, deliberative process. He said there was a motion to appoint five (5) members to the Committee.

Mr. Marzullo asked if the Selectmen were voting on the Committee members who could be candidates. Mr. Tesei said that Committee members would be participating in discussion on should the decision by the RTM go to the electorate. He said information regarding whether Committee members would be running for the Board of Education is hearsay including information about Mr. von Braun’s possible intentions that was passed along during a conversation.

BoE member Ms. O’Neill was recognized by the Chair and said that any reference by Mr. Tesei to her comments made about Mr. von Braun should also reference comments made by Mrs. Erickson about BoE Chair Mr. Sherr running for reelection.

Mr. Marzullo asked that if two (2) of the five (5) Committee members are running for BoE, should the Selectmen wait and call the members to ask if they are running. Mr.
Tesei called the question and requested a vote on his motion.

The motion passed 2-1-0, with Mr. Marzullo casting the dissenting vote. Mr. Marzullo said that he wanted the record to reflect that he would have liked to check whether Mssrs. Von Braun and Peldunas would be running for the Board of Education.

5. New Business

a. Request to Approve second amendment to the Bruce Museum Management Agreement - Bruce Cohen.

b. Request to modify Section 14-5, Schedule II of the Greenwich Municipal Ordinances – Bruce Cohen.

c. Request to modify section 14-7.6, Schedule VIIA of the Greenwich Municipal Ordinances – Bruce Cohen.

Mr. Cohen explained that the Bruce Museum previously received approvals for Municipal Improvement (MI) status regarding the expansion and renovation of the facility. The plan is now near the end of the land use portion of approvals including reviews by the Planning and Zoning Commission, the Zoning Board of Appeals, the Architectural Review Committee as well as Town Administrator Ben Branyan and Town departments including Parking Services, Parks & Recreation, the Town Attorney and Tree Warden. The plans now reflect the changes requested by these various agencies and departments, Mr. Cohen explained. One of the changes now eliminates the need to lease land from the state of Connecticut for parking and the Museum is withdrawing that portion of the MI.

Mr. Cohen also provided a history of the Museum’s operations that included a separate board overseeing operation from 1909 until 1992. An expansion of the Museum in 1991 was the genesis for the current operating agreement which is handled by a 501-c3 known as the Bruce Museum Inc. Last year, the Representative Town Meeting (RTM) extended that operating agreement by 20 years.

Mr. Cohen also provided an overview of the construction plan - including handicapped accessibility as well as connecting downtown activities with both the Museum and Bruce Park – which must be approved by the RTM. He also explained that the Selectmen need to approve the management agreement and modifications to parking regulations.

Mr. Tesei said that a motion was needed to add to the agenda, a modification of Section 14-1, Schedule 1 of the Greenwich Municipal Ordinances, for a total of four (4) requests by the Museum.

Mr. Toner made the motion to add the Section 14-1, Schedule I modification to the agenda. It was seconded by Mr. Marzullo and unanimously approved.
Mr. Tesei commented that the Museum worked collaboratively with the Town administration to determine the best use of a finite resource – parking.

Mr. Toner made a motion, seconded by Mr. Marzullo to approve the second amendment to the Bruce Museum Management Agreement. The motion was unanimously approved.

Mr. Toner made a motion, seconded by Mr. Marzullo to approve the modification of Section 14-1, Schedule I of the Greenwich Municipal Ordinances. The motion was unanimously approved.

Mr. Toner made a motion, seconded by Mr. Marzullo to approve the modification of Section 14-5, Schedule II of the Greenwich Municipal Ordinances. The motion was unanimously approved.

Mr. Toner made a motion, seconded by Mr. Marzullo to approve the modification of Section 14-7.6, Schedule VIIA of the Greenwich Municipal Ordinances. The motion was unanimously approved.

6. Appointments and Nominations

7. Executive Session

Mr. Toner motioned to enter into executive session at 12:53 P.M., seconded by Mr. Marzullo, the Board voted 3-0 in favor.

Attending the Executive Session were J. Wayne Fox, Town Attorney; Eugene McLaughlin, Assistant Town Attorney, and Barbara Heins, Executive Assistant to the First Selectman.

Mr. Toner moved to exit Executive Session at 1:15 P.M., seconded by Mr. Marzullo, the Board voted 3-0 in favor.

a. Full and Final Settlement of tax appeal to settle Docket No. HHB CV 16-6034442S – Parcel No. 01-2515/S for a tax credit of $5,647.

   Upon a motion by Mr. Toner, seconded by Mr. Marzullo, the Board voted 3-0-0 in favor of the settlement.

b. Full and Final Settlement of tax appeal to settle Docket No. HHB CV 16-6034461S – Parcel No. 12-1010/S for a tax credit of $3,309.

   Upon a motion by Mr. Tesei, seconded by Mr. Toner, the Board voted 3-0-0 in favor of the settlement.

c. Full and Final Settlement of tax appeal to settle Docket No. HHB CV 16-6034460S – Parcel No. 06-3903/S for a tax credit of $20,515.
Upon a motion by Mr. Toner, seconded by Mr. Marzullo, the Board voted 3-0-0 in favor of the settlement.

d. Full and Final Settlement of tax appeal to settle Docket No. HHB CV 16-6034312S – Parcel No. 01-2522/S for a tax credit of $8,282.

   Upon a motion by Mr. Toner, seconded by Mr. Marzullo, the Board voted 3-0-0 in favor of the settlement.

e. Full and Final Settlement of tax appeal to settle Docket No. HHB CV 16-6034316S – Parcel No. 03-1413/S for a tax credit of $2,356.

   Upon a motion by Mr. Toner, seconded by Mr. Marzullo, the Board voted 3-0-0 in favor of the settlement.


   Upon a motion by Mr. Toner, seconded by Mr. Marzullo, the Board voted 3-0-0 in favor of the settlement.

g. Full and Final Settlement of tax appeal to settle Docket No. FST CV 16-5015743S – Parcel No. 06-1807/S for a tax credit of $2,700.

   Upon a motion by Mr. Toner, seconded by Mr. Marzullo, the Board voted 3-0-0 in favor of the settlement.

h. Full and Final Settlement of tax appeal to settle Docket No. HHB CV 16-6034461S – Parcel No. 12-1010/S for a tax credit of $3,309.

   Upon a motion by Mr. Toner, seconded by Mr. Marzullo, the Board voted 3-0-0 in favor of the settlement.

8. Adjournment

   Mr. Toner motioned to adjourn at 1:20 P.M.; seconded by Mr. Marzullo, the Board voted 3-0 in favor.

Next Regular Meeting of the Board of Selectmen will be at 11 a.m. Friday, June 9 in the Town Hall Meeting Room.

______________________________________________
Peter J. Tesei First Selectman

______________________________________________
Prepared by Barbara A. Heins
Recording Secretary
May 26, 2017

Mr. Peter Tesei  
First Selectman, Town of Greenwich  
101 Field Point Road  
Greenwich, CT 06830

Dear Peter,

In response to your letter of May 11, the Board of Education considered the proposed changes to Section 66 and 67, Home Rule Provisions of the Charter of the Town of Greenwich at our regular meeting.

We consulted Mr. Wayne Fox, Town Attorney. He advised "(the) Board has no authority, no jurisdiction, nor any formal legal role to play in any such proposed change. It certainly has the right to review it, discuss it and issue a sense of the Board resolution with respect to the concept, but it has no legal role or authority with respect to its adoption. The only question is whether your Board has an opinion on the topic". Accordingly, his office assisted to prepare the following sense of the meeting resolutions to properly express our views:

Regarding Section 66, "It is the sense of the meeting that any home rule action which would affect the existence, mode of selection, composition, rights, powers, privileges or duties of the Board of Education shall not become effective unless such action is approved at a referendum."

Regarding Section 67, "It is the sense of the meeting that any home rule action affecting the Board of Education may be initiated only by affirmative vote of a majority of the members of the Board of Education."

As you will note, these resolutions mirror the language of Section 66 and 67, Home Rule Provisions in plain and understandable English.

Dr. Gaetane Francis moved to table these resolutions and the Board by a majority agreed. Therefore, we have no current plans to provide opinion or advice on proposals to add the Board of Education to Home Rule Provisions of the Charter.
Also relevant to the topic, Ms. Laura Erickson moved "It is the sense of the meeting to accept the recommendation contained within the Charter Revision Committee Report on the proposal to amend the method of election of Board of Education members whereby three Board of Education members are elected in one municipal election cycle and five Board of Education members are elected in the next municipal election cycle."

This motion failed.

I hope this information proves helpful to the Board of Selectmen and attendant charter committees.

Regards,

[Signature]

Peter Sherr
Chair
Greenwich Board of Education

cc: Members of the Board of Education
    Mr. Wayne Fox
    Mr. John Toner
    Mr. Drew Marzullo
Select Dates

June 18th 8-10am
August 6th 8-10am
October 15th 8-10am

April 30th Event Review

Our April 30th event was spectacular. We estimate to have had roughly 1,000 spectators on flow and around 250-300 cars. Many of the Breast Cancer Walker came up to Cars and Coffee after their walk.

The GPD Officers were tremendous in helping with the execution, as well as monitoring traffic, and clearing the avenue promptly at 9:45am to reopen it at 10:05am to be exact.

We received multiple (around 100) emails from community members, attendees and car enthusiast stating how great the event was, and wanting to know when the next one is.

Due to the size and spectators, the GPD Officer working the event decided to close the Lewis Street intersection as well because of the amount of pedestrian traffic. In addition, one of the Officers directed traffic / crossed people at the Elm Street intersection as well.

Requests Moving Forward

Because of the April 30th success we are requesting permission to relocate and expand the event to a new block.

Elm Street – Havemeyer Place + BOE Parking Lot. Roughly 120 Parking Spaces, double the original event.

This expansion would allow us to properly accommodate the cars that were parking in lots behind the shops, as well as in the Lewis Street – Elm Street block.

We would email and communicate with all car attendees and make sure they receive ‘rules’ in advance to eliminate engine revving and burnouts.
Add 4 more Police Officers for a total of 4

- 1 Greenwich Avenue @ Elm Street
  - 1 Greenwich Avenue @ Havemeyer (Traffic)
  - 2 Floating
Greenwich Cars & Coffee
Relocation / Expansion Request

Cars Parked on Greenwich Avenue Elm - Havemeyer and BOE Parking Lot At Elm Street

Traffic Office at Greenwich Avenue at Havemeyer
**Good Morning to All,**

I have spoken with Sebastian and we (GPD Traffic) are fine with this final plan of closing Greenwich Avenue between Elm St. and Arch St./Havemeyer Pl.

**A total of 4 Officers will be hired to accommodate traffic and crowd control.**

Thank for your time,

T/T Roger Drentl II, #80
Traffic Tech
Greenwich Police Dept.
Traffic Section
(203) 622-8014 off
(203) 622-8070 fax

**Hi All,**

Please see the approved GCC Plan for the remaining dates. Please let me know if you need anything else for Thursdays BOS Meeting. I will have 5 Hard Copies for the meeting.

Thanks

Sebastian

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Sebastian Dostmann
Managing Partner
Sebass Events & Entertainment

an SCD Hospitality Company
May 31, 2017

Town of Greenwich
Board of Selectman
101 Field Point Road
Greenwich, CT 06836

Re: Aquarion Water Company of CT
2 Anderson Road, Greenwich, CT-June 8 Board Meeting Agenda Request

To the Board:

Kovacs Construction Corporation has been awarded the project to build a new water pump station for Aquarion Water at 2 Anderson Road, Greenwich, CT. We are requesting that we can be put on the June 8, 2017 agenda to request a road shutdown.

The work requires for us to dig up Anderson Road to tie in new pipe discharge, which is across the street located at 3 Anderson Road at the end of driveway. Remove old pump station and associated piping. We have to do test pits to search for 24” existing pipe restraints to make sure they are present or we need to add the restraints on the pipe ends if not present. We have to remove and replace the sidewalk from Mallard Drive to 30’ on the East Elm Street side approximately 500’. We will also remove asphalt curbing at sidewalk and replace with granite curbing.

The excavation work will take over more than one lane of traffic area and there will not be a safe amount of space for traffic to pass by the excavated area. The work that we have to perform is going to require us to close down the road completely. The work will take approximately 2 months or sooner to complete. We are requesting permission to shut down the area between 3 Anderson Road’s driveway, and the intersection of Mallard and Anderson-local traffic only for this period. This would leave only 3 Anderson Road’s driveway and 5 Anderson Road’s driveway open for the duration of the work.

We are attaching sheets 1, 3, 4 and 20 of contract drawings to show the work in the road, as well as a copy of the map showing where the detour signs will be located.
It is our understanding that the Town requires us to put up signage one week before work will begin, to notify traffic that the road will be closed.

We will perform the work when schools close on June 20\textsuperscript{th} and be complete before September 1\textsuperscript{st}, when schools reopen.

We look forward to a favorable response. Should you require any additional information, please call us ASAP.

Very truly yours,

KOVACS CONSTRUCTION CORPORATION

\textit{Wanda L. McGarry}

Wanda L. McGarry
Sales Manager

Enclosures
TRAFFIC INVESTIGATION REPORT
TOWN OF GREENWICH

Date: June 2, 2017

Location: Echo Lane

Correspondent: Fred Stoleru
8 Echo Lane
917-991-4302

Concern:
Mr. Stoleru is concerned about people using Echo Lane as a cut-through between North Maple Avenue and Ridgeview Avenue/Andrews Road to North Street. He stated that there are many people who walk in the neighborhood, including children. There are also bus stops on Echo Lane and the surrounding streets. Mr. Stoleru requested a speed limit be established for Echo Lane.

Observations:
Echo Lane is a local roadway running west from Ridgeview Avenue to Ridge Brook Road, for a distance of .22 miles. There is currently no established speed limit.

There are no sidewalks on Echo Lane and no parking restrictions exist along the street. There are bus stops for two schools along the street.

Automated traffic counts were recorded for a period of ten (10) days from October 30, 2015 to November 8, 2015 and the 85th percentile speed was found to be 27 MPH. During this time period there were a total of 1519 trips made along Echo Lane.

Recommendations:
It is recommended that a 25 MPH Speed Limit be established and posted for Echo Lane.

In addition, a work request has been submitted to the DPW – Highway Division to have School Bus Stop warning signs installed on Echo Lane at each end, to alert drivers to the school bus stops located there.

Investigated by: Melissa G. Evans, Traffic Operations Coordinator
Approved by: James W. Michel, PE, Deputy Commissioner
RESOLVED,
WHEREAS,
It is in the interest of the Town of Greenwich, acting through the RTM and its other elected officials and town officials, to protect and preserve public health and safety and the natural resources of the Town of Greenwich, including but not limited to water and land, now and for generations of Town citizens in the future;

Natural gas and oil extraction activities involve the use of chemical and hazardous materials during a multi-phase process including drilling, hydraulic fracturing, production, well maintenance, workover operations, and storage; and

Liquid and solid wastes associated with such activities are contaminated with chemicals and naturally-occurring toxins that come from the ground, including but not limited to radioactive materials; and

Many of the chemical constituents injected and utilized during extraction activities, and the naturally-occurring toxins in the ground that mingle with the wastes associated with extraction activity, have documented adverse health effects and/or adverse environmental impacts; and

These wastes can contain radioactive elements and other toxins, and the pollution of water and soil caused by potential leaching, spills and run-off of these wastes may threaten the public health and safety, and economic well-being of communities, as businesses, consumers and residents depend on clean drinking water, surface waters, property and natural resources; and

House Bill 6329 – An Act Concerning Hydraulic Fracturing in Connecticut - as passed by the House of Representatives in the CT General Assembly bans acceptance and receivership, storage, treatment, transfer and disposal of hydraulic fracturing waste in the State of Connecticut, and directs that the DEEP may approve bringing such waste into the State of CT for the purpose of research to determine use in the State; and

House Bill 6329 defines hydraulic fracturing waste as any substance used for or derived secondarily to the “process of pumping fluid into or under the surface of the ground in order to create fractures in rock”; and

Numerous processes during extraction activities produce liquid and solid wastes, and House Bill 6329 bans a portion of the total wastes produced from gas wells, specifically the materials used or generated secondarily to one process, the hydraulic fracturing process; and

House Bill 6329 does not ban other wastes generated secondarily to the drilling, production, treatment or certain large-scale storage processes, and does not ban wastes from oil extraction activities; and

Toxins present in extraction wastes can contaminate waters, soils and natural resources of Greenwich and impact public health and safety where use, leaching, spills, leaks, run-off occurs; and
Seventeen towns in the State of Connecticut — including Andover, Ashford, Branford, Chaplin, Coventry, Hampton, Hebron, Lebanon, Litchfield, Mansfield, Middletown, New London, Portland, Washington, Windham (includes Willimantic), Windsor, and Woodstock have already passed municipal ordinances prohibiting all wastes and by-products from natural gas and oil extraction activities for the purpose of protecting public health, safety, property and natural resources; and

There is no requirement to publicly disclose chemical formulas of hydraulic fracturing fluids or other chemicals used during extraction activities, or disclose the naturally-occurring toxins that have mingled with wastes, so that this information is publicly available for health and safety purposes, and remediation purposes; and

The Town of Greenwich is and should be a leader in protecting public health and safety, and our natural resources, including water supplies and water resources for generations to come; and

Protection of public health and safety, ground and surface waters, property and natural resources in the Town of Greenwich is better accomplished by prevention of contamination and environmental degradation, rather than attempting to clean up contamination and restoring degraded environments after the fact; and

In order to protect public health and safety, and the quality of natural resources and property within the Town of Greenwich, it is necessary to adopt an ordinance prohibiting storage, handling, treatment, disposal and use of waste associated with natural gas and oil extraction, as defined in the ordinance, the text of which is set forth below.

Now, Therefore, the RTM hereby adopts An Ordinance Prohibiting Waste Associated with Natural Gas and Oil Extraction within the Town of Greenwich, as set forth below:

TOWN of Greenwich, CONNECTICUT

CODE OF ORDINANCES

Ordinance Prohibiting Waste Associated with Natural Gas and Oil Extraction

xxx-01 Definitions for the Purposes of this Ordinance:

1. For the purposes of this Ordinance, the following terms, phrases, and words shall have the meanings given here, unless otherwise clearly indicated by the context:

2. "Hydraulic fracturing" shall mean the fracturing of underground rock formations, including shale and non-shale formations, by manmade fluid-driven techniques for the purpose of stimulating oil, natural gas, or other subsurface hydrocarbon production.

3. "Natural gas extraction activities" shall mean all geologic or geophysical activities related to the exploration for or extraction of natural gas, including, but not limited to, core and rotary drilling and hydraulic fracturing.

4. "Oil extraction activities" shall mean all geologic or geophysical activities related to the exploration for or extraction of oil, including, but not limited to, core and rotary drilling and hydraulic fracturing.
5. "Natural gas waste" shall mean: a) any liquid or solid waste or its constituents that is generated as a result of natural gas extraction activities, which may consist of water, brine, chemicals, naturally occurring radioactive materials, heavy metals, or other contaminants; b) leachate from solid wastes associated with natural gas extraction activities; c) any waste that is generated as a result of or in association with the underground storage of natural gas; d) any waste that is generated as a result of or in association with liquefied petroleum gas well storage operations; and e) any products or byproducts resulting from the treatment, processing, or modification of any of the above wastes.

6. "Oil waste" shall mean: a) any liquid or solid waste or its constituents that is generated as a result of oil extraction activities, which may consist of water, brine, chemicals, naturally occurring radioactive materials, heavy metals, or other contaminants; b) leachate from solid wastes associated with oil extraction activities; and c) any products or byproducts resulting from the treatment, processing, or modification of any of the above wastes.

7. "Application" shall mean the physical act of placing or spreading natural gas waste or oil waste on any road or real property located within the Town of Greenwich.

8. As used in this Ordinance and from CGS 22a-220 (g), "collector" means any person who holds himself out for hire to collect solid waste on a regular basis from residential, business, commercial or other establishments.

9. As used in this Ordinance, the term Town shall mean the Town of Greenwich.

xxx-02 Prohibitions:

1. The application of natural gas waste or oil waste, whether or not such waste has received Beneficial Use Determination or other approval for use by DEEP (Department of Energy & Environmental Protection) or any other regulatory body, on any road or real property located within the Town for any purpose is prohibited.

2. The introduction of natural gas waste or oil waste into any wastewater treatment facility within or operated by the Town is prohibited.

3. The introduction of natural gas waste or oil waste into any solid waste management facility within or operated by the Town is prohibited.

4. The storage, disposal, sale, acquisition, transfer, handling, treatment and/or processing of waste from natural gas or oil extraction is prohibited within the Town.

xxx-03 Provision to be included in bids and contracts related to the construction or maintenance of publicly owned and/or maintained roads or real property within the Town:

1. All bids and contracts related to the retention of services to construct or maintain any publicly owned and/or maintained road or real property within the Town shall include a provision stating that no materials containing natural gas or oil waste shall be utilized in providing such a service.
2. All bids and contracts related to the purchase or acquisition of materials to be used to construct or maintain any publicly owned and/or maintained road or real property within the Town shall include a provision stating that no materials containing natural gas or oil waste shall be provided to the Town.

3. The following statement, which shall be a sworn statement under penalty of perjury, shall be included in all bids related to the purchase or acquisition of materials to be used to construct or maintain any publicly owned and/or maintained road or real property within the Town and all bids related to the retention of services to construct or maintain any publicly owned and/or maintained road or real property within the Town: "We ______ hereby submit a bid for materials, equipment and/or labor for the Town of Greenwich. The bid is for bid documents titled _________. We hereby certify under penalty of perjury that no natural gas waste or oil waste will be used by the undersigned bidder or any contractor, sub-contractor, agent or vendor agent in connection with the bid; nor will the undersigned bidder or any sub-contractor, agent or vendor agent thereof apply any natural gas waste or oil waste to any road or real property within the Town of Greenwich as a result of the submittal of this bid if selected."

xxx-04 Penalties

This ordinance shall apply to any and all actions occurring on or after the effective date of this ordinance. In response to a violation of this ordinance, the Town is empowered to a) issue "Cease and Desist" orders demanding abatement of the violation, b) seek any appropriate legal relief, including immediate injunctive relief, as a result of any violation of this ordinance; c) file a complaint with any other proper authority; and d) require remediation of any damage done to any land, road, building, aquifer, well, watercourse, air quality or other asset, be it public or private, within the Town. The Town may recoup from the offending person(s), jointly and severally, all costs, including experts, consultants and reasonable attorney's fees, that it incurs as a result of having to prosecute or remediate any infraction of this ordinance. Any person who violates this ordinance shall be liable for a penalty of $250 per violation per day. The town may pursue other penalties allowable under state law.

xxx-05 Severability

If any clause, sentence, paragraph, subdivision, section or part of this local law or the application thereof to any person, individual, corporation, firm, partnership, entity or circumstance shall be adjudged by any court of competent jurisdiction to be invalid or unconstitutional, such order or judgment shall not affect, impair, effect or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, subdivision, section or part of this law or in its application to the person, individual, corporation, firm, partnership, entity or circumstance directly involved in the controversy in which such order or judgment shall be rendered. To further this end, the provisions of this Chapter are hereby declared to be severable.

xxx-06 Transportation

Nothing in this ordinance shall be interpreted to ban the transportation of any product or by-product described herein on any roadway or real property within the Town.
EXPLANATORY COMMENTS

In 2014, PA 14-200-An Act Prohibiting the Storage or Disposal of Fracking Waste in Connecticut- was passed, creating a temporary moratorium and mandate that the DEEP submit regulations for review between July 1, 2017 and July 1, 2018.

The title of the law referred to "fracking", which is generally used as a nickname to refer to the entire lifecycle of developing natural gas and oil, and includes multiple processes: building a large well pad, drilling multiple wells on-site, pumping these wells with fluid-a process technically referred to as "hydraulic fracturing", producing and then treating the gas before sending it through pipes for use. But the definition of the waste within the law only included any substances "used or generated secondarily to" the hydraulic fracturing process for gas wells. This leaves many loopholes for other wastes produced during the entire lifecycle of natural gas and oil extraction, and the amount of these toxic and radioactive wastes are enormous.

The drilling process alone has produced hundreds of thousands of tons of toxic solid waste in a single year in Pennsylvania. Also, the gas production process has produced hundreds of millions to over a billion gallons of toxic brine in a single year in PA. Re-use of the solid wastes as fill product and salts from the liquid brine puts towns at risk for potential chemical and radioactive contamination, along with other naturally-occurring toxins, that commonly exist in these wastes.

Only a few states allow these wastes to be re-used. Pennsylvania recently stopped issuing new permits for re-using drill cuttings, or earth removed from the ground during the drilling process, citing "lack of transparency". Drillers and waste handlers in PA are currently shipping wastes to at least eight states across the country, and may be seeking new delivery points for the solid wastes no longer allowed for re-use within PA. It is unlikely that PA will have the resources for testing or require remediation of all potentially contaminated sites where this waste by-product has been used for five years.

These waste loopholes also exist in House Bill 6329 An Act Concerning Hydraulic Fracturing Waste in Connecticut. Note the title of House Bill 6329 has changed from PA14-200, where the word "fracking" has been replaced by the technical term "hydraulic fracturing".

This bill needs to pass, as regulating waste from the hydraulic fracturing process and bringing it into CT has never been an adequate option, and the mandate for the DEEP to do this needs to change. There is too much risk for accidents, leaks, spills, run-off, leaching, inadequate treatment followed by discharge to occur, resulting in contamination and need for costly remediation in CT.

Due to the lack of state policy or law concerning all wastes being produced during natural gas and oil extraction activities in nearby PA and NY, towns across CT are passing local ordinances banning all wastes. The first town to pass an ordinance was Washington, which copied the state language. Sixteen additional towns have used model language developed by the legal counsel for Riverkeeper. This language was first passed into law in 2014 in NY.

Several more CT towns are planning to vote on ordinances using this same language before the end of June. There is interest or active organizing by residents, or championing by town leaders to pass ordinances using the same language in over 40 CT towns.

Though House Bill 6329 has passed the House and awaits Senate passage, this good first step by the State is not comprehensive or adequate protection for CT towns.

Greenwich Conservation Advocates, a new citizen's committee formed to address water issues, are proposing the RTM pass the attached ordinance.
Figure 1: Comparison of Exposure to NORM in Marcellus Shale for Vertical Wells and Horizontal Wells
Figure 2: Pathways for Radiation Migration Through Air

National Council on Radiation Protection, Dr. E. Ivan White, Senior Staff Scientist, Consideration of Radiation of Hazardous Waste Produced from Horizontal Hydrofracking
Figure 3: Pathways for Radiation Migration Through Soil and Water
Figure 4. Measured activities for total radium (Ra-226 + Ra-228) and Ra-226 for each of the data sources used in the study. The three datasets for produced water from Marcellus Shale wells are shown on the left; the remaining three datasets are for non-Marcellus Shale wells. The number of points in each dataset is shown in parentheses, and the median values are plotted as heavy black lines. For reference, the dashed line shows the industrial effluent discharge limit (60 pCi/L) for Ra-226 (U.S. Nuclear Regulatory Commission, http://www.nrc.gov/reading-rm/doc-collections/cfr/part022/appb/Radium-226.html).

HEALTH EFFECTS OF CHEMICALS USED IN FRACKING

BY THE NUMBERS

980
NUMBER OF FRACKING CHEMICAL "PRODUCTS" WE KNOW ABOUT

649
NUMBER OF CHEMICALS IN THE 880 FRACKING "PRODUCTS"

90%
"PRODUCTS" CONTAINING CHEMICALS THAT HAVE ADVERSE HEALTH EFFECTS

43%
"PRODUCTS" THAT WE KNOW LESS THAN 1% OF THE CHEMICALS IN THEM

WHAT'S A "PRODUCT"?
A PRODUCT MAY CONTAIN MORE THAN ONE CHEMICAL.
A CHEMICAL MAY BE IN MORE THAN ONE PRODUCT.

FOR THE 50% OF FRACKING CHEMICALS WE CAN IDENTIFY

50%
SOLUBLE IN WATER

36%
VOLATILE
SMALLER PERCENTAGE, BUT HIGHER IMPACT. THESE CHEMICALS CAN BE INHALED, SWALLOWED, AND/OR ABSORBED THROUGH THE SKIN

BODY SYSTEMS AFFECTED BY FRACKING CHEMICALS

ENDOCRINE SYS.
40% 56%
SOLUBLE VOLATILE

IMMUNE
40% 51%
SOLUBLE VOLATILE

CARDIO/CIRC. SYS.
58% 72%
SOLUBLE VOLATILE

RESPIRATORY
93% 87%
SOLUBLE VOLATILE

KIDNEY
53% 66%
SOLUBLE VOLATILE

LIVER/G.I.
89% 83%
SOLUBLE VOLATILE

SKIN
63% 97%
SOLUBLE VOLATILE

BRAIN/NERVOUS SYS.
88% 98%
SOLUBLE VOLATILE

CANCER
23% 33%
SOLUBLE VOLATILE

OTHER
CANCER OFTEN CITED AS DEATH. ALSO INCREASES CHANCE OF MALIGNANT EFFECTS ON KIDNEYS AND TESTES 56% 79%
SOLUBLE VOLATILE

MUTAGEN
33% 35%
SOLUBLE VOLATILE

WHAT'S A "GAS"
A GAS IS Ра A CHEMICAL USED UNDER PRESSURE DURING FRACKING CHEMICAL
<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Tons</th>
<th>Barrels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Sediment</td>
<td>596,068</td>
<td>13,385</td>
</tr>
<tr>
<td>Drill Cuttings</td>
<td>44,913</td>
<td></td>
</tr>
<tr>
<td>Drilling Fluid Waste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flowback Fracturing Sand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fracing Fluid Waste</td>
<td>6,210</td>
<td></td>
</tr>
<tr>
<td>General O&amp;G Waste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Produced Fluid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Servicing Fluid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td>647,192</td>
<td>20,921,776</td>
</tr>
</tbody>
</table>

Waste generated by unconventional wells in Pennsylvania from January to June 2015 by type.

http://www.fractracker.org/2015/09/pa-waste-8-states/
<table>
<thead>
<tr>
<th>Waste Disposal Method</th>
<th>Solid Waste (Tons)</th>
<th>Liquid Waste (Bbls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cent Waste Trt Fac NPDES Discharge</td>
<td>22,639</td>
<td>1,362,225</td>
</tr>
<tr>
<td>Centralized Treatment Plant For Recycle</td>
<td>0</td>
<td>83,618</td>
</tr>
<tr>
<td>Injection Disposal Well</td>
<td>322</td>
<td>1,798,364</td>
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<tr>
<td>Landfill</td>
<td>599,600</td>
<td>31,419</td>
</tr>
<tr>
<td>Residual Waste Proc Fac (General Permit)</td>
<td>6,657</td>
<td>3,662,234</td>
</tr>
<tr>
<td>Residual Waste Processing Facility</td>
<td>1,018</td>
<td>22,343</td>
</tr>
<tr>
<td>Residual Waste Transfer Facility</td>
<td>16,363</td>
<td>32,063</td>
</tr>
<tr>
<td>Reuse Other Than Road Spreading</td>
<td>0</td>
<td>13,863,624</td>
</tr>
<tr>
<td>Road Spreading</td>
<td>0</td>
<td>147</td>
</tr>
<tr>
<td>Storage Pending Disposal Or Reuse</td>
<td>592</td>
<td>65,739</td>
</tr>
<tr>
<td>Grand Total</td>
<td>647,192</td>
<td>20,921,776</td>
</tr>
</tbody>
</table>

*Waste generated by unconventional wells in Pennsylvania from January to June 2015 by type.*


Barrels  Gallons
20,921,776 x 42 = 878,714,592 Total Liquid Waste Reported
7,058,152 x 42 = 296,442,384 Tracked to a Specific Treatment or Disposal Facility
13,863,624 x 42 = 582,272,208 Untracked - Marked as reuse, whereabouts unknown
Toxins found in fracking fluids and wastewater, study shows

By Michael Greenwood

January 6, 2016

In an analysis of more than 1,000 chemicals in fluids used in and created by hydraulic fracturing (fracking), Yale School of Public Health researchers found that many of the substances have been linked to reproductive and developmental health problems, and the majority had undetermined toxicity due to insufficient information.
NEWS RELEASE

July 15, 2018

Hydraulic Fracturing Linked to Increases in Hospitalization Rates in the Marcellus Shale Region, According to Penn Study

PA residents in counties with high well density more likely to be admitted for suite of ailments

PHILADELPHIA - Hospitalizations for heart conditions, neurological illness, and other conditions were higher among people who live near unconventional gas and oil drilling (hydraulic fracturing), according to new research from the University of Pennsylvania and Columbia University published this week in PLOS ONE. Over the past ten years in the United States, hydraulic fracturing has experienced a meteoric increase. Due to substantial increases in well drilling, potential for air and water pollution posing a health threat has been a concern for nearby residents.

Related Links

To address this issue, researchers from two Environmental Health Science Core Centers (EHSCC) of the National Institute of Environmental Health Sciences -- the Center of Excellence in Environmental Toxicology (CEET) at Penn's Perelman School of Medicine and the Center for Environmental Health in Northern Manhattan at the Mailman School of Public Health, Columbia University, examined the link between drilling well density and healthcare use by zip code from 2007 to 2011 in three northeastern Pennsylvania counties.

Using databases that contained over 196,000 hospitalizations (which includes multiple hospitalizations for the same person), the team examined the top 25 specific medical categories for hospitalizations, as defined by the National Hospital Discharge Survey, including major conditions such as heart disease, respiratory illness, and neurological conditions. The researchers found that, relative to other counties, counties with higher density of drilling wells saw higher hospitalization rates among their residents for heart conditions, neurological illnesses, and other specific medical categories.

The study, published in PLOS ONE, is titled "Hydraulic Fracturing Linked to Increases in Hospitalization Rates in the Marcellus Shale Region, According to Penn Study." The researchers, from the University of Pennsylvania and Columbia University, are Karen Kuepper, MD, MPH, of the Perelman School of Medicine at the University of Pennsylvania, and Kelly Connor, PhD, of the Mailman School of Public Health at Columbia University.
MEMORANDUM FROM THE LAW OFFICES OF
HALLORAN & SAGE LLP
225 Asylum Street
Hartford Connecticut 06103

TO: John Elsesser, Town Manager
FROM: Duncan J. Forsyth
Richard P. Roberts
Kelly C. McKeeen
DATE: September 17, 2015
RE: Review of Proposed Town Ordinance

I. BACKGROUND

It is our understanding that the Town has received a petition requesting a Town meeting to vote on a proposed ordinance that prohibits (1) any natural gas waste or oil waste on any road or real property located within the Town, whether or not such waste has received beneficial use determination or other approval for use by the Department of Energy and Environmental Protection ("DEEP"); (2) the introduction of natural gas waste or oil waste into any wastewater treatment facility or solid waste management facility within or operated by the Town; and (3) the storage, disposal, sale, acquisition, handling treatment and/or processing of waste or natural gas or oil extraction within the Town (the "Proposed Ordinance"). The Proposed Ordinance also requires that any bids and contracts related to the purchase or acquisition of materials or the retention of services to be used to construct or maintain any road or real property within the Town include a provision stating that no materials containing natural gas or oil waste were used.

In accordance with § 9.5 of the Town Charter, the Proposed Ordinance must be examined by the town attorney, who is authorized to correct any illegals and unconstitutional provisions that may exist. Based on the foregoing, we offer the following legal opinion on the Proposed Ordinance.

II. CONNECTICUT STATUTE REGULATING FRACKING WASTE

The Proposed Ordinance attempts to regulate both "natural gas waste" and "oil waste" by consistently differentiating between the two terms. "Natural gas waste" is defined as, among other things, waste that is generated as a result of natural gas extraction activities. See Proposed Ordinance, § 5.4. "Oil waste" is defined as, among other things, waste that is generated as a result of oil extraction activities. See Proposed Ordinance, § 5.5.
In Public Act 14-200 (2014), codified at Conn. Gen. Stat. § 22a-472, the Connecticut Legislature established a moratorium on certain fracking activities. The statute provides that "[n]o person may accept, receive, collect, store, treat, transfer or dispose of waste from hydraulic fracturing, including, but not limited to, the discharge of wastewaters into or from a pollution abatement facility, until [DEEP] adopts regulations" that (1) subject fracking wastes from energy production to the state’s hazardous waste management regulations; (2) ensure any radioactive components of fracking waste do not pollute the air, land, or waters or otherwise threaten human health or the environment; and (3) require disclosure of the composition of the waste. See C.G.S. § 22a-472(b). The DEEP must submit these regulations to the legislative review committee sometime between June 30, 2017 and July 1, 2018. Id. After the regulations are adopted, the statute requires any person collecting or transporting fracking waste for receipt, acceptance or transfer in Connecticut to obtain a DEEP permit prior to any such collection or transportation in this State. Id. at § 22a-472(c). The statute also provides that no person may "sell, offer, barter, manufacture, distribute or use any product for anti-icing, de-icing, pre-wetting or dust suppression" that is derived from or contains fracking waste until DEEP adopts regulations. Id. at § 22a-472(d).

The moratorium in § 22a-472 only extends to waste from hydraulic fracturing of natural gas, not oil. The statute defines “hydraulic fracturing” as “the process of pumping a fluid into or under the surface of the ground in order to create fractures in rock for exploration, development, production or recovery of gas.” See C.G.S. § 22a-472(a)(4) (emphasis added). See C.G.S. § 22a-472(a)(3). The legislative history confirms that the Act is only concerned with placing a moratorium on the fracking of gas and not oil. See Sen. Meyer, 5/5/14 (“We were concerned here that if we were not careful with our language, we were going to be prohibiting fracturing that’s used for other good purposes, and so the focus, the clear and sole focus of this bill is on the fracturing hydraulic, means water under pressure with chemicals that focuses on hydraulic fracturing of natural gas, not on the fracturing of other substances.”); (“there is hydraulic fracturing in some instances with respect to minerals and with respect to crude oil. This bill does not attempt to regulate or have a moratorium on those kinds of activities”). Our research found no Connecticut statute that places a similar moratorium on accepting, receiving, collecting, storing, treating, transferring or disposing of waste from hydraulic fracturing for oil. We did find C.G.S. § 22a-473, which prohibits any person from engaging in exploratory drilling for oil or gas until the DEEP promulgates regulations as required under § 22a-472. However, nothing in §22a-473 or any other statute suggests that the Connecticut legislature has prohibited persons from accepting, receiving, collecting, storing, treating, transferring or disposing of waste from hydraulic fracturing for oil.

III. PREEMPTION

The doctrine of preemption is based upon the premise that a legislature may reserve to itself exclusive jurisdiction over an entire subject area thereby preventing local action in that area. “A local ordinance is preempted by a state statute whenever the legislature has demonstrated an intent to occupy the entire field of regulation on the matter...or...whenever the local ordinance irreconcilably conflicts with the statute....Whether an ordinance conflicts with a statute or statutes can only be determined by reviewing the policy and purposes behind the
statute and measuring the degree to which the ordinance frustrates the achievement of the state’s objectives." Bauer v. Waste Mgmt. of Connecticut, Inc., 234 Conn. 221, 222 (1995) (citations omitted). “That a matter is of concurrent state and local concern is no impediment to the exercise of authority by a municipality through local regulation, so long as there is no conflict with the state legislation.” Town of Rocky Hill v. SecureCare Realty, LLC, 315 Conn. 265, 295 (2015).

“A test frequently used to determine whether a conflict exists is whether the ordinance permits or licenses that which the statute forbids, or prohibits that which the statute authorizes; if so, there is a conflict. If, however, both the statute and the ordinance are prohibitory and the only difference is that the ordinance goes further in its prohibition than the statute, but not counter to the prohibition in the statute, and the ordinance does not attempt to authorize that which the legislature has forbidden, or forbid that which the legislature has expressly authorizes, there is no conflict.” Aaron v. Conserv. Comm'n, 183 Conn. 532, 544 (1981). “[M]erely because a local ordinance, enacted pursuant to the municipality’s police power, provides higher standards than a statute on the same subject does not render it necessarily inconsistent with the state law.” Greater New Haven Property Owners Ass’n v. City of New Haven, 288 Conn. 181, 191 (2008).

IV. ANALYSIS

a. The Town’s ban on the transportation of natural gas waste from extraction activities in § 1.1 of the Proposed Ordinance is preempted by § 22a-472.

Section 1.1 of the Proposed Ordinance bans natural gas waste from extraction activities on “any road ... within the town for any purpose.” (emphasis added). The language on “any road” should be stricken from the Proposed Ordinance because it is preempted by C.G.S. § 22a-472.

As previously noted, a test frequently used to determine whether a conflict exists is whether the ordinance prohibits that which the statute authorizes; if so, there is a conflict. Aaron v. Conserv. Comm’n, 183 Conn. 532, 544 (1981). In making this determination, courts frequently review the legislative history of the statute for guidance. See, e.g., Bell Atlantic Mobile, Inc. v. Dep’t of Public Utility Control, 253 Conn. 453, 479 (2000); Medzelewski’s Towing and Recovery, Inc. v. State Dep’t of Motor Vehicles, WL 4494312, *5 (Schuman, J., 7/29/14) (citing Huntington Branch, NCAA v. Town of Huntington, 844 F.2d 926, 934 (2d Cir. 1988)).

A review of the legislative history of C.G.S. § 22a-472 suggests that the legislature deliberately decided not to prohibit the transportation of fracking waste through the State of Connecticut. See, e.g., Rep. Albis, 5/7/14 (“the transport of [fracking] materials would not be prohibited under this act...the department currently has regulations to deal with those types of spills, so they would be able to address that instance should it occur”); Sen. Meyer, 5/5/14 (“we had to look at the question whether or not Pennsylvania might be shipping fracking waste from Pennsylvania to Massachusetts through the State of New York, through the State of Connecticut, and we do not prohibit that interstate transportation because the legal advice we were given was
that could interfere with the interstate commerce"); Sen. Meyer, 5/5/14 ("there was an early version this winter of this bill that I think did have a reference to prohibition of export or import....We struck that on our lawyers' recommendations."); Sen. Meyer, 5/5/14 ("Our counsel...advised us that it would be a violation of the Commerce Clause if we prohibited the transportation of fracking waste through the State of Connecticut, and therefore, an earlier version of this bill was amended to take away any reference to transporting, exporting or importing to avoid that interstate"); Sen. Meyer, 5/5/14 ("[O]ur LCO pointed out to us that we would be violating the Interstate Commerce Clause if we actually prohibited the transportation of fracking waste across the State of Connecticut. And so in the bill you'll see there's nothing that refers to transportation or exporting or importing. We're not going to be able to interfere with fracking waste that's going say, from Pennsylvania to New Hampshire."). This legislative history demonstrates that the legislature consciously deliberated on whether or not to include a ban on the transportation of fracking waste through Connecticut via roads, and decided that such a ban was unwise given the potential for constitutional violations of the Commerce Clause.

Moreover, the legislature defined "transfer" in C.G.S. § 22a-472(a)(8) as "to move from one vehicle to another or to move from one mode of transportation to another." During debate on the Senate floor, Senator Meyer explained the very "limited" scope of this definition. He stated that "transfer" as used in § 22a-472(b) would not incorporate the kind of transportation which would invoke the Commerce Clause; rather, it is limited only to processes whereby a person may be exposed to the waste via a change in transportation vehicle (for example, from a train to a different train or from a train to a truck). By intentionally limiting the ban on fracking waste only to its "transfer" and not to its "transportation," the legislature has impliedly authorized the transportation of fracking wastes through Connecticut.

Lastly, while § 22a-472's moratorium is limited to hydraulic fracturing waste for natural gas, and does not include waste from hydraulic fracturing for oil, we believe that the Town should nevertheless strike the language on "any road" from § 1.1 of the Proposed Ordinance because of potential constitutional violations with the Interstate Commerce Clause.

b. The Town's ban on the introduction of natural gas waste from extraction activities on real property (portion of § 1.1), wastewater treatment facilities (§ 1.2), and solid waste management facilities (§ 1.3) within the Town are not preempted by § 22a-472.

In determining whether a municipality has the authority to enact an ordinance, the state Supreme Court has held that courts are not to look for statutory prohibition against such an enactment. Instead, they must look for statutory authority for it. Sinons v. Canty, 195 Conn. 524, 530 (1985). While the Town does not have the specific authority to regulate fracking wastes, the general statutory grant of police powers is likely sufficient to authorize the Town to undertake the proposed regulations in (1) the portion of § 1.1 of the Proposed Ordinance that prohibits any fracking wastes on any real property located within the Town; (2) § 1.2 of the Proposed Ordinance that prohibits the introduction of fracking waste into any wastewater treatment facility within or operated by the Town; and (3) § 1.3 of the Proposed Ordinance that prohibits the introduction of fracking waste into any solid waste management facility within or
operated by the Town. Unlike the conflict between § 22a-472 and the portion of § 1.1 of the Proposed Ordinance that attempts to regulate the transportation of waste from natural gas fracking, we could find no similar conflict with the foregoing provisions of the Proposed Ordinance. We are of the opinion that the general statutory grant of police powers is sufficient to authorize the enactment of these subsections.

Connecticut courts have upheld the validity of local ordinances based on the general statutory grant of police powers found in C.G.S. § 7-148. For example, in Modern Cigarette, Inc. v. Orange, 256 Conn. 105 (2001), the issue was whether a local ordinance banning all cigarette vending machines within the town was preempted by a state statute that regulated the location of cigarette vending machines, restricting their location from any area which was “frequented primarily by minors.” The trial court declared the ordinance invalid and enjoined the town from enforcing it, but the state Supreme Court reversed, determining that the state statute does not prohibit the town, acting within its powers to protect the health, safety and welfare of its citizens. The court held that “when a statute authorizes a municipality to regulate a certain activity, a prohibition of that activity will be valid if it is rationally related to the protection of the community’s public health, safety and general welfare.” Id. at 127. The court further noted:

Every intendment is to be made in favor of the validity of [an] ordinance and it is the duty of the court to sustain the ordinance unless its invalidity is established beyond a reasonable doubt.... [T]he court presumes validity and sustains the legislation unless it clearly violates constitutional principles.... If there is a reasonable ground for upholding it, courts assume that the legislative body intended to place it upon that ground and was not motivated by some improper purpose.... This is especially true where the apparent intent of the enactment is to serve some phase of the public welfare.

Id. at 118 (emphasis added).

In Modern Cigarette, because the legislature’s concern in enacting the state statute was to prevent tobacco products from being used by minors (i.e., for the public welfare), the court held that the local ordinance, which simply went further and was more comprehensive than the statute, was rationally related to that purpose. Id. at 131. Finally, the court noted that if the legislature had wanted to preempt the town from enacting such an ordinance, it could have done so expressly. Id. at 132.

The legislative history of § 22a-472 repeatedly demonstrates that the legislature’s motivation for placing a moratorium on the collection, storage, treatment, transfer or disposal of waste from fracking natural gas was because of the “high scientific evidence that fracking waste is highly toxic,” and therefore should be regulated. See Sen. Meyer, 5/5/14; see also Sen. Meyer, 5/5/14 (“[w]hat we’re concerned about is this toxic fracking waste coming in here from another state”); (the state “shouldn’t have to have the responsibility for dealing with the toxic material”). We are of the opinion that the portion of § 1.1 banning waste from fracking natural gas on real property within the Town, § 1.2 and § 1.3 simply go further and are more
comprehensive than § 22a-472, and are rationally related to the purpose of protecting the citizens of this State and the environment from the dangerous toxicity of these substances. Moreover, if the legislature had wanted to preempt the Town from enacting such provisions, it could have done so expressly, or implied as such in the legislative history.

c. Section two of the Proposed Ordinance is not preempted by § 22a-472.

Sections 2.1, 2.2 and 2.3 of the Proposed Ordinance provide that all bids and contracts related to the purchase, acquisition of materials, or retention of services to be used to construct or maintain any road or real property within the Town must include a provision stating that no materials containing waste from fracking natural gas will be used. Nothing in § 22a-472 conflicts with these sections of the Proposed Ordinance. In fact, § 22a-472(d) prohibits the use of waste from fracking natural gas in de-icing and dust suppression products, which are used on roads and real estate. The legislative history demonstrates that the purpose for including subsection (d) in § 22a-472 was that other states were beginning to face water contamination issues where toxic fracking wastes were being used in de-icing and dust suppression materials. In other words, the purpose was again to protect the public welfare. Section 2 of the Proposed Ordinance does not conflict with the state statute; instead, it is rationally related to that purpose of protecting the public welfare.

d. The Town’s ban on oil waste from extraction activities on any real property located within the Town (portion of § 1.1), the introduction of oil waste into any wastewater treatment facilities (§ 1.2) or solid waste management facilities (§ 1.3), and the affirmation requirements in § 2 of the Proposed Ordinance are legally valid.

As previously noted, our research found no Connecticut statute that places a similar moratorium on accepting, receiving, collecting, storing, treating, transferring or disposing of waste from hydraulic fracturing for oil. Therefore, the issue is not one of preemption; rather, the question is whether the Connecticut General Statutes governing the scope of municipal powers, or the Town Charter, grants the Town the power to enact such restrictions. We believe that the Town does have such authority. Below is a list of several statutes that we believe provide the Town with the authority to enact restrictions regarding the storage, disposal, treatment and/or handling of extracted waste oil within the Town:

C.G.S. § 7-148(c)(4)(H): Grants municipalities the power to “[p]roduce for or regulate the collection and disposal of . . . waste material.”

C.G.S. § 7-148(c)(7)(E): Grants municipalities the power to “[d]efine, prohibit and abate within the municipality all nuisances and causes thereof, and all things detrimental to the health, morals, safety, convenience and welfare of its inhabitants and cause the abatement of any nuisance....”

C.G.S. § 7-148(c)(7)(H)(xi): Grants municipalities the power to “[p]rovide for the health of the inhabitants of the municipality and do all things necessary or desirable to secure and promote the public health.”
C.G.S. § 7-148(c)(8): Grants municipalities the power to “[p]rovide for the protection and improvement of the environment....”

V. CONCLUSION

Our conclusion is fourfold:

(1) The language on “any road” in § 1.1 of the Proposed Ordinance should be stricken because it is preempted by C.G.S. § 22a-472.

(2) The portion of § 1.1 regulating waste from fracking natural gas on real property within the Town, § 1.2 and § 1.3 of the Proposed Ordinance are not preempted by C.G.S. § 22a-472, and simply go further and are more comprehensive than the state statute.

(3) Section 2 of the Proposed Ordinance is not preempted by C.G.S. § 22a-472.

(4) The Town has the authority to enact restrictions regarding the storage, disposal, treatment and/or handling of extracted waste oil within the Town.

As noted above, §22a-472 requires DEEP to submit proposed regulations by July 1, 2018. Should regulations eventually be promulgated, we strongly urge that any ordinance passed by the Town on these matters be reviewed to determine whether it is still compatible with the state regulatory scheme.
Please note:

Halloran & Sage provided excellent research and documentation for the Town of Coventry.

However, please disregard section IV (a) as this analysis is incorrect. The use of the term "any road" does not ban transportation, and there is no mention of transportation in the Prohibitions section.

Coventry decided to add a Transportation section in their ordinance and this section has been repeated by some of the 16 of 17 CT towns that have passed the Riverkeeper model language. This added clause is not necessary, but provides some town leaders "peace of mind".

Signed,

Jennifer Siskind
Local Coordinator
Food & Water Watch
Passed local ordinances banning oil & gas drilling wastes
M: Movements for passing-citizen initiatives &/or town sponsored
H: Hazardous Waste Treatment Facilities
★ POTW's Approved for Transported, Non-domestic Wastewater
(Publicly Owned Treatment Work or City Wastewater Treatment Facility)
Questions and Clarification of Language in Oil & Gas Drilling Waste Ban Ordinance

1. Does this ordinance ban waste oil drained from automobiles or small engines?

NO. The definitions in this ordinance clearly state it prohibits wastes coming out of wells where oil & gas is being drilled and extracted, or any by-products made from that waste. It does not prohibit any refined petroleum products, or any waste that comes from those products, such as used motor oil or waste oil.

"Waste oil" (or used motor oil derived from engine use) is not the same as "oil waste" as defined in this ordinance. Hundreds of towns in neighboring New York and the entire state of Vermont have had similar oil & gas drilling waste bans for several years, and the collection and disposal of "waste oil" from engine use or any other refined petroleum product waste has not been impacted.

2. Does this ordinance ban tar or asphalt used for roadways?

NO. Tar and asphalt for roadways use products from refined petroleum and wastes from the refinement process, not waste that comes from drilling oil & natural gas wells.

A few states are allowing solid wastes from oil & gas drilling wastes to be mixed with an asphalt capping material used to cap brownfields, when remediating toxic, contaminated properties. This ordinance would ban this type of asphalt capping product, due to risks of leaching of chemicals or radioactive materials present in drilling wastes.

3. Does this ordinance ban fracking my drinking water well, if it goes dry?

NO. Though the word "fracking" is similar, this ordinance only applies to fracking or hydraulic fracturing of oil and gas wells, not drinking water wells.

4. Does this ordinance prevent drilling test wells for potential leaking underground oil or gasoline tanks?

NO. This ordinance does not address any type of drilling. It only applies to wastes coming out of wells that are being drilled for natural gas and oil exploration.

5. Does this ordinance ban wastes from being cleaned out of gas pipelines?

NO. This ordinance only deals with wastes coming out of wells where oil and natural gas are being drilled and extracted and where large volumes of gas are stored underground or as LPG. This ordinance does not ban wastes coming out of pipelines where natural gas is transported. (Some towns may have PIGging stations for a gas transmission line. A PIG is a Pipeline Inspection Gadget. PIGs are periodically sent through the pipeline, to check for damage or deterioration, or for cleaning off hazardous and radioactive scale and residue that builds up overtime inside the walls of gas transmission pipes. This cleaning off of materials that builds up inside pipelines is not prohibited by this oil & gas drilling waste ban language, and can continue if an ordinance passes.)
Memo of Support
Connecticut General Assembly Environmental Committee
Public Hearing March 13, 2017

HB 6329 AN ACT CONCERNING HYDRAULIC FRACTURING WASTE IN CONNECTICUT
To permanently prohibit the storage, disposal, handling and use of hydraulic fracturing waste in Connecticut.

Grassroots Environmental Education commend the introduction of HB 6329 and strongly supports this critically important legislation that will protect the health and safety of Connecticut residents and the state’s natural resources. We urge inclusion of the following important changes to strengthen the bill:
1) Definition of fracturing waste should also include all relevant forms of oil and gas extraction, production and storage waste including liquid or solid waste or its constituents generated as a result of natural gas and oil extraction activities which may consist of water, brine, chemicals, naturally occurring radioactive materials, heavy metals or other contaminants; leachate from solid wastes associated with natural gas and oil extraction activities; any waste that is generated as a result of or in association with the underground storage of natural gas and liquefied petroleum gas well storage operations; any products or byproducts resulting from the treatment, processing or modification of any of the above wastes. 2) Provision to be included in bids and contracts related to the construction or maintenance of all publicly owned roads or real property within the state regarding purchase or acquisition of materials or retention of services. 3) Inclusion of penalties for each violation of law e.g. fine of $25,000 per violation for the sale, application and/or acceptance of natural gas waste or oil waste (Bans enacted in New York counties and New York City include such penalties)

Grassroots Environmental Education is a science-based, environmental health nonprofit, providing public education on environmental health issues and practical solutions for local and state governments, health care providers, school systems, environmental and health organizations nationwide. Grassroots works directly with a network of leading medical and scientific experts in the field of environmental health to bridge the gap between emerging science and public understanding through evidence-based tools and educational programs.

Highly contaminated radioactive fracturing waste byproducts and their constituents continue to pose an urgent public health threat due thousands of oil and gas wells and other production, storage and processing operations in neighboring states. Proliferation of radioactive waste byproducts and their constituents could result in irreversible damage and place significant financial and health burdens on taxpayers. Due to the huge volume of fracturing waste produced, industry is increasingly interested in repurposing waste byproducts by grinding and blending them with other materials for roads and construction. Other companies are processing or dewatering the waste and using the salts for cement. Significant gaps and serious concerns remain regarding the safety of processing fracturing waste resulting in end products that could be even more hazardous containing excessively high levels of
radioactive materials and other contaminants. ¹

In recognition of this urgent public health threat, to date, public officials are taking precautionary steps to protect the health and safety of residents and their water supplies. To date, ten Connecticut towns have already enacted fracking waste bans and more than a dozen other towns are actively engaged in the process. In New York fifteen counties have enacted fracking waste bans including Westchester, Nassau, Suffolk, Rockland, Putnam, Ulster, Orange, Albany, Schoharie, Oneida, Tompkins, Cayuga, Clinton, Onondaga and Erie Counties. In August 2016, New York City enacted a comprehensive fracking waste ban that now protects the health and safety of its eight and a half million residents and its natural resources. The State of Connecticut must follow their lead without further delay.

Hydraulic fracturing, also known as "hydrofracking", is a technology used for oil and gas extraction from shale formations which involves the injection of millions of gallons of fresh water mixed with hundreds of chemicals and sand forced under high pressure into the well bores to crack open the shale. Ten to forty percent of this highly toxic mixture is returned to the surface with the oil or gas and additional contaminants including volatile organic compounds (VOCs) such as benzene, a carcinogen linked with blood disorders, heavy metals (e.g., arsenic, lead, chromium, mercury), tritium 8 times saltier than seawater, and radioactive elements including Radon and Radium which are known carcinogens.

The extraction process produces two types of wastewater. Flowback water is the chemically treated fracking fluid that returns to the surface shortly after a fracking operation. Produced water, also known as formation water or fracking brine, is the fluid that comes out of the target drilling formation along with the oil or gas. The process also produces tons of semi-solid waste in the form of drilling muds, sludge and cuttings.

Produced water or fracking brine has high levels of chlorides and bromides and contains toxic heavy metals. Produced water and semi-solids (drill cuttings, sludge and drilling muds) can contain high levels of Radium-226 and Radium-228. Radium-226 has a half-life of 1600 years and is linked to anemia, cataracts, bone, liver and breast cancers and death.² It also emits gamma radiation that can travel fairly long distances through air, raising risks for cancer in communities. Radon, a decay product of Radium is considered the leading cause of lung cancer in non-smokers with no safe level of exposure.³ There are approximately 21,000 deaths per year attributed to Radon.⁴ Radioactive materials including Radium and its decay product, Radon, are known to be significantly higher in the Marcellus Shale.⁵

Radon is an odorless, tasteless and colorless gas formed by the radioactive decay of Radium, Uranium and Thorium and has a half-life of 3.8 days. Polonium and Lead, the decay products of Radon, have a half-life of 138 days and 22.3 years respectively and are solids known to attach to dust particles. Lead is a neurotoxin with no safe threshold level of exposure and is linked with cognitive deficits and attention deficit/hyperactivity disorder in children and low birth weight. It is linked to elevated blood pressure in adults and is an important risk factor for renal failure.⁶ U.S. EPA classifies Lead as a probable human carcinogen while Polonium is considered a radioactive carcinogen. Radon absorbed by the lungs decays further into Polonium and Lead damaging lung tissue. Lead and Polonium can also damage DNA and RNA.⁷ The exposure pathway of all three of these radioactive materials is through inhalation and possible ingestion.

² http://www.epa.gov/health/lead/leadfactsheet/
³ Ibid.
⁴ Ibid.
⁶ Textbook of Children’s Environmental Health, Edited by P. Landrigan, R. Etzel, Oxford University Press, 2014
⁷ Ibid.
Data from the Pennsylvania Department of Environmental Protection (DEP) reveals that from 2010-2014, other states have accepted hundreds of thousands of tons of fracking waste byproducts, including wastewater and drill cuttings, from fracking operations in Pennsylvania into landfills. Leachate from those landfills is accepted at wastewater treatment plants ill equipped to process hazardous chemicals and radioactive materials in oil and gas drilling waste byproducts.

State and federal laws exclude oil and gas waste byproducts from the definition of hazardous waste even though it exceeds criteria for hazardous classification. These exemptions eliminate hazardous waste tracking requirements for handling, storage, treatment and disposal.  

In his report, Consideration of Radiation in Hazardous Waste Produced from Horizontal Hydrofracking, Ivan White, a staff scientist for the congressionally commissioned National Council on Radiation Protection charged with the protection of military and civilian populations, expressed concern regarding the cavalier attitude toward human exposure to radioactive material and stated that radioactivity should never be released into the environment in an uncontrolled manner because of the potential for exposure from the many potential pathways that exist. Radioactive materials can migrate through air exposing crops and plants, soil, animals, livestock, food supplies and humans. Radioactive contaminants can also migrate through soil and surface or groundwater exposing sand and sediment, aquatic animals and plants, fish, irrigation water, vegetation, animals, livestock, food supplies and humans. He further stated that the type of radioactive material found in the Marcellus Shale formation and brought to the surface by hydrofracking is the type that has a long half-life and could easily bio-accumulate over time delivering a dangerous radiation dose to potentially millions of people long after the drilling is over.

According to a U.S. Geological Survey study, levels of total Radium tested in the wastewater from eleven active New York vertical gas wells averaged over 8,400 pCi/L exceeding the EPA’s maximum contaminant level for drinking water (5 pCi/L for combined Radium-226 and Radium-228) by more than 1,000 times.

In a 2011 review of federal, state and company records, the New York Times reported that in a sampling of wells studied in Pennsylvania and West Virginia, reported levels of Radium or other radioactive elements exceeded EPA’s maximum contaminant level for drinking water by 100 times to more than 1,000 times.

The TENORM report released by the Pennsylvania Department of Environmental Protection (PA DEP) indicates significant radioactivity levels in waste associated with gas development and production exceeding EPA’s maximum contaminant levels by more than several thousand times. Radium-226 levels in blowback samples were measured between 551 pCi/L and 25,800 pCi/L while Radium-228 levels were measured between 248 pCi/L and 1,740 pCi/L. Radium-226 levels in produced water or brine samples were measured between 40 pCi/L and 26,600 pCi/L while Radium-228 concentrations were measured between 26 pCi/L and 1,800 pCi/L.

Naturally occurring radioactive materials (NORM) are distributed through geologic formations and exist undisturbed in nature whether at the earth’s surface or below the surface. However, when NORM are disturbed and transported by human activity to human environments they are considered...
that could interfere with the interstate commerce”); Sen. Meyer, 5/5/14 (“there was an early version this winter of this bill that I think did have a reference to prohibition of export or import....We struck that on our lawyers’ recommendations.”); Sen. Meyer, 5/5/14 (“Our counsel...advised us that it would be a violation of the Commerce Clause if we prohibited the transportation of fracking waste through the State of Connecticut, and therefore, an earlier version of this bill was amended to take away any reference to transporting, exporting or importing to avoid that interstate.”); Sen. Meyer, 5/5/14 (“Our LCO pointed out to us that we would be violating the Interstate Commerce Clause if we actually prohibited the transportation of fracking waste across the State of Connecticut. And so in the bill you’ll see there’s nothing that refers to transportation or exporting or importing. We’re not going to be able to interfere with fracking waste that’s going say, from Pennsylvania to New Hampshire.”). This legislative history demonstrates that the legislature consciously deliberated on whether or not to include a ban on the transportation of fracking waste through Connecticut via roads, and decided that such a ban was unwise given the potential for constitutional violations of the Commerce Clause.

Moreover, the legislature defined “transfer” in C.G.S. § 22a-472(a)(8) as “to move from one vehicle to another or to move from one mode of transportation to another.” During debate on the Senate floor, Senator Meyer explained the very “limited” scope of this definition. He stated that “transfer” as used in § 22a-472(b) would not incorporate the kind of transportation which would invade the Commerce Clause; rather, it is limited only to processes whereby a person may be exposed to the waste via a change in transportation vehicle (for example, from a train to a different train or from a train to a truck). By intentionally limiting the ban on fracking waste only to its “transfer” and not to its “transportation,” the legislature has impliedly authorized the transportation of fracking wastes through Connecticut.

Lastly, while § 22a-472’s moratorium is limited to hydraulic fracturing waste for natural gas, and does not include waste from hydraulic fracturing for oil, we believe that the Town should nevertheless strike the language on “any road” from § 1.1 of the Proposed Ordinance because of potential constitutional violations with the Interstate Commerce Clause.

b. The Town’s ban on the introduction of natural gas waste from extraction activities on real property (portion of § 1.1), wastewater treatment facilities (§ 1.2), and solid waste management facilities (§ 1.3) within the Town are not preempted by § 22a-472.

In determining whether a municipality has the authority to enact an ordinance, the state Supreme Court has held that courts are not to look for statutory prohibition against such an enactment. Instead, they must look for statutory authority for it. Simons v. Canty, 195 Conn. 524, 530 (1985). While the Town does not have the specific authority to regulate fracking wastes, the general statutory grant of police powers is likely sufficient to authorize the Town to undertake the proposed regulations in (1) the portion of § 1.1 of the Proposed Ordinance that prohibits any fracking wastes on any real property located within the Town; (2) § 1.2 of the Proposed Ordinance that prohibits the introduction of fracking waste into any wastewater treatment facility within or operated by the Town; and (3) § 1.3 of the Proposed Ordinance that prohibits the introduction of fracking waste into any solid waste management facility within or
technologically enhanced naturally occurring radioactive materials (TENORM) increasing potential of exposure that may result in concentration levels above background levels. The term NORM is often misused when applied to radioactive material introduced into human environments by oil and gas extraction, production and storage operations. Typically, radioactive oil and gas drilling waste byproducts are improperly classified as NORM instead of TENORM that have special disposal requirements.

In a recent peer-reviewed study at University of Texas and University of North Texas Health Science Center, School of Public Health, Department of Environmental and Occupational Health, soil and water (sludge) obtained from reserve pits used in unconventional natural gas activities were analyzed for the presence of technologically enhanced naturally occurring radioactive material (TENORM). Samples were analyzed for total gamma, alpha, and beta radiation, and specific radionuclides. Laboratory analysis confirmed elevated beta readings. Specific radionuclides present included Thorium-232 and Radium-226 radionuclides. According to the authors, many of the radionuclides found in oil and gas drilling waste and their constituents are not addressed by regulatory guidance documents and negligible information is provided in determining potential of cumulative effects of simultaneous exposure to several radionuclides or potential human and animal health impacts. The study also indicated that the Environmental Protection Agency (EPA) and the Nuclear Regulatory Commission (NRC) do not have established federal regulations that directly govern NORM waste from the oil and gas industry.

The authors describe synergistic catalysis, a relatively new field of chemical study concerned with the ability of synthetic chemicals to spontaneously form new chemical bonds when exposed to sunlight, water, air and radionuclides or other chemical catalysts. The potential health risks of resulting compounds are unknown and pose a public health threat as mixtures of hydrofracking chemicals, interaction of chemicals with radioactive materials and reaction of chemicals with other contaminants under heat and pressure cause unknown synergistic reactions.

Regulators and operators may be grossly underestimating radioactivity levels in oil and gas waste by using improper methods to detect radiation. Dr. Julie Weatherington, a soil scientist, describes the inability of casual readings of radioactivity of oil and gas waste byproducts for its proper assessment. She points out Radium-226 and Radium-228 emit Alpha and Beta but that the Gamma emitters cannot be measured in the field. A sample must be taken and a minimum of 21 days waiting period is required in order to get an ingrowth curve measuring Lead and Bismuth, decay products of Radium. At that time, gamma spectrometry must be conducted in the lab to assess the gamma emitters in the fracking waste sample.

Dr. Michael Schultz and his colleagues at the University of Iowa, in their peer-reviewed study, tested the accuracy of the Radium measurement technique used and recommended by the U.S. EPA for analyzing radioactivity in drinking water since studies have shown that the drinking water method is unsuitable for solutions with high radioactive concentrations characteristic of fracking waste byproducts. Several methods were used to assess Radium isotopes in a sample of gas drilling waste from the Marcellus Shale. One method, the co-precipitation technique used by the EPA recovered less than 1% of Radium-226, the most abundant Radium isotope in the gas drilling waste byproduct sample. Another method known as gamma-ray spectroscopy, the gold standard for Radium analysis, detected 91% of

17 Ibid.
18 Ibid.
19 Ibid.
20 Ibid.
21 https://www.youtube.com/watch?v=9VlU4a9AIr4 https://www.youtube.com/watch?v=s0Z1a92EwU
22 Ibid.
23 http://pubs.acs.org/doi/abs/10.1021/ez5000379?source=pubs
the Radium. The authors' findings indicated that the EPA method is ineffective for analyzing oil and gas drilling waste byproducts. Their subsequent study calls attention to the use of radium alone to predict radioactivity concentrations can greatly underestimate total radioactivity levels and that uranium and thorium decay series require scrutiny as well.

The Pennsylvania Department of Environmental Protection (DEP) data noted a marked increase in radiation alarms at Pennsylvania landfills between 2009-2012 triggered by waste trucks from hydrofracking wells with over 1,000 of those radiation alarms coming from oil and gas drilling waste byproducts.

Bill Hughes, chair of the Wetzel County Solid Waste Authority in West Virginia, reported that tests on water leaching from the Meadowhill landfill showed varying levels of radioactivity averaging 250 pCi/L in 2013 and at times spiking as high as 2,000 pCi/L, many times higher than the clean drinking water standard while another local landfill in Wetzel County taking large amounts of hydrofracking waste also demonstrated significant levels of radioactivity. Hughes acknowledged that radioactivity occurs in the drill cuttings and brine from the Marcellus gas wells.

Landfill disposal of radioactive waste from oil and gas extraction, production and storage operations could contaminate them for thousands of years. All landfill membranes fail eventually and leaching or flooding could result in contamination of nearby ponds, streams, or groundwater. Leachate from landfills is a frequent cause of groundwater contamination and its disposal cannot be safely handled by wastewater treatment facilities or via applications on farmland or other real property.

Fifty-nine scientists attested to the fact that wastewater treatment facilities are not designed to treat chemicals, contaminants and highly radioactive materials produced from hydrofracking operations. High bromide levels in oil and gas waste byproducts are highly corrosive to equipment and can react during water treatment to form brominated trihalomethanes linked to bladder and colon cancers and are associated with birth defects. Once added to drinking water supplies, trihalomethanes are difficult to eliminate.

According to another study conducted at Duke University, authors examined water quality and radioactivity of discharged effluents, surface waters, and stream sediments associated with a treatment facility site in western Pennsylvania. Downstream from the treatment facility, concentrations of chloride and bromide were above background levels and Radium-226 levels in stream sediments at the point of discharge were 200 times greater than upstream and background sediments and above radioactive waste disposal threshold regulations posing potential public health and environmental risks of Radium bioaccumulation in areas of shale gas waste byproduct disposal.

Agricultural areas are especially vulnerable to the immediate threat posed by radioactive oil and gas waste byproducts and their constituents. Mounting evidence reveals livestock illness and death from acute toxicity poisoning from harmful exposures to oil and gas drilling waste byproducts. Reproductive problems in cows and higher rates of stillborn and deformed calves have also been reported.

Presence of highly radioactive materials and other contaminants on farmland and in food products can
cause irreparable damage and serious financial impacts. Protection of the quality and safety of food production is imperative for the health and safety of residents and to ensure consumer confidence in food production.

Vehicles transporting radioactive fracking waste byproducts increase the risk of human and animal exposure and contamination of water, air, soil and farmland when accidents, leaks, and spills occur. Due to lack of proper hazardous classification and tracking requirements, trucks hauling the waste have no special hazardous waste warning signs or emergency instructions placing first responders and residents at risk.

Truck accidents, spills, leaks and road spreading applications can expose drivers, passengers, pedestrians, animals and livestock to radioactive materials while contaminating nearby surface waters, residential areas, school properties and cropland. Radioactive particles may become airborne as trucks and passenger vehicles travel along roads and can be tracked on tires into driveways and garages and ultimately tracked in on shoes into homes. Rain and snowmelt carrying radioactive materials can run off road surfaces where it can migrate onto nearby property, farms and into streams, ponds and irrigation systems, leach into soil or seep into groundwater. These numerous pathways of exposure pose increased risk for human and livestock inhalation and ingestion of highly radioactive materials, and carcinogenic and endocrine disrupting chemicals.

Potential exposure to toxic chemicals and radioactive contaminants comes at a tremendous toll to human health and the economy. An updated and expanded analysis of the costs of environmentally mediated diseases in children nationwide by Dr. Leo Trasande, Associate Professor in the Department of Pediatric Environmental Medicine and Population Health at NYU Medical Center, found that the costs of childhood cancer, asthma, and neurological disorders had escalated from $54.9 billion in the 2002 analysis to $76.6 billion in 2008. Dr. Trasande states that the analysis re-emphasizes for policy makers the implications of failing to prevent toxic chemical exposures not only for the health of children but also for the health of the economy.33

Emphasis must be placed on primary prevention, eliminating hazards BEFORE children and adults are exposed. Disease and dysfunction triggered by toxins can be prevented and it is imperative that strong measures be taken to prevent harmful exposures to hazardous materials in oil and gas waste from extraction, production and storage operations. The potential for irreversible damage is far too great a socio-economic burden for any region to withstand. The mere perception of contamination could have far-reaching consequences.

Grassroots Environmental Education strongly urges the swift passage of HB6329 with full inclusion of the aforementioned edits to protect public health and safety and resources.

Grassroots is available to answer any questions you may have and provide further documentation.

Respectfully submitted by,

Ellen Weininger
Director, Educational Outreach
914-422-3141
52 Main Street
Port Washington, New York 11050

33 http://content.healthaffairs.org/content/30/5/863.abstract
Board of Selectmen Meeting
Friday, June 9, 2017
11:00 a.m.
Town Hall Meeting Room

AGENDA

1. Welcome and Pledge of Allegiance

2. Approval of Minutes
   a. Board of Selectmen Regular Meeting on May 30, 2017

3. First Selectman’s Updates – Peter J. Tesei

4. Old Business
   a. Recertification and validation of the actions taken by the Board of Selectmen at
      its May 30, 2017 meeting including:
      1) Approval of May 11, 2017 Board of Selectmen meeting minutes. Vote: 3-0-0.
      2) Establishment of a committee to review a proposal to add the Board of Education to Section 66 of the Town Charter. In particular, the establishment of a committee to consider a requirement that any change to the mode of selection, composition, rights, powers, privileges or duties of the Board of Education require a referendum. Vote: 2-1-0.
      3) Request to Approve second amendment to the Bruce Museum Management Agreement - Bruce Cohen. Vote: 3-0-0.
      4) Request to modify Section 14-5, Schedule II of the Greenwich Municipal Ordinances – Bruce Cohen. Vote: 3-0-0.
      5) Request to modify section 14-7.6, Schedule VIIA of the Greenwich Municipal Ordinances – Bruce Cohen. Vote: 3-0-0.
      6) Request to add modification of section 14.4, Schedule I of the Greenwich Municipal Ordinances to the agenda. Vote: 3-0-0.
      7) Vote on requested modification of section 14.4, Schedule I of the Greenwich Municipal Ordinances. Vote: 3-0-0.
      8) Vote to move into Executive Session. Vote: 3-0-0.

"The Town of Greenwich is Dedicated to Diversity and Equal Employment Opportunity"
9) Vote to approve settlement of Docket No. HHB CV 16-6034442S – Parcel No. 01-2515/S for a tax credit of $5,647. Vote: 3-0-0.

10) Vote to approve settlement of Docket No. HHB CV 16-6034461S – Parcel No. 12-1010/S for a tax credit of $3,309. Vote: 3-0-0.

11) Vote to approve settlement of Docket No. HHB CV 16-6034460S – Parcel No. 06-3903/S for a tax credit of $20,515. Vote: 3-0-0.

12) Vote to approve settlement of Docket No. HHB CV 16-6034312S – Parcel No. 01-2522/S for a tax credit of $8,282. Vote: 3-0-0.

13) Vote to approve settlement of Docket No. HHB CV 16-6034316S – Parcel No. 03-1413/S for a tax credit of $2,356. Vote: 3-0-0.

14) Vote to approve settlement of Docket No. HHB CV 16-6034313S – Parcel No. 12-1020/S for a tax credit of $988. Vote: 3-0-0.

15) Vote to approve settlement of Docket No. FST CV 16-5015743S – Parcel No. 06-1807/S for a tax credit of $2,700. Vote: 3-0-0.

16) Vote to approve settlement of Docket No. HHB CV 16-6034461S – Parcel No. 12-1010/S for a tax credit of $3,309. Vote: 3-0-0.

17) Motion to adjourn. Vote: 3-0-0.

5. New Business
   b. Anderson Road closure and detour for construction of a new water pump station - Kova Construction Corp.
   c. Establish a 25 mph speed limit on Echo Lane – Traffic Operations Coordinator Melissa Evans.

6. Appointments and Nominations

7. Executive Session
   a. Pending Litigation

8. Adjourn

[Signature]
Peter J. Tesei
First Selectman