



**Town of Essex, Connecticut
2020 Annual Report**

**General Permit for the Discharge of Stormwater
from Small Municipal Separate Storm Sewer Systems (MS4)**

Permit Number GSM 000019

MS4 General Permit
Town of Essex 2020 Annual Report
Existing MS4 Permittee
Permit Number GSM 00016
[January 1, 2020 – December 31, 2020]

This report documents the Town of Essex's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2020 to December 31, 2020.

Part I: Summary of Minimum Control Measure Activities

1. Public Education and Outreach (Section 6 (a)(1) / page 19)

1.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1.1 Implement public education and outreach	Active	2020 Facebook Recycling and Environmental postings. Published on social media and town website a reminder about proper removal and disposal of leaves and other vegetation and to prevent debris from entering the MS4. Link to information on free compost collection at the Essex Landfill station.	Impacts to stormwater from web-based personal waste / recycling programs and car washing activities.	Alyson Finnegan	Jul 1, 2018	Ongoing	Facebook posts have reach approximately 100 people per post.

1-2 Implement public education and outreach to raise awareness about pollution from stormwater runoff and its damaging impact on water quality	Ongoing	Town of Essex Community Resiliency Building Workshop.	In the Spring 2019, the Town of Essex embarked on a certification via Sustainable CT. As part of that certification, Sustainable CT and the Nature Conservancy provided the Town with a voluntary process to conduct an assessment of Climate Change impacts. In August 2019, a municipal-based core team organized a Community Reliance Building Workshop facilitated by the Nature Conservancy in Partnership with Sustainable CT.	Town Members	Ongoing	Ongoing	
1-3 Car and Truck Washing Events	Ongoing	Published Car and Truck washing prohibited on impervious surfaces.	Posted vehicle washing recommendations on town web site and Facebook page. Residents should avoid having car washes on impervious surfaces.	Town Members	Ongoing		The Town continues to educate residents to wash their cars and boats on grassy or crushed stone areas.
1-4 Pet Wastes (Pick up)	Ongoing	Published pet waste removal from Public Areas (i.e. Parks)	Residents request to pick up after your pet.	<i>Town Members</i>	Ongoing	Until End of Permit	

1-4 Address education/ outreach for pollutants of concern*	<i>Non-active</i>	<i>Due to Covid-19 restrictions, which included the closure of public buildings, schools, and town fairs and events, minimal public outreach occurred in 2020.</i>	<i>none</i>	<i>none</i>	Jul 1, 2018	<i>none</i>	<i>none</i>
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1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.

Continued support of Sustainable CT and the Stormwater MS4 Working Group.
Continued Facebook posts regarding material recycling.
Continue to pursue other public activities and groups to participate in MS-4 activities.

1.3 Details of activities implemented to educate the community on stormwater

Program Element/Activity	Audience (and number of people reached)	Topic(s) covered	Pollutant of Concern addressed (if applicable)	Responsible dept. or partner org.
<i>Essex Events Magazine, electronic newsletter or Valley Courier</i>	100's	Keeping Stormwater clean, recognizing illicit discharges and "What can I do?" items.	All	Essex Health Dept
<i>Public Education and Outreach</i>	<i>Due to Covid-19 restrictions, which included the closure of public buildings, schools and town fairs and events, minimal public outreach occurred in 2020.</i>	<i>none</i>	<i>none</i>	<i>none</i>

2. Public Involvement/Participation (Section 6(a)(2) / page 21)

2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2-1 Final Stormwater Management Plan publicly available	On-going	Publicly available SMP.		Town of Essex	Ongoing	Ongoing	Town Hall and Town Website (http://essexct.com/)
2-2 Comply with public notice requirements for Annual Reports	On-going	Public Notice available	45-day Public Notice	Town of Essex	Ongoing	Ongoing	Valley Courier
2-3 Town of Essex Stormwater (MS4) Working Group	Quarterly Meetings	Committee Members Identified	Provide forum to coordinate SWMP implementation across commissions	John Guskowski (Town Planner)	-	On going	Reason for addition: Committee will represent town departments & commissions with stake in stormwater mgmt.
2-4 Public Involvement / Participation	Non-activity	<i>Due to Covid-19 restrictions, which included the closure of public buildings, schools, and town fairs and events, minimal public outreach occurred in 2020.</i>	<i>none</i>	<i>none</i>	<i>none</i>		

2.2 Describe any Public Involvement/Participation activities planned for the next year, if applicable.

Hold quarterly stormwater committee meetings to review SMP implementation progress.
Continue to present MS-4 information during public events and in area newspaper and magazines.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Yes	1/1/2020	Town Webpage (http://essexct.com), Town Hall and Library

Availability of Annual Report announced to public	Yes	3/9/2021	Valley Courier and Town Hall
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3. Illicit Discharge Detection and Elimination (Section 6(a)(3) and Appendix B / page 22)

3.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3-1 Develop written IDDE program	Completed	Town completed written IDDE program using the CT IDDE program template	Written plan prepared	Essex DPW Essex Health Dept.	February 20, 2019	February 2021	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	100% Completed	Finalizing the remaining interconnections and CBs.	100%	MapGEO Essex DPW Essex Health Dept.	August 2020		
3-3 Implement citizen reporting program	On going	Design a public comment / reporting on MS4 webpage.	Completed Reporting Program	WebMaster Alyson Finnegan	On going	March 2022	
3-4 Establish legal authority to prohibit illicit discharges	Completed	Completed	Written ordinance	Town Officials	February 2019	Completion date: February 20, 2019	
3-5 Develop record keeping system for IDDE tracking	Completed	Inspection sheets and MS4 documents		Essex DPW Essex Health Department	On going	March 2021	
3-6 Address IDDE in areas with pollutants of concern	On going	Performed approximately 1/2 of outfall inspections.		MapGEO Essex DPW	On going	March 2022	

3.2 Describe any IDDE activities planned for the next year, if applicable.

The written IDDE Plan / program will be posted to the Town of Essex webpage and a link listed in 2021 Annual Report; will update the written IDDE program as needed throughout the permit term.

Maintain master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process and can log in future IDDE reports.

3.3 List of citizen reports of suspected illicit discharges received during this reporting period.

Date of Report	Location / suspected source	Response taken
None		

3.4 Provide a record of illicit discharges occurring during the reporting period and SSOs occurring July 2012 through end of reporting period using the following table.

Location (Lat long/ street crossing /address and receiving water)	Date and duration of occurrence	Discharge to MS4 or surface water	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures planned and completed (include dates)	Sampling data (if applicable)
Primrose Ledge	10/2/17	MS4	Unknown	Unknown	Re-inspect Discharge	Visual only
West Avenue	10/3/17	MS4	Unknown	Unknown	Re-inspect Discharge	Visual only
Plaza Drive	10/2/17	MS4	Unknown	Unknown	Re-inspect Discharge	Visual only

3.5 Briefly describe the method used to track illicit discharge reports, responses to those reports, and who was responsible for tracking this information.

Illicit discharges are called into the town and the town public works department is sent in to investigate.

3.6 Provide a summary of actions taken to address septic failures using the table below.

Location and nature of structure with failing septic systems	Actions taken to respond to and address the failures	Impacted waterbody or watershed, if known
33 Prospect Street	Septic Repair Tank & D box only	Connecticut River
22 Cedar Grove Terr Ext	New Infiltrator 3 bedroom.	Connecticut River
85 Plains Road	Replace with 1000 gal for 3 bedrooms	Connecticut River
43 West Avenue	Septic Mod / wastewater	Connecticut River
6 Crosstrees Hill	Increase tank only to 2000 gallons from previous addition.	Connecticut River
10 Meigs Lane	Septic Mod / for addition.	Connecticut River
77 Saybrook Road	Septic Repair	Connecticut River
9 Cedar Street	Septic Repair	Connecticut River
49 South Main	Dry Well Failure	Connecticut River
9 Cedar Street	Septic Repair	Falls River
117 Mares Hill Road	Septic Repair	Falls River
27 Grove Street	Septic Repair – Tank Cracked / Broken	Connecticut River
18 Mallard Point	Septic Repair	Connecticut River
5 Carol Drive	Repair D-box only. Concrete crumbling	Falls River
87 Saybrook Road	Install riser on tank, replace existing D-box	Connecticut River
24 Bushy Hill Road	Septic Repair	Falls River
9 Harbor View S	Leach Fields Failure	Connecticut River
50 Crosstrees Hills	Septic Repair	Connecticut River
22 Gates Road	Add 1,250-gallon tank	Connecticut River
8 River Road Drive	Tank Failure	Connecticut River
20 River Road	Septic Repair	Connecticut River
9 Prospect Street	Tank Replacement Only	Connecticut River
18 Hemlock Drive	Septic Modification	Connecticut River

20 Ridge Road	Septic Repair - D- box	Falls River
18 Hemlock Drive	System Failure	Connecticut River
40 Walnut Street	New sewer pipe, D-box, Distribution Pipe	Falls River
24 Hilltop Avenue	Crack in tank	Connecticut River
57 Comstock Avenue	New 1,000-gallon tank w/effluent filter	Falls River
25 Parker Terrace	Septic Repair	Connecticut River
36 Mallard Point	1,250 Gallon Tank Installed (3 bedrooms)	Connecticut River
37 Maple Avenue	Upgrade to Code Compliant System	Connecticut River

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	207
Estimated or actual number of interconnections	18
Outfall mapping complete	100%
Interconnection mapping complete	100%
System-wide mapping complete (detailed MS4 infrastructure)	100%
Outfall assessment and priority ranking	50%
Dry weather screening of all High and Low priority outfalls complete	157
Catchment investigations complete	340
Estimated percentage of MS4 catchment area investigated	40%

3.8 Briefly describe the IDDE training for employees involved in carrying out IDDE tasks including what type of training is provided and how often is it given (minimum once per year).

IDDE Training is given annually by the Town Garage (Public Works) Director. Training issues discussed include IDDE identification, potential catchment basin and outfall repairs and sediment loading.

4. Construction Site Runoff Control (Section 6(a)(4) / page 25)

4.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	Ongoing	Specific LID Requirements		Land Use Office Town Engineer Essex DPW Essex Health Dept.	Jul 1, 2019		
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Ongoing	Stormwater MS4 Working Group		Land Use Office Town Engineer Essex DPW Essex Health Dept.	Ongoing	Completed	
4-3 Review site plans for stormwater quality concerns	Ongoing	Stormwater MS4 Working Group	None	Land Use Office Essex DPW Essex Health Dept. Town Engineer.	Ongoing	Ongoing	
4-4 Conduct site inspections	Ongoing	PRATT ST oil/ water inspection May 2020 STONEBROOK recharge inspection Dec 2020 HERON Retention Pond Maintenance Activities		Essex DPW Town Engineer MapGEO	Ongoing	Ongoing	

4-5 Implement procedure to allow public comment on site development	Ongoing	Stormwater MS4 Working Group		Land Use Office Town Engineer Essex DPW	Ongoing	Ongoing	
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Ongoing	Section 82 of the Zoning Regulations	Regulation Completed	Land Use Office Town Engineer	Ongoing	Ongoing	
4-7 Develop stormwater compliance checklist	In progress	Developing checklist to provide developers on stormwater management compliance requirements and LID options	LID checklist (attached)	Land Use Office Town Engineer	-	Ongoing	The existing Zoning and Inland Wetlands Regulations are routinely enforced by Town staff for all approved Wetlands and P & Z applications that are under construction.

4.2 Describe any Construction Site Runoff Control activities planned for the next year, if applicable.

Continue to inspect and perform maintenance on Town-owned stormwater features such as detention ponds, oil/water separators and infiltration galleries. The Town of Essex Land Use Office and Engineering Department require any new proposed Site Plans to comply with the Planning and Zoning LID regulation requirements. The Town of Essex Land Use Department Officer, or his designee, inspects all construction sites a minimum of once a week or as necessary.

The Town of Essex Land Use and Town Engineer require any new proposed Site Plans to comply with the current Erosion and Sediment Control and LID regulation requirements.

5. Post-construction Stormwater Management (Section 6(a)(5) / page 27)

5.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning	In Progress	Article IV Section 608 Drainage and Stormwater Control regulations	Written Zoning Regulations	Land Use Office	Jul 1, 2021	Ongoing	
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	In Progress	Article IV Section 608 Drainage and Stormwater Control regulations.	Written Zoning Regulations	Land Use Office	Ongoing beginning Jul 1, 2020	Ongoing	
5-3 Identify retention and detention ponds in priority areas	In Progress	Heron Pond (stormwater detention pond) 36 Pratt Street Oil/water separator Stone Brook Drive Recharge/Infiltration Gallery.	Annual and Semi-annual Maintenance activities	Land Use Office Town Engineer Essex DPW	On-going beginning Jul 1, 2019	Ongoing	Heron Pond (stormwater detention pond) clean out on 12/29/20. 36 Pratt Street Oil/water Separator – Inspection on 05/22/20. Stonebrook Drive recharge inspection Dec 2020.
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	In Progress	Heron Pond (stormwater detention pond) 36 Pratt Street Oil/water separator Stone Brook Drive Stormwater Recharge/Infiltration Gallery.	Annual and Semi-annual Maintenance activities	Land Use Office Town Engineer Essex DPW	Ongoing beginning Jul 1, 2019	Ongoing	Heron Pond (stormwater detention pond) clean out – 03/06/20. 36 Pratt Street Oil/water Separator – Inspection. Stone Brook Drive Stormwater Recharge/Infiltration Gallery.

5-5 DCIA mapping	Complete	Completed the DCIA Mapping and Report	Town-wide DCIA estimated at 6.78%	Land Use Office Town Engineer AppGEO	June 2020	June 2020	
5-6 Address post-construction issues in areas with pollutants of concern	In Progress	None	Reduction DCIA by 2%	Land Use Office Town Engineer	Not specified		

5.2 Describe any Post-Construction Stormwater Management activities planned for the next year, if applicable.

No residential or commercial development was performed during 2020. However, the Town of Essex Land Use and Town Engineer require any new proposed Site Plans to comply with the current Erosion and Sediment Control and LID regulation requirements.

The Town of Essex Public Works department maintains the stormwater retention ponds, oil/water separators and infiltration galleries.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	1,507.67 acres
DCIA disconnected (redevelopment plus retrofits)	0 acres this year / acres total
Retrofits completed	0 #
DCIA disconnected	0% this year / % total since 2012
Estimated cost of retrofits	\$
Detention or retention ponds identified	0# this year /# total

5.4 Briefly describe the method to be used to determine baseline DCIA.

To estimate the DCIA % for the town, the total acres of catchment areas (1,507.67 acres) and impervious cover within those catchments (250.52 acres) were used to get the towns IC% (16%). Equation 3 was used as an average for all the catchments to estimate the town's DCIA% to be **6.78%**.

6. Pollution Prevention/Good Housekeeping (Section 6(a)(6) / page 31)

6.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-1 Develop/implement formal employee training program	Ongoing	Perform Training Program	Annual training performed	Essex DPW	Jul 1, 2017	02/05/21	
6-2 Implement MS4 property and operations maintenance	Complete	Heron Pond (stormwater detention pond) 36 Pratt Street Oil/water separator Stone Brook Drive Recharge/Infiltration Gallery.	Annual and Semi-annual Maintenance activities	Land Use Office Town Engineer Essex DPW	Jul 1, 2018	Ongoing Annual Maintenance Activities	
6-3 Implement coordination with interconnected MS4s					Not specified		
6-4 Develop/implement program to control other sources of pollutants to the MS4	Ongoing	Industrial stormwater permit compliance at Town Garage.	Compliance with Industrial Stormwater General Permit Criteria	Essex DPW	Not specified	On-Going	
6-5 Evaluate additional measures for discharges to impaired waters*	Ongoing	There are no impaired waterways identified for the Town of Essex	0 complete.	Essex DPW	Not specified		There are no impaired waterways identified for the Town of Essex
6-6 Track projects that disconnect DCIA	Ongoing	Drywell installations (4)		Essex DPW	Jul 1, 2017		

6-7 Implement infrastructure repair/rehab program	Ongoing	Catchment basin repairs (19)	Nineteen CB were repaired during 2020.	Essex DPW	Jul 1, 2021	Continue inspecting CBs in town.	
6-8 Develop/implement plan to identify/prioritize retrofit projects	Not Started				Jul 1, 2020		
6-9 Implement retrofit projects to disconnect 2% of DCIA	Not Started				Jul 1, 2022		
6-10 Develop/implement street sweeping program	Ongoing	Street Sweeping Report attached.	Completed 2020 Street Sweeping Program.	Essex DPW	Jul 1, 2017		
6-11 Develop/implement catch basin cleaning program	Ongoing	340 catch basins cleaned (out of 965 total)	List of 340 CBs cleaned in 2020	Essex DPW	Jul 1, 2020		
6-12 Develop/implement snow management practices	Ongoing	Snow management practices began in 2019 including snow disposal locations, reduced sand spreading operations and use of treated "brown" salt materials.		Essex DPW	Jul 1, 2018	On-going	
6-13 Map & Inventory highly erosive areas in town ROW	Not started	Collect information on eroding areas in ROW from highway maintenance personnel over course of normal operations	ID areas contributing large volume of sediment to town waterbodies	Essex DPW	July 2021	-	Reduce sedimentation of waterways near town ROWs

6.2 Describe any Pollution Prevention/Good Housekeeping activities planned for the next year, if applicable.

Inventory and Map erosion areas in Town ROW to reduce the sediment that may be entering the Town MS4 system. Continue infrastructure repair and rehabilitation, street sweeping, catch basin cleaning and snow management practices. The town will continue to track illicit discharges and sanitary sewer system failures / repairs.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	Yes / 02/05/21
Street sweeping	
Curb miles swept	84 miles
Volume (or mass) of material collected	450 cuyd
Catch basin cleaning	
Total catch basins in priority areas	
Total catch basins in MS4	950
Catch basins inspected	340
Catch basins cleaned	340
Volume (or mass) of material removed from all catch basins	350 tons
Volume removed from catch basins to impaired waters (if known)	Unknown
Snow management	
Type(s) of deicing material used	Blizzard Wizard treated brown sugar cane molasses salt and washed winter road sand
Total amount of each deicing material applied	150 tons / 241 tons
Type(s) of deicing equipment used	Spreader / Jet Sanders
Lane-miles treated	84 miles
Snow disposal location	1. Bushnell Park Parking Lot 2. Comstock Field (50 Park Road)
Staff training provided on application methods & equipment	On the Job Training
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	The Town of Essex does not use fertilizers on town-owned properties. 100%
Reduction in turf area (since start of permit)	acres
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$0

6.4 Catch basin cleaning program

Briefly describe the method used to optimize your catch basin inspection and cleaning schedule. [\[Complete this section for the 2017 Annual Report only\]](#)

The Town of Essex retains the services of Janet Sweeping Company, Meriden Connecticut. The Department of Public Works oversees the catch basin cleaning activities and attempts to complete a third of the CBs in one year (approximately 350/year).

6.5 Retrofit program

Briefly describe the Retrofit Program identification and prioritization process, the projects selected for implementation, the rationale for the selection of those projects and the total DCIA to be disconnected upon completion of each project. [\[Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.\]](#)

The Town of Essex will utilize the DCIA map and new zoning regulations to prioritize the Retrofit Program. Any new project that is anticipated to be undertaken will be evaluated for possible retrofit to remove impervious surfaces with low LID projects. The responsible departments will review any projects that may be used as retrofit projects.

Responsible Department: Engineering, Public Works

Administration Measurable Goal: Develop a list of possible retrofit projects.

Status to Date: Nothing at this time.

Scheduled for 2021

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection in future years. [\[Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.\]](#)

The Town of Essex Planning and Engineering Departments require any new proposed Site Plans to comply with the Planning and Zoning LID regulation requirements.

Describe plans for continuing the Retrofit program beyond this permit term with the goal to disconnect 1% DCIA annually over the next 5 years. [\[Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.\]](#)

The Town of Essex Planning and Engineering Departments require any new proposed Site Plans to comply with the Planning and Zoning LID regulation requirements.

Part II: Impaired waters investigation and monitoring [This section required beginning with 2018 Annual Report]

1. Impaired waters investigation and monitoring program

1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution. This data is available on the MS4 map viewer: <http://s.uconn.edu/ctms4map>.

Nitrogen/ Phosphorus ☐ Bacteria ☐ Mercury ☐ Other Pollutant of Concern ☐

1.2 Describe program status.

Discuss 1) the status of monitoring work completed, 2) a summary of the results and any notable findings, and 3) any changes to the Stormwater Management Plan based on monitoring results.

According to the MS4 map viewer described above, there are no priority impaired or TMDL Impaired waterways in the Town of Essex. The Town of Essex monitors outfalls for bacteria (E. coli), Nitrogen and Phosphorus.

2. Screening data for outfalls to impaired waterbodies (Section 6(i)(1) / page 41)

2.1 Screening data collected under 2017 permit

Complete the table below for any outfalls screened during the reporting period. Each Annual Report will add on to the previous year's screening data showing a cumulative list of outfall screening data.

[illegible]

2.2 Credit for screening data collected under 2004 permit

If any outfalls to impaired waters were sampled under the 2004 MS4 permit, that data can count towards the monitoring requirements under the modified 2017 MS4 permit. Complete the table below to record sampling data for any outfalls to impaired waters under the 2004 MS4 permit.

Outfall	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?

3. Follow-up investigations (Section 6(i)(1)(D) / page 43)

Provide the following information for outfalls exceeding the pollutant threshold.

Outfall	Status of drainage area investigation	Control measure implementation to address impairment

4. Prioritized outfall monitoring (Section 6(i)(1)(D) / page 43)

Once outfall screening has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 1, 2020.

Outfall	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)

Part III: Additional IDDE Program Data [This section required beginning with 2018 Annual Report]

1. Assessment and Priority Ranking of Catchments data (Appendix B (A)(7)(c) / page 5)

Provide a list of all catchments with ranking results (DEEP basins may be used instead of manual catchment delineations).

1. Catchment ID (DEEP Basin ID)	2. Category	3. Rank
CT_E1_029-SB	High Priority	12
CT4019-00-01	Low Priority	10

2. Outfall and Interconnection Screening and Sampling data (Appendix B (A)(7)(d) / page 7)

2.1 Dry weather screening and sampling data from outfalls and interconnections

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies.

[illegible]

2.2 Wet weather sample and inspection data

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor.

Outfall / Interconnection ID	Sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or Enterococcus	Surfactants	Water Temp	Pollutant of concern
FRS-OF-0018	12/14/20	1.18	NS	NS	NS	4.1	NS	NS	None
FRS-OF-0026	12/14/20	0.06	NS	NS	NS	17.5	NS	NS	None
CRN-OF-0008	12/14/20	<0.05	NS	NS	NS	1,986.3	NS	NS	e. Coli
CRN-OF-0025	12/14/20	<0.05	NS	NS	NS	2,419.6	NS	NS	e. Coli
FRS-OF-0051	12/14/20	<0.05	NS	NS	NS	32.7	NS	NS	None
FRN-OF-0001	12/14/20	0.16	NS	NS	NS	292.4	NS	NS	e. Coli

3. Catchment Investigation data (Appendix B (A)(7)(e) / page 9)

3.1 System Vulnerability Factor Summary

For those catchments being investigated for illicit discharges (i.e. categorized as high priority, low priority, or problem) document the presence or absence of System Vulnerability Factors (SVF). If present, report which SVF's were identified. An example is provided below.

Outfall ID	Receiving Water	System Vulnerability Factors

Where SVFs are:

1. History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
4. Common or twin-invert manholes serving storm and sanitary sewer alignments.
5. Common trench construction serving both storm and sanitary sewer alignments.
6. Crossings of storm and sanitary sewer alignments.
7. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;

8. Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.
9. Areas formerly served by combined sewer systems.
10. Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.
11. Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).
12. History of multiple local health department or sanitarian actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).

3.2 Key junction manhole dry weather screening and sampling data

Key Junction Manhole ID	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants
CRN-OF-00013	02/05/21	NONE	NO ODOR	NO ODOR	NO FOAM
CRN-OF-0008	02/05/21	NONE	NO ODOR	NO ODOR	NO FOAM
CRN-OF-0022	02/05/21	NONE / TIDE WATER	NO ODOR	NO ODOR	NO FOAM
CRN-OF-0023	02/05/21	NONE / FINE SILT	NO ODOR	NO ODOR	NO FOAM
CRN-OF-0004	02/05/21	NONE / RUST COLOR	NO ODOR	NO ODOR	NO FOAM
CRN-OF-0002	02/05/21	NONE	NO ODOR	NO ODOR	NO FOAM
CRN-OF-0003	02/05/21	NONE / RUST COLOR	NO ODOR	NO ODOR	NO FOAM
CRN-OF-0009	02/05/21	NONE / HEAVY ALGAE	NO ODOR	NO ODOR	NO FOAM
FRS-OF-0001	02/05/21	NONE / FOAM	NO ODOR	NO ODOR	FOAM
FRS-OF-0019	02/05/21	NONE / RUST COLOR	NO ODOR	NO ODOR	NO FOAM

3.3 Wet weather investigation outfall sampling data


Outfall ID	Sample date	Ammonia	Chlorine	Surfactants

3.4 Data for each illicit discharge source confirmed through the catchment investigation procedure

Discharge location	Source location	Discharge description	Method of discovery	Date of discovery	Date of elimination	Mitigation or enforcement action	Estimated volume of flow removed

Part IV: Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Chief Elected Official or Principal Executive Officer	Document Prepared by
Print name:	Print name: William Drouin, CHMM (#13261)
Signature / Date:	Signature / Date:  March 25, 2021

Sustainable Essex Hosts Talks on Waste Reduction

By Karena Garrity
Courier Staff Writer
ESSEX

To make residents more aware of the effects of global warming and offer solutions within their own homes, the Sustainable Essex Committee (SEC) has teamed up with the Essex Library to offer several programs focused around the central idea of environmental awareness.

"There are three main goals we have by offering these programs," said SEC member Mike Long. "We want to create awareness about solid waste issues and how they are impacting the climate change and the world, give guidance about how individual households locally can make changes to help reduce the amount of solid waste and food waste they produce, and we want to gather feedback from participants of these programs and discussions regard actions

they think we can take on a community level to make Essex a more sustainable community."

To achieve those goals, SEC has developed what it's calling Sustainable Essex Environmental Discussions or SEED at the Essex Library.

The first program discussion will be held on Saturday, Feb. 29 from noon to 1 p.m. facilitated by Cheryl Baldwin of the Department of Environmental & Energy Protection. The program is called "Garbage and Climate Change: What's the Connection?"

The second program will be held on Saturday, March 7 from 1 to 2 p.m. facilitated by Georgia Male, farm manager of the Bushy Hill Incarnation Center. This program is titled "What is the Environmental Impact of the Food We Throw Away?"

Third program, "Climate Change Impact of Plastic and

Micro-plastic Waste," is scheduled for Saturday, May 2 from 1 to 2 p.m. facilitated by professor Evan Ward, head of Maritime Science at the University of Connecticut at Avery Point.

"Our hope is to hold a series of eight programs in total, now through fall," said Long. "These programs are an opportunity for residents to get information on key drivers of global warming and climate change from experts in the field. In addition, we will be providing practical ways to residents make a change in their own homes and this an opportunity for them to share their ideas and thoughts about this issue. The SEC will then bring these ideas and concerns back to the Essex town officials so that action as an entire community can be taken."

For more information about these programs, visit www.youressexlibrary.org.

[Find out more >](#)

Authors & Artists Online Series: Erica Cirino "Trashed rivers, seas of plastic: How your habits on land harm the ocean"

October 13 @ 6:00 pm - 7:00 pm

Connecticut River Museum, 67 Main Street
Essex, CT 06426 United States - [Google Map](#)



Erica Cirino "Trashed rivers, seas of plastic: How your habits on land harm the ocean" Presented online via Zoom Tuesday, October 13, 2020 6:00 pm \$5.00 Non-Members Members Free Members [Click Here to Register](#) The ocean is often depicted as ground zero of the world's plastic pollution crisis. But it turns out that a minority of plastic in the oceans—about 20 percent—is there as a result of dumping at sea. The vast majority of pollution—about 80 percent—blows from land to...

[Find out more >](#)

TOWN OF ESSEX
STORMWATER (MS4) WORKING GROUP
Meeting Minutes
February 19, 2020
Essex Town Hall, Conference Room B

The Essex Stormwater (MS4) Working Group Meeting was held on Wednesday, November 20, 2019.

Attendees

Ryan Welch (DPW)
Joe Budrow (Planning/Zoning/IWWC/Land Use)
Rebecca Talamini (AppGeo GIS)

Jessica Sypher (Assessor)
Lisa Fasulo (Health Director)
Maria Lucarelli (Selectman's Office)

Absent

John Guskowski (Town Planner)
Norman Needleman (First Selectman)
William Drouin (Apex Co)
Robert Doane (Town Engineer)

Guest

Cate Hewitt from the Connecticut Examiner

General Discussion:

Director of Health and Sanitarian Lisa Fasulo discussed the Town would need to pick another six (6) sampling sites.

Areas	New sampling Locations TBD	Previous sampling locations 2019 (as of Oct 2018)
Industrial		WH – Witch Hazel Complex
Industrial		WB – Walnut St Bridge
Commercial		CF – Cumberland Farms pond
Commercial		FM – Foot of Main St. Essex
Residential		BD – Brewers Dauntless
Residential		SH – Stanford Hill (Residential)

There was discussion about compiling a list and a map of all catch basins and outfall maps. Rebecca inquired if the Town needed anything new added to the maps. Rebecca reported that she had taken pictures of all outfalls that have been added to the maps and mentioned that when you hover your mouse over an outfall a photograph of that outfall should pop up.

DCIA Calculations

Rebecca reported she is still waiting on some data. Once she receives the data, the missing connection/information will be worked on in delineating the catchment areas and then calculate the DCIA. Rebecca reported that based on the NEMO site, Essex has a baseline DCIA of about 10%.

<https://nemo.uconn.edu/ms4/tools/ms4map.html> Rebecca reminded everyone that we need to get these calculations completed by July 1st. The three areas are Carol Drive, Harborview Drive, and Ridge Road.

There was discussion that Carol Drive may be already figured out. They will need to revisit Ridge Road and look closely from the intersection of Dogwood to the cul-de-sac. It appears the pipes go out to the middle of nowhere. Once these three major issues are resolved then the DCIA calculations can be completed.

Annual Report

Lisa Fasulo reported that Bill Drouin is working on the annual report which is due on or by March 1. The report must be filed with the state and encompasses the best management practices of the Town.

Ryan Welch reported he emailed Lisa Fasulo street sweeping and road salt collection information and catch basin repairs. Ryan also mentioned that he forwarded results from water tests. Ryan stated that he would try to have Lisa added to the vendor email distribution list for all water test results.

Public Training / Education

There was an article in the February 13, 2020 Valley Courier with a headline "Sustainable Essex Hosts Talks on Waste Reduction". The training will focus on creating awareness about solid waste issues and how they are impacting the climate change and the world. These trainings will give guidance about how individual households can make changes to help reduce solid waste.

Construction Site Run Off

Joe Budrow discussed infiltrators and retention basins which help water to pool on a property and return down into the ground on that same property. This helps stormwater stay out of municipal catch basins. Joe also reported that during any construction that a silt fence is required, which we have always required.

There was discussion on impaired waterways, and it was determined that we do not have any impaired waterways that we are aware of in Town. Impaired means having a high level of bacteria or having something in it that shouldn't be there. This is something that should be highlighted in the annual report.

Jessica mentioned that if anyone wanted something added to the maps such as any drainage system, to let her know and she would work with or send it over to Rebecca to be added to the Town maps. Ryan reported that Bob Doane did drawings on the new catch basins that were recently installed and tied into existing outfalls. Ryan reported there are two new ones, one at the end of Saybrook Road and one added on Mallard Point. Rebecca reported once she receives the maps that she would assign them identifying numbers. She also mentioned the new 2019 aerials are now on the maps.

2020 MS4 Stormwater Meeting Schedule

Motion was made by Ryan Welch to approve the 2020 Quarterly meeting schedule for the Stormwater (MS4) working group. Lisa Fasulo seconded the motion, it was unanimously approved. Motion carried.

The 2020 schedule will be filed with the Essex Town Clerk and posted on the Town of Essex web site.

Pollution Prevention – Training Training Training & Educating

People need to think about where their water is going!

Next Stormwater Meeting: Wednesday, May 13th, 2020 at 11:00 am, Essex Town Hall, Conf. Room B.

TOWN OF ESSEX
STORMWATER (MS4) WORKING GROUP
Meeting Minutes
June 10, 2020
Zoom Meeting

The Essex Stormwater (MS4) Working Group Meeting was held on Wednesday, June 10, 2020 by Zoom.

Attendees

Jessica Sypher (Assessor)
William Drouin (Apex Co)
Lisa Fasulo (Health Director)
Rebecca Talamini (MapGeo GIS)
Maria Lucarelli (Selectman's Office)
Robert Doane (Town Engineer)
John Guskowski (Town Planner)

Absent

Ryan Welch (DPW)
Norman Needleman (First Selectman)
Joe Budrow (Planning/Zoning/IWWC/Land Use)

Guest

Annual Report

Lisa Fasulo reported the Town sent in the payment for the annual report and she did receive confirmation the State received it, but the check has not yet cleared. Bill requested that Lisa send him a copy of the green registered receipt card for his files.

General Discussion:

Bill Drouin mentioned the MS4 Tasks for 2004 Permittees (copy attached).

There was discussion on the baseline GCIA, develop a retrofit plan (using more green stormwater management programs, like a retention pod or infiltration gallery), completing a dry weather outfall samples (outfalls that have a discharge) IDDE Program, more detail MS4 mapping, inspect all catch basins. Bill would like to make sure we are hitting our priority areas. The Town of Essex is following the plan and programs. The Town must be demonstrating they are working towards their goals and heading in the right direction.

Bill Drouin reported on that he is always looking for more detail on the MS4 mapping, which the Town is doing.

Lisa Fasulo reported that ZEO Joe Budrow compiled a list of post construction stormwater information from November 2011 to 2019 and produced a list of properties that have done retention and/or retrofit on their property. Bill requested Lisa send him the list for his files.

There was discussion on dry weather outfall sampling. Bill reported that Ryan Welch has this on his list of items to do.

Bill stated the Town should always push for newer / greener stormwater infiltration systems.

Bob Doane inquired if we had to dry weather testing. Bill stated that it should be done if there is a flow, or if there is an illicit discharge. Bob said these are different than the 6 sampling locations in our priority areas. Such as wells in the areas, endangered species issue, etc. We look at the 6 areas and then you move onto the next 6 areas.

Rebecca reported there are 212 catchment areas on her list, and she will forward that list to the group. Rebecca reminded everyone to send her any changes or sketches so she can update the data. Bill said these 212 areas are the ones that should be checked for discharges after 72 hours of dry. Bill said the Town should look at all these outfalls over time and do a few every year. Rebecca did report that most of these have been looked at once already. Bill suggested that Ryan look at all these areas, but to look at them all over time. Maybe do a 1/3 this year, and 1/3 next year, and 1/3 the last year.

DCIA Calculations

Rebecca Talamini reported she received all the DCIA calculations and Essex' general average is 6.75% The goal is to be below 11%. Essex is doing fantastic!!! Bill discussed how the Town came up with the DCIA and discussed the maps, etc. DEP anticipates the Town is not going to meet the goal, but the Town has met the goal. Essex is doing everything that is appropriate. . .

Bill reported the Town still should work towards public participation and work towards reducing MS4, and adding oil water separators, etc. Look at what town facilities we are maintaining, at how many streets are swept, how much sand we use during storms, etc. We still want to do these things, but just monitor them better.

Lisa reported the Town of Essex is in great shape and we are on the right track. We have the right people, in the right place, doing the right thing.

Rebecca did report she went out and took photographs of probably 157 area and only 5 were noted as having some type of flow. Rebecca stated she would send those 5 locations to Ryan to go out and look at them to classify the type of discharge and to see what the outfall looks like or grab a couple of samples from these outflows. And find out whether it is biological, physical, chemical? Bill asked that Ryan reach out to him if he had any questions or needed any assistance.

Attached is the Town of Essex CT DCIA Calculations and the Town of Essex DCIA Map.

Invoices

Jessica asked Rebecca to please get invoices to her before the end of the month or early July. Bill will also submit his invoices prior to July 1 for work to date.

Public Training / Education

Bill reported the next annual report is March or April of 2021 and that Essex needs more public participation.

MapGeo

There was discussion on the pros and cons of making the Town MapGeo layers more public. John asked if he could have access to all the Town layers on MapGeo and he would like to view them. Jessica stated that she would give John the Town login and password to MappGeo. Some of the layers are utilities, signs, hydrants, poles, utilities poles, street signs, water system.

Rebecca and Bill mentioned they are both working from their home offices.

Bill reminded Ryan that he needs to two semi-annual samples, he needs one before March 30 and one before September 30 – (003) discharge to the north of the town garage building. Semi-annual requirements. Lisa stated she would email Ryan to remind him of these requirements.

Pollution Prevention – Training Training Training & Educating

People need to think about where their water is going!

Next Stormwater Meeting: Wednesday, November 18, 2020 at 11:00 am via Zoom

MS4 Tasks for 2004 Permittees

Legend							Permit page	Implementation Deadline	Year 1	Year 2	Year 3	Year 4	Year 5
MCM 1	MCM 2	MCM 3	MCM 4	MCM 5	MCM 6	Monitoring			July 2017 - June 2018	July 2018 - June 2019	July 2019 - June 2020	July 2020 - June 2021	July 2021 - June 2022
Employee stormwater management training program							31	Jul 1 2017	✓	✓	✓	✓	✓
Update and implement public education and outreach program							19	Jul 1 2017	✓	✓	✓	✓	✓
Interdepartmental Coordination plan							26	Jul 1 2017	✓	✓	✓	✓	✓
Site plan review for stormwater practices							26	Jul 1 2017	✓	✓	✓	✓	✓
Site inspections for stormwater practices							26	Jul 1 2017	✓	✓	✓	✓	✓
Receive public input to development projects							26	Jul 1 2017	✓	✓	✓	✓	✓
Notify developers of DEEP construction general permit							26	Jul 1 2017	✓	✓	✓	✓	✓
Track DCIA (additions and subtractions)							30	Jul 1 2017	✓	✓	✓	✓	✓
Citizen reporting program							22	Jul 1 2017	✓	✓	✓	✓	✓
Record illicit discharge abatement activities							23	Jul 1 2017	✓	✓	✓	✓	✓
Maintain Inventory of known SSOs (5 year look back)							App B p2	Oct 30 2017	✓	✓	✓	✓	✓
Post draft Annual Report							21	Feb 15 annually	✓	✓	✓	✓	✓
Submit final Annual Report to DEEP							21	Apr 1 annually	✓	✓	✓	✓	✓
Sweep streets in Priority Areas at least 1x per year							35	none specified	✓	✓	✓	✓	✓
MS4 Property O&M							33	none specified	✓	✓	✓	✓	✓
Log catch basin inspections & cleanings (including volume of material removed)							37	none specified	✓	✓	✓	✓	✓
Develop/implement deicing material SOP							37	none specified	✓	✓	✓	✓	✓
Implement snow/ice SOP to minimize stormwater pollution							37	none specified	✓	✓	✓	✓	✓
Establish catch basin inspection and cleaning schedule							36	Jul 1 2018	✓				
Develop alternate plan for sweeping streets outside Priority Area (if not sweeping < 1x per year)							35	Jul 1 2018	✓				
Develop written IDDE program							22 & App B p4	Jul 1 2018	✓				
Establish IDDE legal authority							23 & App B p5	Jul 1 2018	✓				
Map all MS4 outfalls							23 & App B p2	Jul 1 2019		✓			
Update construction site legal authority							25	Jul 1 2019		✓			
Maintenance plan for SW ponds & treatment structures							30	Jul 1 2019		✓			
Determine baseline DCIA							30	Jul 1 2020			✓		
Develop retrofit plan							32	Jul 1 2020			✓		
Complete dry weather outfall sampling (for high & low priority catchments)							App B p12	Jul 1 2020			✓		
Detailed MS4 mapping							App B p3	Jul 1 2020			✓		
Inspect all catch basins in Priority Areas							36	Jul 1 2020			✓		
Review regulations for LID barriers							27	Jul 1 2021				✓	
Legal authority for SW retention standards							27	Jul 1 2021				✓	
Monitor 6 'worst' outfalls to impaired waters annually							43	Jul 1 2021				✓	✓
Implement projects from retrofit plan							33	Jul 1 2021				✓	✓
Inspect all catch basins outside Priority Areas							36	Jul 1 2022					✓
2% impervious disconnection goal							33	Jul 1 2022					✓
Screen all outfalls to impaired waters							44	Jul 1 2022			50%		✓

Town of Essex CT DCIA Calculations

J&D Civil Engineering delineated catchment areas for each Town owned outfall and some state owned outfalls that interconnected with the Town's system. Once the catchments were delineated, each catchment was evaluated for a level of connectivity based on UCONN's NEMO MS4 DCIA calculation table.

Connectivity Level	Description of Contributing Area	Land use type	Equation	Example for a watershed with 20% impervious cover (IC)
1. Fully Connected (default)	100% storm sewered with all IC	High density mixed use, commercial	None. DCIA% = IC%	20% DCIA
2. Wicked Connected	Mostly storm sewered with curb and gutter, residential rooftops connected to MS4	High density residential, commercial, industrial, institutional	$DCIA\% = 0.4(IC\%)^{1.2}$	$0.4(20)^{1.2} = 14.6\% \text{ DCIA}$
3. Moderately Connection	Mostly storm sewered with curb and gutter, residential rooftops NOT connected to MS4	Medium density residential, commercial, industrial, institutional, open land	$DCIA\% = 0.1(IC\%)^{1.5}$	$0.1(20)^{1.5} = 8.9\% \text{ DCIA}$
4. Sorta Connected	50% storm sewered with some infiltration and residential rooftops not connected to MS4	Low density residential, open land	$DCIA\% = 0.04(IC\%)^{1.7}$	$0.04(20)^{1.7} = 6.5\% \text{ DCIA}$
5. Slightly Connected	Small % of urban area storm sewered or mostly infiltration	Agricultural, forested, natural areas	$DCIA\% = 0.01(IC\%)^2$	$0.01(20)^2 = 4\% \text{ DCIA}$

AppGeo then processed the catchment areas to determine the DCIA for each through the following steps:

1. Calculated size of the catchment area, in acres
2. Calculated amount of impervious cover, in acres, (buildings, roads, sidewalks, parking lots, etc.) within each catchment
3. From those two calculations the impervious cover percent (IC%) could be calculated
4. Using the NEMO equations, the IC% could be filled into the equations, based on the connectivity level determined by J&D, to determine the DCIA %

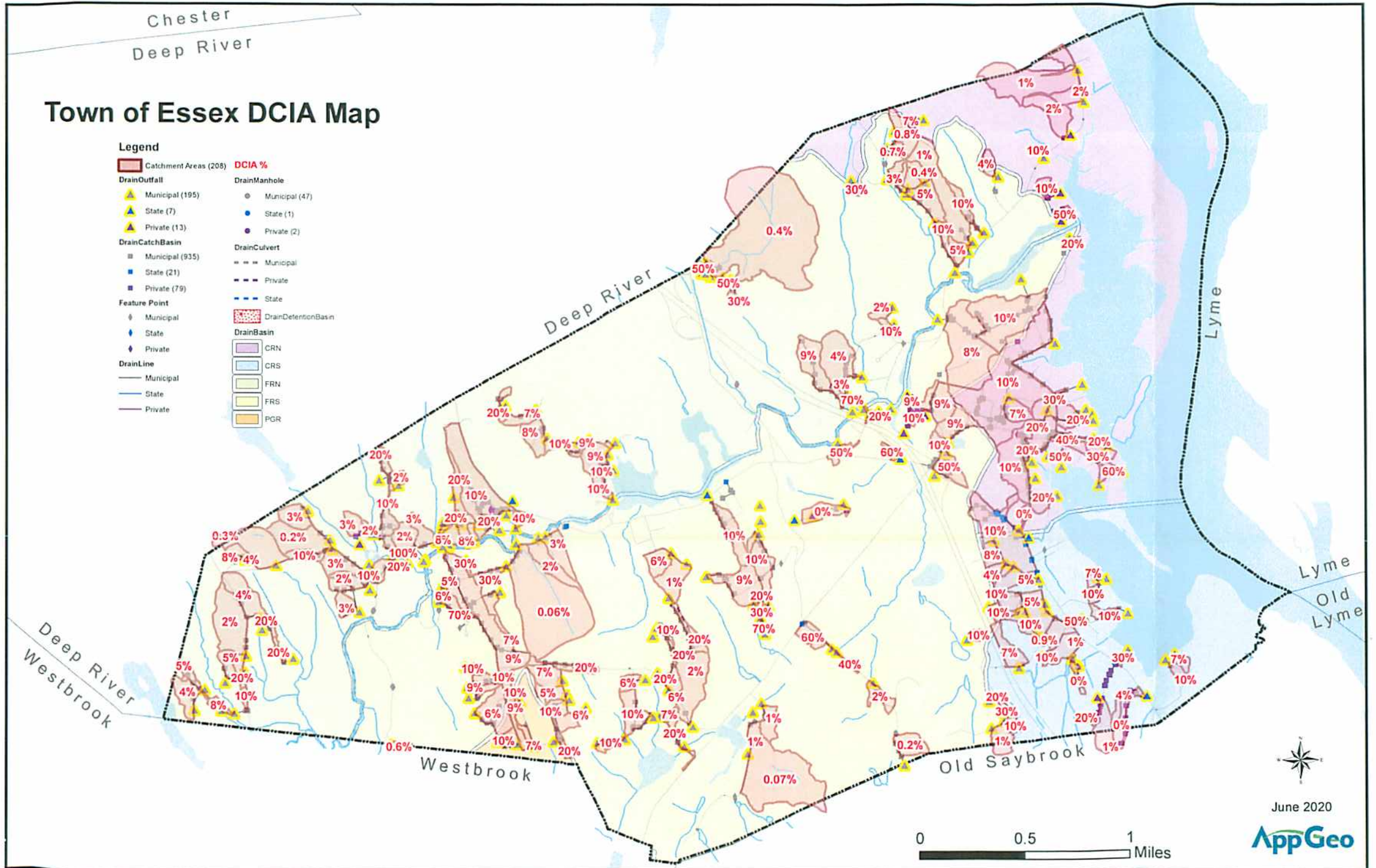
To estimate the DCIA % for the town, the total acres of catchment areas (1507.67 acres) and impervious cover within those catchments (250.52 acres) were used to get the towns IC% (16%). Equation 3 was used as an average for all the catchments to estimate the town's DCIA% to be **6.78%**.

Chester
Deep River

Town of Essex DCIA Map

Legend

Catchment Areas (208)	DCIA %
DrainOutfall	DrainManhole
Municipal (195)	Municipal (47)
State (7)	State (1)
Private (13)	Private (2)
DrainCatchBasin	DrainCulvert
Municipal (935)	Municipal
State (21)	Private
Private (79)	State
Feature Point	DrainDetentionBasin
Municipal	DrainBasin
State	CRN
Private	CRS
DrainLine	FRN
Municipal	FRS
State	PGR
Private	



June 2020

AppGeo

TOWN OF ESSEX
STORMWATER (MS4) WORKING GROUP
Meeting Minutes
September 23, 2020
Zoom Meeting

The Essex Stormwater (MS4) Working Group Meeting was held on Wednesday, September 23, 2020 by Zoom.

Attendees

William Drouin (Apex Co)
Lisa Fasulo (Health Director)
Rebecca Talamini (MapGeo GIS)
Maria Lucarelli (Selectman's Office)
Ryan Welch (DPW)
Joe Budrow (Planning/Zoning/IWWC/Land Use)

Absent

Norman Needleman (First Selectman)
Jessica Sypher (Assessor)
Robert Doane (Town Engineer)
John Guskowski (Town Planner)

Annual Report

Lisa Fasulo reported the Town sent in the payment for the annual report and she did receive confirmation the State received it, but the check has not yet cleared. Bill requested that Lisa send him a copy of the green registered receipt card for his files.

Due to the coronavirus issues we didn't get to do a lot of public education because we are socially distancing and not allowed to do any large group meetings.

There was discussion of stormwater sampling and identifying catch basins need to be clarified.

Ryan reported that we had a higher level, the last sample was high, so we will have to sample again. Bill said we need to sample all of those outfalls for chloride and cyanide which is a sector requirement. Ryan reported he would do the other 6 samples in Town soon. Ryan reported he needs to do personnel training for the industrial stuff. Bill will do the personnel training with Ryan and Lisa today after this meeting. Ryan reported that he does inspections and he was hoping to delegate that to someone else, but that is not happening.

Ryan will send the new locations to Bill. There was discussion that one would be the foot of Main. There was discussion of moving down stream on a few other locations. Another location would be one in Ivoryton near the Ivory Street Bridge. Another would be down by the Shell Station which would be a new location. And to test the bottom of Woodland Drive because there is a catch basin there for the whole neighborhood. There was discussion if Woodland would be considered residential because the runoff is from residential properties and commercial properties are across the road. Ryan also reported there would be testing of the pond behind Cumberland Farms which was tested last year.

So in summary - Ryan stated he would like to test the Foot of Main, the Witch Hazel Stream, intersection of Main Street (near the laundromat) the pond on Westbrook Road (behind Cumberland Farm's), Walnut Street Bridge (near Piano Factory), Rivers Edge Condominium Association is new and the bottom of Woodland Drive.

Bill asked Joe or Lisa if we have installed any retention ponds or galleries, or green engineering lid stuff. . . rain gardens or infiltrators. Joe looked back 4 years. Joe will get a new list to Lisa of any IWWC approved infiltrators. No new LID regulations adopted yet. Joe said it will be in 2021.

Bill reported the Annual Report draft is due by January 30th, 2021. The report covers the time period from January 1, 2020 to December 31, 2020.

Ryan reported he is documenting all outfalls. Rebecca reported she would give Ryan a current list of all outfalls.

Public Education / Participation:

There was discussion of having an MS4, Stormwater, and Emergency Management table in the Auditorium on Election Day – November 3, 2020 to help educate the public.

There was a discussion that the Town should look at the Connecticut River Museum's and the Connecticut River Conservancy for their upcoming events to see if there are any scheduled cleanups or trash pickups along the river.

Bill and Joe discussed lid regulations and the legal stormwater legend standards. Bill wants to get an idea of time frame and timeline of the draft ordinance. Joe reported that he submitted to Lisa all regulations that currently relate to stormwater or best management practices, and he would look at potential and upcoming regulations.

People need to think about where their water is going!

Next Stormwater Meeting: Wednesday, November 18, 2020 at 11:00 am via Zoom

TOWN OF ESSEX
STORMWATER (MS4) WORKING GROUP
Meeting Minutes
December 8, 2020
Zoom Meeting

The Essex Stormwater (MS4) Working Group Meeting was held on Tuesday, December 8, 2020 by Zoom.

Attendees

William Drouin (Apex Co)
Lisa Fasulo (Health Director)
Rebecca Talamini (MapGeo GIS)
Maria Lucarelli (Selectman's Office)
Ryan Welch (DPW)
Joe Budrow (Planning/Zoning/IWWC/Land Use)
Jessica Sypher (Assessor)
Robert Doane (Town Engineer)
John Guskowski (Town Planner)

Absent

Norman Needleman (First Selectman)

Bill Drouin reported he has a new email and for everyone to please use Bill.Drouin@apexc.com

DCIA Report – Ryan reported he has not taken samples yet because he wants to take a sample that is accurate. Ryan reported he will get a sample very soon and anticipates that next years sample will be done in August or September 2021. Bill reported that hurricane season is a good time to gather a sample.

Ryan reported he is working on the annual maintenance report and will give that to Lisa. Ryan also reported that several new catch basins have been installed in Town which will be added to the Town's GIS map.

William Drouin reminded everyone that the Annual Report is due on March 31, 2021. The public notice gets published in February 2021. Lisa and Bill will work on completing the draft by the end of January 2021.

There was discussion on the DCIA, and Rebecca reported they were done in June and the numbers were overall very good. The average is 6.78 and the state wants everyone to be below 11 – so we have met the goal. But future goals are to continue to have progress and to strive to lower the current number.

Bob reported he attended a webinar on DCIA and learned that Greenwich is a Town that has strict aggressive regulations. Lisa Fasulo emailed out Nemo training information to some members last week. Bill requested she forward the link to him so he could see how other towns are progressing. It was noted that Essex is very lucky to be starting with such a low DCIA number.

Lisa reported that we are not in the drought anymore. Bill reported that we must be sampling during an applicable storm, or something that does not contain snow melt. Although you can sample during a rain event, which can contain a small amount of snow. Ryan is hopeful to do sampling next week during the upcoming storms.

There was discussion that Ryan would also be doing dry weather inspections of catch basins and outfalls to look for discharges that aren't stormwater. This is called illicit discharge sampling and is just visual sampling. Bill mentioned that if there is a noted discharge, then you must grab a sample. Ryan reported he will go out in the next couple of weeks and look at the outfalls. Bill also mentioned that if Ryan's notes the outfalls are dry,

then Ryan must note they are dry in his report in order to document the findings. Bill reported he will work with Ryan to determine what analysis should be done on any sample(s) that are taken.

Ryan reported he has extra bottles for collections and that this time of year is easier for him to find the outfalls.

Bill Drouin reported on the detailed MS4 mapping. Rebecca reported the mapping was finished up last year and extra cleanup was done this year. Bill asked if the Town could submit to him a final drawing, map, or a final report. Rebecca stated she would update the map and provide a copy to Bill and Lisa. Rebecca requested that Ryan send her the list of verified outfalls so she can get that corrected. Anything unverified, or anything new. Ryan stated he would get the information to Jessica and that there are approximately 10 new drains. Rebecca commented that she needs to know which outfalls were verified so she can do some updating.

Bill stated that he would like a tally of those outlets that were accomplished this year. Ryan stated that he believes it is 30 outlets and he has the list and will provide that list to Bill.

Ryan reported public works cleans a third of the catch basins every year which is approximately 300 – 400 each year. For now, the Town is caught up since this is the third year, which means the contractors have been through the entire town by doing one third each year.

There was discussion on the new regulations and new LID requirements. William Drouin reported he would work with Joe Budrow on this.

Bill mentioned that new projects should have retrofit program to remove some of the MS4 discharges. Another thought is to prepare and develop a retrofit for some historic properties in town. Bill said it is any historic property, not just town owned. Bill said he would look at what other towns have done implementing a retrofit program.

Bill said we are looking for 2% impervious connect goal, which is an ongoing goal. We will keep monitoring what we can monitor.

Public Education / Participation:

Lisa and Bill discussed that due to the pandemic, we cannot hold any public education. It has been a difficult year to doing public outreach or public education due to COVID.

John Guskowski reported the Town of Essex Zoning and Planning Commission recently merged.

Joe Budrow reported he is working on the LID program.

There was discussion of having Alyson Finnegan send out additional public participation and education information links that can be found on the Nemo site, which has good MS4 information.

Bill mentioned that the annual report is looking for any new inspections, retention ponds, maintenance on retention ponds, any information on those should be in the annual report.

Jessica reported she is working on the map updates. Bill mentioned he would like a copy of the map update.

Next Stormwater Meeting: Tuesday, February 9, 2021 at 11:00 am via Zoom

IC_ID	Operational Area	Street Primary	IC Type	Flow Direction	Owner Change
FRS-IC-0001	FRS	SUNSET TERR	Catch Basin	Outgoing	PRIVATE
CRN-IC-0001	CRN	SAYBROOK RD	Catch Basin	Outgoing	STATE
CRS-IC-0001	CRS	SAYBROOK RD	Catch Basin	Outgoing	STATE
CRS-IC-0002	CRS	SAYBROOK RD	Catch Basin	Outgoing	STATE
CRS-IC-0003	CRS	SAYBROOK RD	Catch Basin	Outgoing	STATE
CRS-IC-0004	CRS	SAYBROOK RD	Catch Basin	Outgoing	STATE
CRS-IC-0005	CRS	TURNSTONE RD	Catch Basin	Incoming	PRIVATE
FRS-IC-0002	FRS	BOKUM RD	Catch Basin	Incoming	PRIVATE
FRS-IC-0003	FRS	WESTBROOK RD	Catch Basin	Outgoing	STATE
FRS-IC-0004	FRS	INDUSTRIAL PARK RD	Catch Basin	Incoming	PRIVATE
FRS-IC-0005	FRS	MAIN ST CTBK	Catch Basin	Outgoing	STATE
FRS-IC-0006	FRS	MAIN ST IVTN	Catch Basin	Outgoing	STATE
FRN-IC-0001	FRN	SUMMIT ST	Catch Basin	Incoming	PRIVATE
FRN-IC-0002	FRN	SUMMIT ST	Catch Basin	Incoming	PRIVATE
FRN-IC-0003	FRN	CLARKS POND LN	Catch Basin	Outgoing	PRIVATE
FRS-IC-0007	FRS	SAYBROOK RD	Catch Basin	Outgoing	STATE
FRN-IC-0004	FRN	EAGLE RIDGE DR	Catch Basin	Incoming	PRIVATE
FRN-IC-0005	FRN	POND MEADOW RD	Catch Basin	Incoming	PRIVATE

Town of Essex, CT Drainage Map

Legend

Drain Outfall

- Municipal (207)
- State (7)
- Private (13)

Catch Basin

- Municipal (965)
- State (22)
- Private (84)

Feature Point

- Municipal (177)
- State (0)
- Private (26)

Drain Line

- Municipal (1,068)
- State (18)
- Private (101)

Drain Manhole

- Municipal (48)
- State (1)
- Private (2)

Drain Culvert

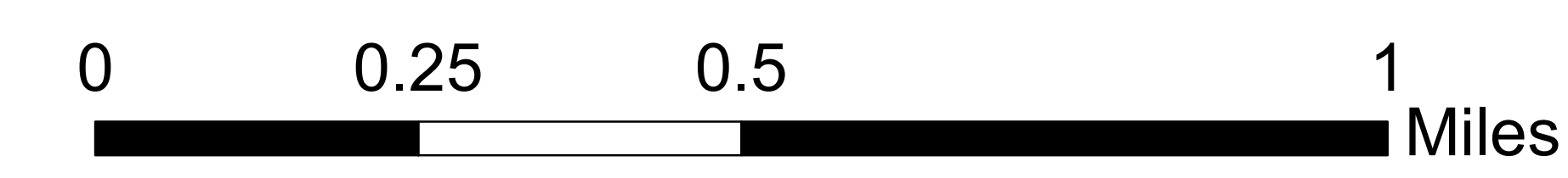
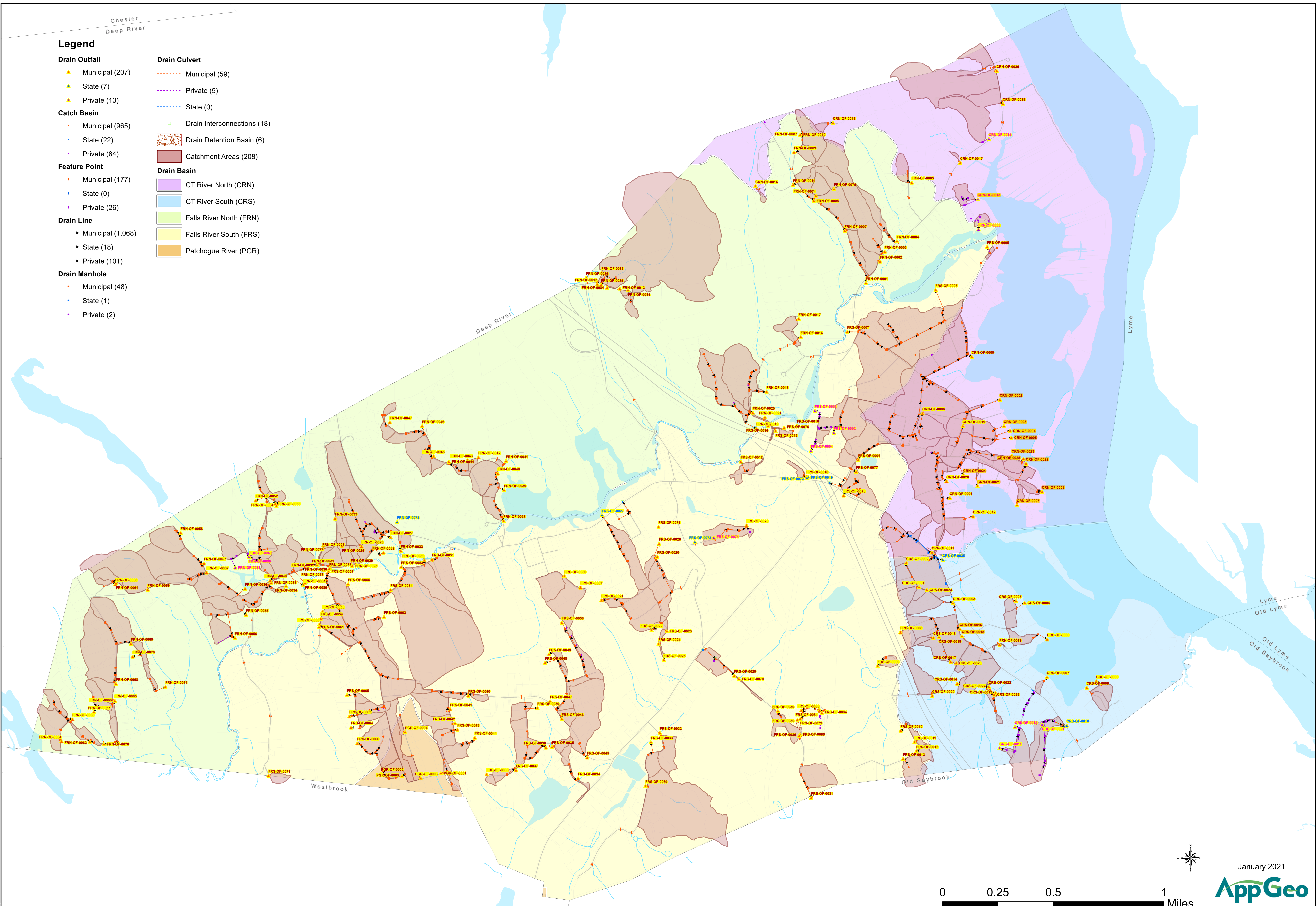
- Municipal (59)
- Private (5)
- State (0)

Drain Interconnections

- Drain Interconnections (18)
- Drain Detention Basin (6)
- Catchment Areas (208)

Drain Basin

- CT River North (CRN)
- CT River South (CRS)
- Falls River North (FRN)
- Falls River South (FRS)
- Patchogue River (PGR)

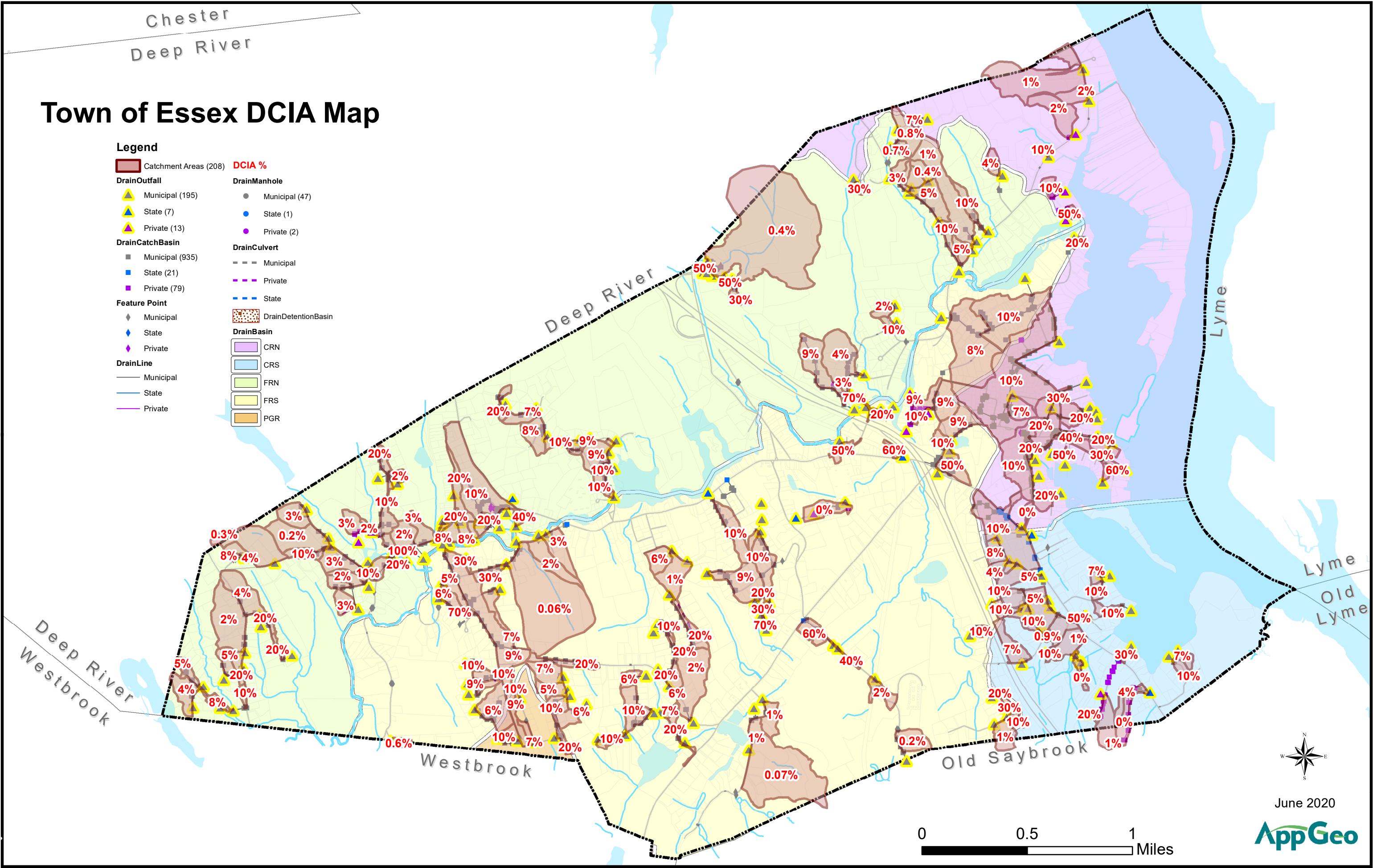
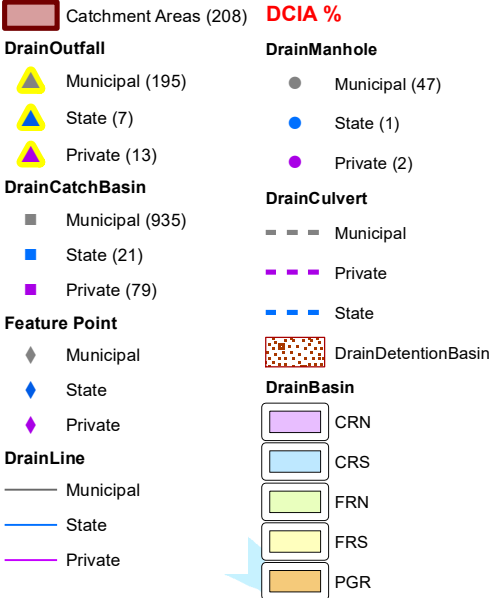


January 2021



Town of Essex DCIA Map

Legend



June 2020

AppGeo

Town of Essex CT DCIA Calculations

J&D Civil Engineering delineated catchment areas for each Town owned outfall and some state owned outfalls that interconnected with the Town's system. Once the catchments were delineated, each catchment was evaluated for a level of connectivity based on UCONN's NEMO MS4 DCIA calculation table.

Connectivity Level	Description of Contributing Area	Land use type	Equation	Example for a watershed with 20% impervious cover (IC)
1. Fully Connected (default)	100% storm sewered with all IC	High density mixed use, commercial	None. DCIA% = IC%	20% DCIA
2. Wicked Connected	Mostly storm sewered with curb and gutter, residential rooftops connected to MS4	High density residential, commercial, industrial, institutional	$DCIA\% = 0.4(IC\%)^{1.2}$	$0.4(20)^{1.2} = 14.6\% \text{ DCIA}$
3. Moderately Connection	Mostly storm sewered with curb and gutter, residential rooftops NOT connected to MS4	Medium density residential, commercial, industrial, institutional, open land	$DCIA\% = 0.1(IC\%)^{1.5}$	$0.1(20)^{1.5} = 8.9\% \text{ DCIA}$
4. Sorta Connected	50% storm sewered with some infiltration and residential rooftops not connected to MS4	Low density residential, open land	$DCIA\% = 0.04(IC\%)^{1.7}$	$0.04(20)^{1.7} = 6.5\% \text{ DCIA}$
5. Slightly Connected	Small % of urban area storm sewered or mostly infiltration	Agricultural, forested, natural areas	$DCIA\% = 0.01(IC\%)^2$	$0.01(20)^2 = 4\% \text{ DCIA}$

AppGeo then processed the catchment areas to determine the DCIA for each through the following steps:

1. Calculated size of the catchment area, in acres
2. Calculated amount of impervious cover, in acres, (buildings, roads, sidewalks, parking lots, etc.) within each catchment
3. From those two calculations the impervious cover percent (IC%) could be calculated
4. Using the NEMO equations, the IC% could be filled into the equations, based on the connectivity level determined by J&D, to determine the DCIA %

To estimate the DCIA % for the town, the total acres of catchment areas (1507.67 acres) and impervious cover within those catchments (250.52 acres) were used to get the towns IC% (16%). Equation 3 was used as an average for all the catchments to estimate the town's DCIA% to be **6.78%**.

2019-2020 Annual Sand and Salt usage

Town of Essex, CT

Department of Public Works

Required to manage: Winter snow and ice control

154 Tons- Blizzard Wizard treated sugar cane molasses salt

241 Tons- Washed winter road sand

2020 BATCH BASIN CLEANING RECORD

Town of Essex, Public Works Department

Basins cleaned by Janet Sweeping Company,
Meriden CT

Between August 18th and August 31st all the catch
basins on the following roads were cleaned: **(340
total catch basins cleaned)**

ABBY LN	HUNTERS TRL
BUSHNELL ST	KINGS LN
CAPTINS WALK	LITTLEPOINT ST
CEDAR GROVE TERR	MACK LN
HARBOR VIEW DR	MAIN ST ESX
HARBOR VIEW N	MALLARD PT
HARBOR VIEW S	MAPLE AVE
CEDAR GROVE TERR EXT	NEWCITY ST
CHAMPLIN SQ	NORTH MAIN ST ESX
CLARK LN	PARKER TERR
CROSSTREES HILL RD	PARTRIDGE LN
ESSEX HILLS DR	PRATT ST
ESSEX SQ	PROSPECT ST
EVANS LN	RIVERVIEW ST
FERRY ST	SOUTH MAIN ST
FOXBORO RD	SPINAKE LN
GATES RD	SQUIRES LN
GRANDVIEW TERR	STAMFORD HILL RD
GROVE ST	SUNSET TERR
HEMLOCK D	TEAL LN
HERON POND RD	TURNSTONE RD
HILLSIDE DR	WATERSIDE LN
	WEST AVE

ROAD SWEEPING REPORT 2020

TOWN OF ESSEX PUBLIC WORKS AND HIGHWAY DEPARTMENT

It is necessary to continually sweep town-maintained roads throughout the year. The collection of sand, leaves, dirt, litter and other debris is part of our best management practice to ensure clean streets, drainage and waterways.

Approx. 450 yards of debris collected in 2020

1/9 Falls River area including all side streets

1/10 West Ave, Grove, N main Essex, Dennison, Maple, Kings Ln, Grandview, Laurel, Plaza Dr, Woodland Dr, Dump Rd.

1/14 Bushy Hill Rd, Hopper Rd, Postmaster Rd

1/15 Lynn Rd, Rachal Ln, Deer Ln

1/30 Main St Centerbrook, West Ave, around Rt154 islands, grove St, North Main St Essex, River Rd, Book Hill Rd, Meadow Woods, Oxbow Rd

2/7 Prospect St, North Main Essex, Maple Ave, Kings Ln, Riverview, New City St, Partridge Hill Rd, Fire House parking lot

2/12 Bushy Hill Rd, Brooks Ln, Lynn Rd, Rachal Ln, Deer Ln, Pink Lake Rd, Postmaster, Walnut St, Melody Ln

2/13 Park Rd, Mikes Terr, Melody Ln, Harmony Ln, Cord Ln, Townwoods Rd, Westwood Rd, Piney Branch Rd, hickory Ln, Walnut St, Mares Hill Rd, North Winds Rd, Birch Mill Trial, South Winds Rd

2/18 Dump Rd, Sweeper cleaning and repairs

2/19 Dennison Rd, North Main Essex, Donald Rd, Brookside Ln, Old Dennison Rd, River Rd, Andrews Rd, Lookout Hill Rd, Dump Rd

2/20 West Ave, South Main St, North Main St, River Rd, River Rd Dr, Hudson In, Carriage Ln, Dennison Rd, Primrose Ln, Dump Rd

2/25 West Ave, Main St, Post Office parking lot, Pratt St, Ferry St, Grove St, Dump Rd, Parker Terr, Grandview Terr

3/2 Woodland Drive and all side Roads

3/3 Cedar Grove Terr, Harbor View Terr, Hillside, Hunters Trail, Nutmeg In

3/4 Main St Centerbrook, Earl St, Firehouse parking lot, Cove Hill, Gates Rd

3/5 Main St Ivoryton, Ebony, Blake St, Summit St, Highland Terr, Oak St

3/9 Falls River Area, Comstock Ave, Ivory St, Terrace Ln, Main St Ivoryton

3/10 West Ave, Sunset Terr, Grandview Terr, Laurel Rd, New City St, Riverview St, Maple Ave, Kings Ln, Foxboro

3/11 Main St Essex, Maple Ave, New City St, Riverview, Kings Ln, Clark Ln, Post Office parking lot, Dennison Rd

3/12 Dennison Rd, old Dennison Rd, Book Hill Woods Rd, Dump Rd

3/ 18 South Cove Rd, Prospect St, Maple Ave, North Main St Essex, Dump Rd

4/5 Town Hall Campus, Grove St, Bushnell St, Teal Ln, North Main Essex, Dennison Rd

4/15 West Ave, Grove St, South Main St, Main St Essex, Pratt St, Ferry St, North Main St, Maple Ave, Kings Ln, Riverview St, Prospect St, High St

4/16 Main St Ivoryton, Bushy Hill Rd, Lynn Rd, Rachael Ln, Deer Ln, Winthrop Hills Rd, Hopper Rd, Postmaster Rd

4/17 Comstock Ave, Park Rd, Terrace Ln, Winthrop Hills Rd, Read St, Baldwin Ln, Melody Ln and all side streets, Walnut St

4/23 Crosstrees Hill Rd, Mallard Pt Rd, gates Rd, Harbor View Dr, Fire House parking lot,

5/19 parade Rt, Westbrook Rd, Main St Centerbrook, West Ave, Main St Essex, North Main St Essex

6/29 Middlesex TPK RT154 around garden islands, Gates Rd, Fordham Rd, Hemlock Rd, South Cove Ln, Dump Rd

9/11 Main St Ivoryton, Summit St, Chestnut St, Oak St, Highland Terr, Pond Meadow Rd, Bushy Hill Rd, Lynn Rd, Dump Rd

9/15 Dump Rd, River Rd, Hudson Ln, River Rd Dr, Carriage In, Sunset Terr

9/16 Dennison Rd, Old Dennison #2, Old Dennison Rd, Dump Rd

10/6 Falls River Dr and all side Streets, Cedar St, Earl St, Charles St

10/8 Summit St, Cheney St, Bushy Hill Rd, Main St Ivoryton,

10/22 Gates Rd, Cedar Grove Terr and all side streets, Harbor View Terr, Dump Rd

10/28 Fordham Rd, hemlock Rd, Mallard Pt Rd, Heron Pond Rd, Crosstrees Hill Rd, Cove Hill Rd

12/29 West Ave- leaf clean up

Post-construction Stormwater Management

Requested BMPs for development projects since 2011:

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CATCH BASIN DRAINAGE AND REPAIR 2020

TOWN OF ESSEX, CT

PUBLIC WORKS AND HIGHWAY DEPARTMENT

IN 2020 DRAINAGE UP-GRADES AND REPAIRS (23) WERE MADE TO THE FOLLOWING LOCATIONS:

MAY

52 Foxboro Point- installed 2 x 8 drywell surrounded by stone to expand existing drywell.

JUNE

9 Clark Ln- new flat catch basin top set to grade for new road

8 Clark Ln- new flat catch basin top set to grade for new road

15 Clark Ln- new flat catch basin top set to grade for new road

12 Clark Ln- new flat catch basin top set to grade for new road

JULY

1 Dump Rd- new flat top catch basin connected to existing pipe at intersection of CRRRA transfer center

1 Dump Rd- New curb top catch basin located near RR tracks. Piped outlet to North culvert.

5 Dump Rd- replaced pipe CRP under Dump Rd at intersection near town transfer center. 15-inch CRP pipe. Installed new headwall on north side of road. Installed new catch basin on south side of road with outlet piped down grade along road.

Essex Plaza- 2 new curb top basins set to new height for new road elevation. Made needed repairs to block work in basins.

AUGUST

11 Gates Rd- new catch basin curb top set to grade for new road- made necessary repairs to block work.

18 Gates Rd- new catch basin curb top set to grade for new road- made necessary repairs to block work.

19 Gates Rd- new catch basin curb top set to grade for new road- made necessary repairs to block work.

36 Gates Rd- new catch basin curb top set to grade for new road- made necessary repairs to block work.

22 Gates Rd- New precast head walls for 24" CRP pipe. Installed new headwalls on east and west of road. installed new 24" CRP pipe between new headwalls.

26 Gates Rd- new catch basin curb top set to grade for new road- made necessary repairs to block work.

1 Cove Hill- new catch basin curb top set to grade for new road- made necessary repairs to block work.

36 Gates Rd- new catch basin curb top set to grade for new road- made necessary repairs to block work.

36 Gates Rd- installed new catch basin and piped outlet to existing catch basin located on corner of Cove Hill Rd.

SEPTEMBER

3 Dogwood Rd- new catch basin curb top set to grade for new road- made necessary repairs to block work.

30 Hemlock Rd- move existing catch basin out into existing curb line, connect to existing pipe and install 2 ft sump. Keep old sump with directional pipe change and cover with precast conversion slab and 10-inch concrete riser. Manhole access riser is located 4 ft center behind new catch basin.

OCTOBER

19 Melody Ln- new catch basin with 2 ft sump installed. Piped to nearest catch basin at intersection of Key Board Ln.

NOVEMBER

16 Meadow Woods- 2 new catch basin installed. 1 with slab and riser- 1 with 2 ft sump. Created new outlet and extended an existing headwall pipe. There are now 2 out falls at this location.

2 Birch Mill Trail Rd- installed new catch basin with 2 ft sump. Installed 2- 4 x 4 drywell galleys along side new catch basin with 1 manhole cover access. New system is connected to an existing 6-inch perforated underdrain pipe, which acts as a highwater overflow.

**TOWN OF ESSEX PUBLIC WORKS AND HIGHWAY
DEPARTMENT**

1 DUMP RD ESSEX, CONNECTICUT 06426

860-767-0715

MS4 STORM WATER MAINTENANCE

LOCATION Heron Pond

INSPECTION ☒ Y ☐ N ANNUAL QUARTLY MONTHLY

CLEANOUT ☒ Y ☐ N ANNUAL ☒ QUARTLY MONTHLY

DATE PERFORMED 3/6/2020

CREW MEMBERS WHO PERFORMED WORK Dave, Dawight,
Brian

DISCRIPTION OF WORK Clean out overgrowth
of retention pond

NOTES work took 2 hours. will be back
in mid summer to trim again.

SUPERVISORS SIGNATURE [Signature]

**TOWN OF ESSEX PUBLIC WORKS AND HIGHWAY
DEPARTMENT**

1 DUMP RD ESSEX, CONNECTICUT 06426

860-767-0715

MS4 STORM WATER MAINTENANCE

LOCATION Heron Pond

INSPECTION ~~Y/N~~ ANNUAL BI-ANNUAL


CLEANOUT Y/N ANNUAL BI-ANNUAL

DATE PERFORMED 12/29/2020

CREW MEMBERS WHO PERFORMED WORK Ryan

DISCRIPTION OF WORK inspect retention pond

NOTES Pond in good condition - could use
some weedwacking - will trim in Spring

SUPERVISORS SIGNATURE 

**TOWN OF ESSEX PUBLIC WORKS AND HIGHWAY
DEPARTMENT**

1 DUMP RD ESSEX, CONNECTICUT 06426

860-767-0715

MS4 STORM WATER MAINTENANCE

LOCATION 36 Pratt St. oil water separator

INSPECTION ☒ Y/N ☒ Bi- ☐ ANNUAL ☐ QUARTLY ☐ MONTHLY

CLEANOUT ☒ Y/N ☐ ANNUAL ☐ QUARTLY ☐ MONTHLY

DATE PERFORMED 5/22/2019

CREW MEMBERS WHO PERFORMED WORK Ryan. Dwight,
Dave.

DISCRIPTION OF WORK removed manhole covers
to inspect oil separator tank. Approx. 12in

NOTES Sediment in bottom.

* will clean out tank in fall.

SUPERVISORS SIGNATURE

[Signature]

Town of Essex, Connecticut
Septic System Repairs / Modifications in 2020 (36)

Date	Res / Comm	Permit No.	Type	Contractor	Owner/Applicant	Location	Notes:
1/21/2020	R	H20-8	Septic Repair	Duncan Downies	Frederick Clarke	33 Prospect St	Septic Repair Tank & D box only
1/28/2020	C	H20-11	Septic Repair	John Finkeldey	B&G Realty & Co.	15 Main St. SX	Septic Repair replace pump chamber
2/6/2020	R	H20-15	Septic Repair	Andrew Dayon	James Vandermale	22 Cedar Grove Terr Ext	New Infiltrator 3 bedroom.
2/18/2020	R	H20-21	Septic Repair	Jeff Stevens	85 Plains Rd. LLC	85 Plains Road	1000 gal for 3 bedrooms
3/10/2020	R	H20-35	Septic Repair	Paul Riggio	Pamela & David Keller	43 West Ave.	Septic Mod / wastewater
3/17/2020	R	H20-39	Septic Repair	Duncan Downies	Chad Schadler	6 Crosstrees Hill	Increase tank only to 2000 gallons from previous addition.
3/30/2020	R	H20-45	Septic Repair	Duncan Downies	Markham & Jody Rollins	10 Meigs Lane	Septic Mod / for addition.
4/23/2020	R	H20-54	Septic Repair	John Finkeldey	Peter Amos	77 Saybrook Road	Septic Repair
6/24/2020	R	H20-82	Septic Repair	Duncan Downies	Stephen Cox	9 Cedar Street	Septic Repair
7/8/2020	R	H20-91	Septic Repair	Schumack Eng. Const.	Antonio Robaina	49 South Main	Dry well failure
7/14/2020	R	H20-96	Septic Repair	Duncan Downies	Steven Smith	9 Cedar Street	Septic Repair
7/17/2020	R	H20-100	Septic Repair	Dale Hesser	Craig & Scott Szymanski	117 Mares Hill Road	Septic Repair
7/22/2020	R	H20-103	Septic Repair	Lee Archer	Anchored Inn, LLC	27 Grove Street	septic repair - tank cracked / broken
7/27/2020	C	H20-107	Septic Mod	Stevens Excavation	Carlson's Landing	53 Main St., SX	Replace 500 gal grease tank w/ 1000
8/3/2020	C	H20-109	Septic Repair	E.A. Stevens Co	Carlsons Landing	53 Main St., SX	Septic Repair
8/13/2020	R	H20-115	Septic Repair	Olmstead Contracting	Kate Dressel	18 Mallard Point	Septic Repair
9/2/2020	R	H20-134	Septic Repair	Jefferey Wilcox	Thomas MacNeil	5 Carol Drive	Repair D-box only. Concrete crumbling
9/2/2020	R	H20-135	Septic Repair	Jefferey Stevens	Sal Sapia	87 Saybrook Road	Install riser on tank, replace existing D-box
9/2/2020	R	H20-136	Septic Repair	HomeTown Sanitation	Phillip Miller	24 Bushy Hill Road	Septic Repair
9/3/2020	R	H20-137	Septic Repair	Palco	Gordon & Lois Ely	9 Harbor View S	leaching fields failure
9/4/2020	C	H20-139	Septic Repair	AJ Shea /Stevens Excav.	Carlson's Landing	55 Main St.,	Retail, office space food prep.
9/17/2020	C	H20-149	Septic Repair	Thomas Maynard	Zachary Cohen	35 Comstock Ave	system failure
9/25/2020	R	H20-157	Septic Repair	Finkeldey	Patrick Smith	50 Crosstrees Hills	Septic Repair
9/28/2020	R	H20-160	Septic Repair	Craig Stevens	Greg & Shannah Balogh	22 Gates Road	add 1250 tank.
9/28/2020	R	H20-161	Septic Repair	D'Amico Enterprises	Art Meister	8 River Road Dr.	Tank failure
10/1/2020	R	H20-164	Septic Repair	Monoflo	Tom & Moira Daniels	20 River Road	Septic Repair
10/22/2020	R	H20-180	Septic Repair	Martin Rochette	Jane Severance	9 Prospect St	tank replacement only
10/26/2020	R	H20-181	Septic Repair	Tom Maynard -Monoflo	Charles D. Gill	18 Hemlock	Septic Mod
10/26/2020	R	H20-182	Septic Repair	Lussier & Sons	Alan Nietlisbach	20 Ridge Road	Septic Repair - D- box
11/2/2020	R	H20-189	Septic Repair	David Aycheck	Christine Stone	18 Hemlock Drive	System failure
11/4/2020	R	H20-191	Septic Repair	Parker Construction	Travis Parker	40 Walnut St	New sewer pipe, D-box, Distribution Pipe
11/5/2020	R	H20-194	Septic Repair	Duncan Downies	David & Sally Rosengren	24 Hilltop Ave	Crack in Tank
11/10/2020	R	H20-198	Septic Repair	Matthew Stark	Dylan Jones	57 Comstock Ave	New 1000 gallon tank w/effluent filter
12/7/2020	R	H20-217	Septic Repair	Duncan Downies	Christopher Streit	25 Parker Terr	Septic Repair
12/10/2020	R	H20-219	Septic Repair	John Finkeldey	Susan Jacobson	36 Mallard Point	1250 Gallon 3 bedrooms
12/28/2020	R	H20-228	Septic Repair	Paul Riggio	Aaron Ribchinski	37 Maple Ave.	Upgrade to Code Compliant System

**TOWN OF ESSEX PUBLIC WORKS AND HIGHWAY
DEPARTMENT**

1 DUMP RD ESSEX, CONNECTICUT 06426

860-767-0715

MS4 STORM WATER MAINTENANCE

LOCATION STONE BROOK Dr.

INSPECTION Y/N ANNUAL QUARTLY MONTHLY

CLEANOUT Y/N ANNUAL QUARTLY MONTHLY

DATE PERFORMED 12/29/2020

CREW MEMBERS WHO PERFORMED WORK Dave, Dwight

DISCRIPTION OF WORK Remove manhole lids to inspect
to inspect recharge system under Stonebrook Dr.

NOTES Culdesac

System is clean and in good working

condition. Small amount of sand to be cleaned out

SUPERVISORS SIGNATURE 

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Zoning Regulations requiring applicants to propose Best Management Practices were first added to the Essex Zoning Regulations in 2011. They were first added to the Limited Industrial District, and then to the newly created Business District.

April 25, 2011 - Limited Industrial District

Sections 90B.7 and 90B.8

July 11, 2011 – Business District (delayed to an appeal by a resident)

Sections 82B.2 and 82B.3

The Sections are attached.

In 2020 the Zoning Commissions to have public hearings to propose a reformatted book of Zoning Regulations. The new book also has added language not currently in the Town's Zoning Regulations.

Attached, please find sections with highlighted Regulations related to BMPs and Stormwater Management.

Section 606B

Section 608

715A

Article VI - Town-Wide Requirements

Section 601 – Definitions and Prohibitions

H. *Definitions – See Article VIII*

I. *Prohibitions – See Article III, Section 301*

Section 602 – Parking and Loading

A. GENERAL. To serve every use of land or improvement thereon, there shall be provided permanent and conveniently available spaces for off-street parking of motor vehicles and areas affording uncongested and safe access between such spaces and a street. To serve hospitals, institutions, hotels, retail, wholesale and industrial buildings, there also shall be provided permanent and conveniently available space for loading and unloading of trucks and areas affording uncongested and safe access between such spaces and a street. No use of any land or improvement thereon shall be commenced until required off-street parking and truck-loading space has been completed in accordance with this section.

B. ACCESS AND PARKING. No use of any land or improvement thereon shall be commenced until the required off-street parking and truck loading facilities have been provided and completed in accordance with this Section 602 and Table VI-1. The increase of any factor with reference to which off-street parking or truck loading spaces are prescribed in this Section 602, without providing the number of spaces, with access areas, of the size and nature prescribed therefore in Section 602 and Table VI-1 is prohibited. No land shall be used for access to, or parking in connection with, a use which is not permitted in the district in which such land is located, except that land in a Commercial District may be used for access to a permitted use in an Industrial District and land in any district may be used for access to a use in a Residence District

C. LOCATION. Such parking or loading facilities shall be located on the same premises as the use which they serve, except that the Commission may, by grant of a special exception, approve their location elsewhere, subject to the conditions prescribed in or pursuant to Article I, Section 115 C. On any premises, parking facilities, including access driveways, shall be not less than six feet from the front lot line or less than five (5) feet from any side or rear lot line.

D. DRIVEWAY LOCATION AND GRADE. The lateral paved or surfaced portion of any driveway, common driveway or other private roadway shall not be located closer than five (5) feet to any side or rear lot line. Driveway grades shall not exceed twelve (12) per cent.

E. NATURE OF PARKING AND LOADING AREAS. Parking or loading facilities may be enclosed within a building or may be open. All spaces for parking, loading and access, except in single family residence lots, shall be graded, surfaced, drained and adequately lighted and suitably maintained in the manner and to the extent necessary to avoid dust, erosion, and excessive discharge of collected surface water onto streets or adjacent property. See Article VI, Section 608. The spaces and access areas shall

be so arranged as to afford clearly safe and convenient maneuvering room, entrances and exits in light of the expected volume and frequency of parking, loading and unloading. The access driveways shall be so connected to a street as to avoid unsafe driving conditions and traffic congestion.

F. OPERATION AND MAINTENANCE. Such parking or loading facilities shall remain in existence so long as the use which they serve exists and shall at all times be exclusively reserved for, and available to, the persons occupying or visiting the land or improvement, the use of whom such facilities are provided to serve.

G. MULTIPLE USES: JOINT FACILITIES. A single parking facility may serve more than one use provided that the aggregate number of spaces shall be the sum of those required for each use. Whether or not *Article IV*, Sections 407 A. 2-3. may apply, if more than one permitted individual principal use is proposed to occupy any portion of the gross floor area of any existing or proposed building, an accurate account of the gross floor area to be occupied by each proposed use or proposed uses within such space shall be provided. Where two or more different principal or accessory uses are located on the same premises the parking requirements for the different uses shall be computed separately and cumulatively. The following are typical but not exclusive examples of multiple uses: a bowling alley with a restaurant; a marina with recreational facilities.

In addition, the location and calculations of all parking spaces prescribed for each such proposed use shall be provided. Nothing in this Section shall be construed to prohibit the providing of more than the minimum amount of parking for each such proposed use or proposed uses where the applicant can demonstrate the need for such additional parking, and where low impact development measures are employed. See *Article VII*, Section --. The Commission may require that such additional parking spaces be held as reserve parking spaces in accordance with Section J below.

H. PARKING SPACES REQUIRED. Parking facilities serving the uses set forth in Table VI-I shall afford parking spaces specified for each such use in Table VI-I.

1. These parking standards are minimum requirements. The Commission may require additional parking spaces where the nature of development, its location, or other unique features require such additional parking. In determining the appropriate parking standards to be applied to a specific use, the decision of the Commission shall be final.

2. Where the number of car spaces is based on square footage of building area, the building area shall be computed as the gross floor area in the building.

3. Where the number of car spaces is determined by the number of employees, that number shall be periodically determined by the maximum number working on the premises at any one time. The number of employees reported on the most recent quarterly report to the State Labor Department shall be considered prima facie evidence of the number of employees under this Section.

4. Where computation of required parking spaces results in a fraction of a car space the required number of spaces shall be increased to the next whole number of

spaces.

Where a unit of gross floor area is used to calculate parking, any fraction of that unit will be rounded up to the next whole unit.

5. Handicapped Parking Spaces: Handicapped parking spaces shall be provided for in accordance with the provisions of CGS 19-395, Section 315.0 as contained in the Basic Building Code of the State of Connecticut. For the purposes of this section, required handicapped spaces shall be considered a part of the parking spaces required under Section 602 of these regulations and not in addition thereto. Location and arrangement of handicapped parking spaces and building approaches shall be in accordance with CGS 19-385, Section 315.4 (Parking Lots and Building Approaches).

TABLE VI-I
MINIMUM PARKING SPACE REQUIREMENTS BY USE

A. RESIDENTIAL USES

1. ACCESSORY APARTMENT. One car space for a unit under 650 square feet. Two (2) car spaces for a unit above six hundred fifty (650) square feet.
2. ONE AND TWO FAMILY DWELLINGS. Two (2) car spaces per family dwelling unit.
3. MULTIPLE DWELLINGS. One and one-half car spaces per family dwelling unit.
4. HOME BASED BUSINESS. One car space plus one (1) car space for each employee over and above the occupant(s) of the dwelling.
5. ACTIVE ADULT COMMUNITY. Two (2) car spaces per dwelling unit.
6. RESIDENTIAL LIFE COMMUNITY. One (1) car space for each employee and/or staff member. One (1) car space for each dwelling unit. One-half space for each patient space (bed) in a health center.

B. OTHER USES

1. ANIMAL HOSPITALS, KENNEL. Two (2) car spaces per doctor plus two (2) car spaces per employee.
2. ARTISAN, CRAFTSPERSON. Two car spaces plus one (1) car space per four hundred (400) square feet of gross floor area, plus one (1) car space per each 1,000 square feet of gross floor area.
3. AUTOMOBILE SERVICE STATIONS. One (1) car space per employee plus four (4) car spaces per bay.
- 4.
5. BREWERY ESTABLISHMENT. One car space plus one car space per employee plus one (1) truck loading space per 20,000 square feet of gross floor area.
6. BUSINESS AND PROFESSIONAL OFFICE. Two (2) car spaces plus one (1) car space per 400 square feet of gross floor area plus one (1) car space per each 1,000 square foot of gross floor area.
7. BAKERY, CONFECTIONER. Two (2) car spaces plus one (1) car space per 400 square feet of public floor area
8. BANKS AND LENDING INSTITUTIONS. Two (2) car spaces plus one (1) car space per 400 square feet of gross floor area plus one (1) car space per each 1,000 square foot of gross floor area.

9. BUSINESS, SECRETARIAL OR VOCATIONAL SCHOOL OVER GRADE TWELVE (12). One (1) car space per employee plus one (1) car space per each two (2) legal occupants (per Fire Safety Code, State of Connecticut).

10. CENTERS FOR TOURISM TO INCLUDE A VISITOR'S CENTER, LIBRARY, AUDITORIUM, HISTORIC RAILROAD COMPANY, MUSEUM OR PUBLIC GARDEN. Eight (8) car spaces plus one (1) car space per 800 square feet of gross floor area;

11. CHILD DAY CARE CENTER. One car space per four (4) children at maximum capacity.

12. COMMERCIAL GREENHOUSE, NURSERY, OR GARDEN CENTER. Two car spaces plus one (1) car space per 100 square feet of gross floor area or outdoor display area, plus one (1) car space per each 1,000 square feet of gross floor area or fraction thereof, plus one (1) truck loading space for each 20,000 square feet of gross floor area, except that square footage of greenhouses and/or hoopouses not open to the public shall not be included for purposes of determining gross floor area of farm stand buildings for the calculation of parking.

13. COMMERCIAL KITCHEN. One (1) car space per employee plus one truck loading space for each 20,000 square feet of building area or fraction thereof.

14. CONVALESCENT HOMES, REST HOMES, NURSING HOMES, EXTENDED CARE FACILITIES. One (1) car space per employee or staff member plus one (1) car space per four (4) patient beds.

15. DOG GROOMING FACILITY. Two (2) car spaces per employee.

16. EMERGENCY MEDICAL FACILITY. Four (4) car spaces/1000 square feet of floor area.

17. FAMILY DAY CARE HOME. Two (2) car spaces per the single family dwelling plus two (2) additional car spaces.

18. FAMILY DAY CARE FACILITY. One (1) car space per employee plus four (4) additional car spaces.

19. FARM STAND. Two (2) car spaces plus one car space per 100 square feet of gross floor area, plus one (1) car space per each 1,000 square feet of gross floor area, plus one (1) truck loading space for each 20,000 square feet of gross floor area, except that square footage of greenhouses and/or hoopouses shall not be included for purposes of determining gross floor area of farm stand buildings

20. GROCERY STORE. One (1) car space per 150 square feet of gross floor area, plus one (1) car space per employee, plus one (1) truck loading space per 20,000 square feet of gross floor area.

21. FOOD SERVICE SHOP. Two (2) car spaces plus one car space per 400 square feet of public floor area, plus one (1) car space per three (3) customer table seats, plus one (1) car space per 1-1/2 counter or bar seats.
22. FUNERAL HOME. Thirty (30) car spaces.
23. INDOOR RECREATIONAL FACILITY – MINOR or MAJOR. One (1) car space per each three (3) legal occupants.
24. INLAND MARINE. One (1) car space per employee.
25. INTERNET, RADIO AND TELEVISION BROADCASTING FACILITY. One (1) car space per employee plus (--) spaces.
26. LIGHT INDUSTRY/ MANUFACTURING FACILITY. One (1) car space per employee plus one (1) truck loading space for each 20,000 square feet of building area or fraction thereof.
27. LOTTERY AGENT. Notwithstanding the general provisions and requirements of Section 602 of these Regulations, any use having the service of selling lottery tickets for the State of Connecticut shall provide an additional number of two (2) car spaces for each lottery ticket dispensing machine located on the premises of such use.
28. MARINAS, BOAT YARDS. One (1) car space per employee plus one and one half spaces per slip.
29. MEDICAL AND DENTAL OFFICE. Four (4) car spaces/1000 square feet of gross floor area.
30. MEETING HALLS, THEATRE FOR DRAMATIC ARTS, DANCE, MUSIC. One (1) car space per each fixed seat or one (1) car space per person for the maximum persons allowed as established by the Fire Marshal in accordance with the Fire Prevention Code.
31. PHARMACY. Three (3) car spaces, plus one (1) car space per 200 square feet of gross floor area.
32. PERSONAL SERVICE ESTABLISHMENT. Two (2) car spaces per employee.
33. PLACE OF WORSHIP. One (1) car space for each four (4) seats in principal worship area.
34. POLICE STATION, FIRE HOUSE, AMBULANCE STATION. One (1) space per emergency vehicle plus one (1) space per employee.
35. POST OFFICE. One (1) car space per employee plus one (1) car space per 600 square feet of gross floor area plus two (2) truck loading spaces.

36. ART GALLERIES, ART STUDIO. Eight (8) car spaces plus one (1) car space per 800 square feet of gross floor area; however, in the case of an Auction Establishment or Gallery one (1) car space per two (2) customer seats.

37. PUBLIC or PRIVATE SCHOOL UNDER GRADE TWELVE (12). One (1) car space per employee plus one (1) car space per each ten (10) students or one (1) car space per three (3) auditorium seats, whichever is greater, plus safe and convenient space for pickup and discharge of passengers from automobiles and school buses.

38. RETAIL STORE. Two (2) car spaces plus one (1) car space per 400 square feet of gross floor area, plus one (1) car space per each 1,000 square feet of gross floor area or fraction thereof, plus one (1) truck loading space for each 20,000 square feet of gross floor area or fraction thereof.

39. RESTAURANTS. One (1) car space per three (3) customer seats, other than counter or bar service seating, plus one (1) car space per 1-1/2 counter or bar seats or fraction thereof, plus one (1) car space per employee as needed per shift.

40. SELF SERVICE LAUNDRIES AND CLEANERS. One (1) car space per employee plus one (1) car space per each two (2) washing, drying or cleaning machines.

41. SERVICE CONTRACTOR FACILITY. One (1) space for each business vehicle plus one (1) car space per employee.

42. STUDIO FOR DRAMATIC ARTS, DANCE, MUSIC INSTRUCTION. Eight (8) car spaces plus one (1) car space per 800 square feet of gross floor area;

43. VEHICLE SALES FACILITY. One (1) car space per employee plus one (1) car space per 400 square feet of gross floor area, plus one (1) car space per each 1,000 square feet of gross floor area or fraction thereof, plus one (1) truck loading space for each 20,000 square feet of gross floor area or fraction thereof.

44. WAREHOUSES, WHOLESALE DISTRIBUTORS, RESEARCH LABORATORY. One (1) car space plus one (1) car space per employee plus one (1) truck loading space per 20,000 square feet of gross floor area or fraction thereof.

45. YACHT CLUBS/CLUBS AND FRATERNAL ORGANIZATIONS. One (1) car space per four (4) legal occupants (per Fire Safety Code, State of Connecticut).

46. OTHER USES NOT SPECIFICALLY LISTED: Parking space requirements for uses not specifically listed in this section shall be determined by the Commission based upon parking requirements for a listed use of similar characteristics, or upon reference to recent parking standards of the Institute of Traffic Engineers or other recognized source, or upon a determination of spaces actually required for the proposed use.

I. CONFIGURATION OF PARKING SPACES AND AREAS:

1. Each car space shall be a minimum of 9 feet wide and 18 feet in length and shall be so arranged in relation to other car spaces as to provide easy and convenient access, and shall conform with Appendix C Figure C-6 which sets forth a diagram of parking dimensions and layout.

2. Truck loading space shall be located only at the rear of buildings and shall be not less than 10 feet in width and not less than fifty (50') feet in length. Truck loading spaces shall not be located in car spaces, travel aisles or in any location to block viewing sightlines unless demonstrated not to interfere. See Article VII, Section 716 A.7 regarding the location of loading docks.

J. PORTION OF REQUIRED PARKING AREA HELD IN RESERVE. The Commission may determine that the total number of parking spaces required by this section will not be immediately required by a particular use and may therefore further determine that up to 50 percent of the required parking area may be kept in reserve. It must then be planted and maintained rather than surfaced for parking until such time as the Commission may determine that the additional parking area is required. At such time as the Commission shall inform the applicant in writing by certified mail that additional parking area is to be completed, as authorized in the approved application, the area shall be completed within sixty (60) days of dispatch of such notification. No above ground improvement shall be constructed or placed upon such reserve parking area.

K. For the purposes of this Section 602, an employee shall mean the following: an owner, a manager, an assistant manager, and any other person performing specified duties upon the premises of the use regardless of his/her status as employee, independent contractor, or other form of retention; and includes part-time employees at any given time.

Section 603 – Signs and Lights

A. PURPOSE. The purpose of this section is to regulate signage and lighting in such a way as to insure public safety and protect property values and a neighborhood's character throughout the Town of Essex by limiting the location, quantity, size, design, construction, illumination and use of such structures. All signs shall conform to the standards set forth in this section as well as to any conditions set forth as part of a site plan or special exception. No sign shall include the use of profane language.

B. STANDARDS. Signs in all districts shall be allowed as an accessory use only and upon the issuance of a zoning permit or special exception, if required, and shall conform to the following characteristics:

1. **SIGN CONSTRUCTION.** Signs must be constructed of sound material, firmly supported and maintained in good condition and repair and must be removed when the purpose for which they were erected no longer exists. No sign shall be so designed,

situated, constructed or illuminated as to have any characteristic which may be confused with a traffic control sign or signal. The applicant may be required to provide certification from a structural engineer that the sign meets all local, State and Federal building and safety codes.

2. LOCATION. Except as provided in 603 F.8., no sign in any District shall be located on any premises other than the same premises as the use or improvement to which such sign is accessory. No sign or sign structure shall be permitted at any location where it could interfere with traffic, obstruct the view of traffic or prohibit safe pedestrian and vehicular access, movement, parking, ingress and egress. See Appendix C Figure C-8 Lighting/Illumination Diagram.

3. ILLUMINATION. No sign or light shall be erected in such a manner that any spotlight or other source of illumination directly projects to another lot; All illuminated advertisement signage must be turned off during non-business hours. See Appendix C Figure C-8 Lighting/Illumination Diagram.

3.1. Sign and building lighting shall be mounted on the sign, a building or on the ground in such a manner as to shield the light source from direct view from off-premise.

3.2. Naked or unshaded incandescent or fluorescent-electric light bulbs are allowed as part of holiday season decorations; or community events or private celebrations not to exceed forty-five (45) days;

3.3. Under no circumstances shall the illumination level measured at the property line exceed ten (10) foot candles.

4. DYNAMIC SIGNS. No sign, including an advertising sign, shall move or rotate mechanically, change context/content, or be illuminated by a light source which visibly flashes, oscillates or otherwise automatically changes in intensity or color, except one barber pole used on the premises of a licensed barber shop;. No dynamic sign located interior of a building shall be placed in a manner that is visible from a building exterior or to be used for exterior advertising through storefront windows;

C. GENERAL LIMITATIONS – See Appendix C Figure C-7 Sign Illustrations

1. WALL SIGNS. The aggregate area of all signs which are painted on, or affixed parallel against, an exterior wall of a building shall not exceed 10 percent of the gross area of such wall, measured along a straight line parallel to the setback line for such wall. This includes wall-mounted menu box signs for drive-through windows at restaurants;

2. PROJECTING SIGNS. The aggregate area of all signs projecting from a wall of a building shall not exceed three percent of the gross area of such wall measured along a straight line parallel to the setback line for such wall. This includes wall-mounted menu box signs for drive-through windows at restaurants No such projecting sign shall exceed twelve (12) square feet in area or project more than five feet from the

surface of the wall from which it projects and shall be not less than eight feet above the grade of the sidewalk, if any, or any other pedestrian pathway;

3. FREESTANDING SIGNS. No freestanding sign shall exceed an area of 40 square feet. The aggregate area of all freestanding signs located on any one lot shall not exceed either (a) one square foot for every five linear feet of such lot's front lot lines or (b) 80 square feet, whichever is less. There shall be no more than one (1) freestanding sign for each street upon which the lot has frontage and an access driveway. No freestanding sign shall be located nearer to any side lot line than the width of the required side yard nor less than 10 feet from the front lot line. No freestanding sign, in a District other than a Village Residence or Rural Residence District, exceeding 12 square feet in area or exceeding 12 feet in height shall be located within 50 feet from the boundary of any Village Residence or Rural Residence District. All signs must be a minimum of five feet from the edge of a roadway and all signs must be a minimum of two feet from the inside edge of a sidewalks when a 10-foot distance is not possible, as determined by the Zoning Enforcement Officer. This Section includes free-standing menu box signs for drive-through windows at a restaurant;

4. PORTABLE OUTDOOR SIGNS.

4.1. The purpose of these portable signs, such as "A"-frame or "T" -frame signs is to help with the promotion of economic development by allowing businesses to use portable signs in order to advertise their products and services on a daily basis. Each business is allowed one portable sign. Portable signs shall be no higher than three (3) feet nor more than five (5) square feet per surface.

4.2. In the case of a multi-business premises, each business may display such sign immediately in front of the business only.

4.2. Signs must be set back at least one (1) foot from the front property line and shall allow safe passage for pedestrians.

4.3. Exception to Setback from front property line: Location of signs for businesses within the four (4) Village Business Districts may be placed on the public sidewalk provided:

4.3.1. Their location does not prohibit safe pedestrian traffic on the public sidewalk and business ingress and egress, as determined by the Zoning Enforcement Officer.

4.3.2. Signs need to be removed and stored in a safe, secure location during non-operational hours of the business and when not safely visible by natural sunlight.

5. TERMINATION OF USE. Any sign advertising a business and/or its products must be removed within thirty days of the voluntary discontinuance of the use.

D. SIGNS REQUIRING PERMITTING

1. Signs recognized in Section 603 C. and in Appendix C Figure C-7 Sign Illustrations: Locations and area calculations need an approved zoning permit from the Zoning Enforcement Agent.

E. SIGNS NOT REQUIRING PERMITTING

1. Signage that was approved as part of a Site Plan and/or Special Exception site plan.

2. SALE OR FOR RENT SIGNS - One temporary sign advertising the sale or rental of the premises upon which it is located, not to exceed four (4) square feet in sign area;

3. CONSTRUCTION SIGNS - One temporary sign pertaining to a construction operation upon the premises upon which it is located not to exceed six (6) square feet.

4. GARAGE or TAG SALE SIGNS – One temporary sign advertising such sale on a residential property, to be held within three days following its erection, of personal property and effects. Such sales shall not exceed four (4) events per property per calendar year, and no more than two days per event.

5. TEMPORARY SIGN – see definition.

6. GOVERNMENT under the jurisdiction of the Town, the State, or the Federal governments and located on land or roadways owned by that government; and POLITICAL SIGNS

7. OFF-PREMISES SIGNS: Off-premises signs shall have a maximum area of four (4) square feet. Examples of permitted off-premises signs are as follows:

7.1. Non-Profit sponsored events

7.2. Fundraising progress signs

7.3. Campaign election signs

7.4. Multi-business name signs advertising business locations when authorized by the Board of Selectmen or its designee.

7.5. Temporary real estate signs promoting an open house, which are removed after the event.

8. SEASONAL RETAIL SALE SIGNS – No more than four signs on a property at the same time for the purpose of promoting the sale of seasonal items accessory to a farm stand, commercial greenhouses and nurseries, and similar seasonal uses. Signs shall be a maximum of four (4) square feet each.

9. MENU BOX SIGN – An enclosed box that contains the menu of a restaurant or food service.

F. SIGNS THAT ARE PROHIBITED

1. Any sign prohibited elsewhere in this section.
2. ROOF SIGN, but signs smaller than 24 square feet are permitted on roof-like areas that are not above any second story.
3. Electronic Message Centers
4. Streamers, pennants and banners, unless expressly approved by the Essex Board of Selectmen and/or traffic authority where over a street, or by the Zoning Enforcement Agent when used as temporary signage per Article VIII, S.21. for an event by a business. Signs that wave in the wind are also prohibited, not including flags less than twenty-four (24) square feet.
5. BILLBOARD SIGNS.
6. VEHICLE SIGNS, Such vehicle sign is to be parked at least 50 feet from the front property line or screened from any off-premises view.
7. PRODUCT ADVERTISING SIGNS that are on-premises and affixed to the ground, or attached to poles, fences, or other accessory structures unless otherwise permitted under these Regulations.
8. OFF-PREMISES SIGNS that advertise a product, event or location except for those allowed in Section 603 E.7.
9. INTERNALLY-ILLUMINATED SIGNS within Essex Village and Ivoryton Village.

G. ENFORCEMENT: The Commission, Zoning Enforcement Agent, or in their absence a designated agent of the Commission, shall issue written order for the removal of any signs that are not maintained or erected in accordance with the provisions of these Regulations. In the case of off-premises signs that have been placed anywhere on town or State property without approval of the Town or the State, the Zoning Official may remove such off-premises signage and store at a location for future pick-up for a period of 10 days. The provisions of Article I, Section 111 shall apply.

Section 604 - Landscaping, Limited Industrial, Business, Commercial Municipal and Industrial Services Districts

A. LANDSCAPING. It is the objective of these regulations to provide adequate landscaping to screen commercial, industrial, and/or office buildings (especially utilitarian buildings) from abutting residential properties and from the street so that the streetscape is in keeping with a rural village appearance. Before commencing any use of such building or enlargement, landscape planting, including trees, shrubs, and grass or ground cover, shall be provided and maintained by the owner in the area required for setback from property and street lines and specifically:

B. LANDSCAPING AND SCREENING. Existing trees shall be preserved to the maximum extent possible, and parking and service areas shall be suitably screened and buffered during all seasons of the year from view of adjacent residential areas and

public streets.

C. *STANDARDS*

1. All lots shall provide a landscaping strip on such lot which is not less than thirty-five (35') feet wide in the Industrial District and twenty five (25') in all other Section 604 Districts, adjacent to and extending for the length of any property line fronting on any street or private roadway maintained by the Town of Essex. This landscaping strip shall be formed with an appropriate screening berm, if feasible, and suitably landscaped and planted with street trees, ornamental trees, shrubs and lawns.

2. The landscaping strip may be traversed by one driveway for a property with less than 300 feet of front lot line. The landscaping strip may be traversed by two driveways for properties with over 300 feet of frontage. Each driveway is not to exceed 24' wide and be a minimum of 100 feet apart.

3. There shall be no parking in the fifty (50') foot front yard setback area.

4. Not more than twenty-five (25%) percent of the area of the required front yard shall be paved, and the balance shall be put in lawn or suitably landscaped and planted and shall at all times be maintained in good appearance (see number 6 below).

5. No portion of any setback area shall be used for storage or for any purpose except as herein provided. No construction equipment and vehicles shall be parked or stored in the front yard.

6. Permanent outside storage areas for materials, supplies and products shall be located in the rear yard and be fenced to the height allowed and/or otherwise screened from view from the property's public service road and/or adjacent properties

7. Loading and unloading platforms shall be located at the rear of the building, and before commencing any use of such building or enlargement, areas used for loading and unloading shall be screened from adjacent streets by landscaping or fencing.

8. *Sidewalks*

8.1. The construction of a sidewalk is strongly suggested, where feasible, along not only streets but also roadways within any multiple building complex. Refer to the Town's most current POCD.

8.2. The construction of a sidewalk is mandated along Plains Road. The sidewalk shall be parallel to and one-foot inside the front lot line of the property from the one edge of the front property line and contiguous to the other edge (unless there is a physical constraint that interferes with this location, such as a mature tree, in which case, the sidewalk shall go around the physical constraint);

9. *Trees*

9.1. Any existing tree of more than ten inches caliper (diameter at breast height) shall be shown on plot plans and shall be maintained unless it hampers utilities, structures, or reasonable working room during construction. In the event that existing trees more than ten (10) inches caliper are cut down in anticipation of filing a zoning application and for the apparent purpose of circumventing this requirement, the Commission may require such trees to be replaced with the largest trees that are commercially available.

9.2. All new deciduous tree plantings shall be a minimum of 2 ½-3" caliper (diameter at breast height) at planting. Evergreen trees shall be a minimum of five-six (5-6) feet at planting. Shrubs shall be a minimum of 2 ½-3 feet tall at planting unless the mature size is under that height (such as shrubs used as groundcover);

10. Where a property adjoins a Residence District on the side or rear property lines, a "green belt", not less than thirty (30') feet in width for Industrial District and twenty-five (25') feet in width for all Section 604 Districts, shall be planted and maintained as identified in the approved site plan. The distance between plants may be varied according to the growth requirements of the plant material in order to provide continuous screening. Generally, conifers will be planted in no fewer than two rows that are fifteen (15) feet apart, with the plant material staggered approximately fifteen (15) feet apart to provide continuous screening. An alternative placement of plant material may be allowed depending upon the suitability of the plant material species. Screening conifer plant material, recommended by the Tree Warden, may not be less than five feet in height at the time of planting.

11. A. bicycle path may be required as set forth in the approved Transportation Plan by the Planning Commission.

12. All other existing natural growth shall be preserved and maintained where practicable.

13. The Commission may require more extensive plantings, or more mature plantings, if unusual conditions demand more extensive screening and noise abatement. The Commission may, upon written request of the owner of the premises, determine that the requirements of the planting of conifers above is not required where existing natural growth to be preserved and maintained affords, in the opinion of the Commission, will provide suitable screening no less effective than would be afforded by the prescribed conifers.

14. *BONDS: See Article I, Section 107 A. Bonds and Filing Fees*

15. OTHER CONDITIONS. The Commission may impose such other reasonable conditions on an Applicant as it may deem necessary or appropriate for the purpose of preventing or diminishing:

15.1. any adverse effect of the use, land, or improvements to be authorized, upon the health, safety, and welfare of the Community,

15.2. Any undue annoyance or disturbance of the occupants of premises in the general neighborhood of such use, land or improvements, and;

15.3. any impairment of the suitability of such use, land or improvements for the General Principal Uses permitted in the district thereof under these Regulations and predominantly existing therein

Section 605 – Floodplain

A. STATUTORY AUTHORITY AND PURPOSE. The Legislature of the State of Connecticut has in Title 7, Chapter 98, Section 7-148(c)(7)(A) and in Title 8, Chapter 124, Section 8-2 of the General Statutes delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry (see Article I, Section 102 of these regulations). Therefore, the Commission of Essex, Connecticut does ordain the following regulation. The purpose of this regulation is to:

1. Minimize public and private losses due to flood conditions in specific areas of the Town of Essex by the establishment of standards designed to:

- 1.1. protect human life and public health;
- 1.2. minimize expenditure of money for costly flood control projects;
- 1.3. minimize the need for rescue and relief efforts associated with flooding;
- 1.4. minimize prolonged business and employment interruptions;
- 1.5. minimize damage to public facilities and utilities;
- 1.6. help maintain a stable tax base;
- 1.7. ensure that purchasers of property are notified of special flood hazards;
- 1.8. ensure that persons who occupy areas of special flood hazard assume responsibility for their actions; and
- 1.9. ensure continued eligibility of owners of property in the Town of Essex for participation in the National Flood Insurance Program pursuant to rules and regulations published in the Federal Register.

B. OTHER RESTRICTIONS. This regulation is not intended to repeal, abrogate or impair any easements or other laws, regulations or ordinances, and whichever imposes the more stringent restrictions shall prevail.

C. INTERPRETATION. In the interpretation and application of this regulation, all provisions shall be considered as minimum requirements and shall be construed so as to preserve and maintain the purpose and intent hereof.

D. WARNING AND DISCLAIMER OF LIABILITY. The degree of flood protection established by this regulation is considered reasonable for town-wide regulatory

purposes and is based on available scientific and engineering studies. Larger floods may occur on rare occasions, and flood heights may increase as a result of man-made or natural causes. This regulation does not imply that land outside of "special flood hazard areas" will be free from flooding or flood damages. This regulation shall not create liability on the part of the Town of Essex, any officer or employee thereof or the Federal Insurance and Mitigation Administration (FIMA) for any flood damages that result from reliance of this regulation or any administrative decision lawfully made hereunder.

E. SEVERABILITY. If any section, subsection, paragraph, sentence, clause, or phrase of this regulation should be declared invalid for any reason whatsoever, such decision shall not affect the remaining portions of this regulation, which shall remain in full force and effect; and to this end the provisions of this regulation are hereby declared to be severable.

F. DEFINITIONS. *SEE Article VIII - Definitions*

G. ZONE DESIGNATIONS. The zone designations are as they appear on the Flood Insurance Rate Map effective as of August 28, 2008 as adopted by the Commission (*See Article III, Section 303 C.*) and made a part of these regulations, and as the same may be amended from time to time, as filed in the Town Clerk's office. Reference is made to the adoption and incorporation of the Flood Insurance Study and Flood Boundary and Floodway Maps of August 28, 2008, or as they may be amended from time to time, as filed in the Town Clerk's office, and any subsequent revisions thereto, are adopted by reference and declared to be part of this regulation. Since mapping is legally adopted by reference into the regulation, it must take precedence when more restrictive, until such time as a map amendment is obtained.

H. LAND USE AND DESIGN REQUIREMENTS:

1. All new construction and substantial improvements in flood-prone areas must:

1.1. Be constructed by methods and practices that minimize flood damages; and

1.2. Be constructed with materials resistant to flood damage.

2. Any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, mining, dredging, filling, grading, paving or excavation operations, may be made within the "special flood hazard area" only in accordance with the following requirements.

2.1. Anchoring. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.

2.2. Construction Materials and Methods. All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

3. Utilities. Water supply and sanitary systems shall conform to the following:

3.1 New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

3.2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood water; and

3.3. On-site sewage disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

4. Flood Elevation. New construction and substantial improvement of buildings and other structures shall conform to the following:

4.1. Any residential structure shall have the lowest floor, including basement, elevated to or above the base flood elevation.

4.2. Any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to or above the base flood elevation or shall, together with attendant utility and sanitary facilities, conform to the following:

4.3. be flood proofed so that at one foot (1') above the base flood elevation, the structure is watertight with walls substantially impermeable to the passage of water.

4.4. for all new construction and substantial improvements, fully enclosed areas below the lowest floor are usable solely for parking of vehicles; building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria: a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

4.5. be certified by a registered professional engineer or architect that the above standards are satisfied, which certifications shall be provided to the Zoning Enforcement Agent.

5. In Zones A, A1-A30, *refer to Article III, Section 303, C.*, the requirements of Section 605 H.4. that any nonresidential structure shall have the lowest floor, including basement, elevated to or above the base flood elevation shall not apply to the following:

5.1. A one story attached garage, provided said garage is not an integral part of a residential structure.

5.2. Accessory buildings, which are less than 400 square feet in floor area and are

accessory to a residential structure.

5.3. One story row garages located on a lot in a residential district containing multiple dwelling units.

6. Accessory buildings, one story attached garages on residential structures and detached garages, as defined in Section 605 H.5. shall conform to the following:

6.1. One story attached garages on residential structures

6.1.1. Shall not be used for human habitation.

6.1.2. Shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwater.

6.1.3. No machinery or equipment which services a building such as furnaces, air conditioners, heat pumps, hot water heaters, washers, dryers, elevator lift equipment, electrical junction and circuit breaker boxes, and food freezers, are permitted below the base flood elevation.

6.1.4. All interior wall, floor, and ceiling materials located below the base flood elevation must be unfinished and resistant to flood damage.

6.1.5. There shall be no basement or excavated area below any accessory building or garage.

6.2. Detached garages.

6.2.1. Use of the garage must be limited to parking or limited storage.

6.2.2. The garage must be built using unfinished and flood damage resistant materials.

6.2.3. The garage must be adequately anchored to prevent flotation, collapse, or lateral movement of the structure and meet the hydraulic openings requirements of Section 605 H.4.3-4.4.

6.2.4. The garage must comply with flood plain encroachment requirements as per Section 605 I.

6.2.5. There shall be no basement or excavated area below any accessory building, attached garage, or detached garage.

6.3. Manufactured Homes:

6.3.1. All manufactured homes must be elevated and anchored to resist floatation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors.

6.3.2. Manufactured homes placed or substantially improved within Zones A1-30, AH and AE must be elevated on a permanent foundation such that the lowest floor of the

manufactured home is elevated to or above the base elevation and be securely anchored to an adequate foundation system to resist flotation, collapse, and lateral movement, which meet one of the following location criteria:

6.3.2.1. Outside of a manufactured home or subdivision;

6.3.2.2. In a new manufactured home park or subdivision;

6.3.2.3. In an expansion to an existing manufactured home park or subdivision; or

6.3.2.4. In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as a result of a flood.

6.3.3. Recreational Vehicles: All recreational vehicles placed on sites within A1-30, AH and AE must be either:

6.3.3.1. On the site for fewer than 180 consecutive days, and be fully licensed and ready for highway use, or

6.3.3.2. Meet the elevation and anchoring requirements of a manufactured home. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnected type utilities and security devices and has no permanently attached additions.

6.4. Subdivision applications shall include the following:

6.4.1. Base flood elevation data for all new subdivision proposals and other proposed developments greater than 50 lots or five acres, whichever is the lesser;

6.4.2 The Planning Commission shall review subdivision proposals to assure that:

6.4.2.1. Such proposals minimize flood damage;

6.4.2.2. All public utilities and facilities are located and constructed to minimize or eliminate flood damage; and

6.4.2.3. Adequate drainage is provided.

6.5. COMPENSATORY STORAGE: The water holding capacity of the floodplain, except those areas which are tidally influenced, shall not be reduced. Any reduction caused by filling, new construction or substantial improvements involving an increase in footprint to the structure, shall be compensated for by deepening and/or widening of the floodplain. Compensatory storage will also be subject to the following:

6.5.1. Storage shall be provided on-site, unless easements have been gained from adjacent property owners;

6.5.2. It shall be provided within the same hydraulic reach and a volume not previously used for flood storage;

6.5.3. It shall be hydraulically comparable and incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Compensatory storage can be provided off-site if approved by the municipality.

6.6. **EQUAL CONVEYANCE.** Within the floodplain, except those areas which are tidally influenced, as designated on the Flood Insurance Rate Map ("FIRM") for the community, encroachments resulting from filling, new construction or substantial improvements involving an increase in footprint of the structure, are prohibited unless the applicant provides certification by a registered professional engineer demonstrating, with supporting hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that such encroachments shall not result in any (0.00 feet) increase in flood levels (base flood elevation). Work within the floodplain and the land adjacent to the floodplain, including work to provide compensatory storage shall not be constructed in such a way so as to cause an increase in flood stage or flood velocity.

I. FLOODWAYS.

1. Floodways as designated on the Flood Boundary and Floodway Maps are extremely hazardous areas due to the velocity of flood waters which cause erosion and carry debris and potential projectiles. The town may request floodway data of an applicant for watercourses without FEMA published floodways. When such data is provided by an applicant or whenever such data is available from any other source (in response to the town's request or not), the town shall adopt a regulatory floodway based on the principle that the floodway must be able to convey the waters of the base flood without increasing the water surface elevation more than one foot (1') at any point along the watercourse.

2. In Zone A when base flood elevations become available, but before a floodway is designated, no new construction, substantial improvement, or other development (including fill) shall be permitted which will increase base flood elevations more than one foot (1') at any point along the watercourse when all anticipated development is considered cumulatively with the proposed development. The following additional standards are applicable to development in relation to floodways:

2.1. **Encroachment:** There shall be no encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating that encroachment will not result in any increase in flood levels during the occurrence of the base flood discharge.

2.2. If the requirement of Section 605 I.2.1. is satisfied, all new construction and substantial improvements shall comply with all other applicable standards of the Flood Plain District.

J. FLOOD HAZARD AREA PERMITS. See Article I Section 114 D.-

K. Bonds and Filing Fees – See Article I, Section 107.

L. APPEALS AND VARIANCES IN FLOOD PLAIN DISTRICT.

1. Refer to Article II – ZONING BOARD OF APPEALS for procedures for variances.

2. Exemption. Variances for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places and the Connecticut State Inventory of Historic Places may be issued without regard to the considerations and conditions of this section.

3. General Considerations. In passing upon applications for variances, the Zoning Board of Appeals shall consider:

3.1. the technical evaluations and studies that are the basis of these Regulations,

3.2. the standards of these Regulations, and

3.3. the following:

3.3.1. the danger that materials may be swept onto other lands to the injury of others;

3.3.2. the danger to life and property due to flooding or erosion damage;

3.3.3. the susceptibility of the proposed facility and its contents to flood damage, and the effect of such damage on the individual owner;

3.3.4. the importance of the services provided to the community by the proposed facility;

3.3.5. the necessity of a waterfront location for the function of the facility;

3.3.6. the availability of alternative locations for the proposed facility which are not subject to flooding or erosion damage;

3.3.7. the compatibility of the proposed use with existing and anticipated other development;

3.3.8. the relationship of the proposed use to the plan of development for the Town and the flood plain management program for that area;

3.3.9. the safety of access to the property in times of flood for ordinary and emergency vehicles;

3.3.10. the costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges;

3.3.11. the expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site.

4. Conditions for Variance. The following are conditions applicable to the issuances of variances by the Zoning Board of Appeals: (See Article II)

4.1. No variance shall be issued within a floodway if any increase in flood levels during the base flood discharge will result.

4.2. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

4.3. Otherwise, variances may be issued for new construction and substantial improvements to be erected on a lot of approved size in the district in which it lies when the lot is contiguous to and generally surrounded by lots with existing structures constructed below the base flood elevation provided that the following criteria are met:

4.3.1. a showing of good and sufficient cause;

4.3.2. a determination that failure to grant the variance would result in exceptional hardship to the applicant; and

4.3.3. a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with other existing Town laws, ordinances and regulations.

5. Conditions. When issuing a variance, the Board may attach such conditions that it deems necessary to further the purpose and intent of this regulation.

6. Written Notice. Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation up to amounts as high as \$25.00 for \$100.00 of insurance coverage.

M. ENFORCEMENT

1. Each Zoning Flood Hazard Area Permit shall authorize, as a condition of approval, the Zoning Enforcement Agent ("ZEA") or designated agents to make inspections of the subject property at reasonable times and upon reasonable notice. The ZEA or designated agents are also authorized to inspect any property in a Special Flood Hazard Area ("SFHA") where it appears that violations of these regulations may be taking place. If the ZEA finds that any person is undertaking any construction, substantial improvement, filling, or any other activity, or maintaining a condition which is in violation of these regulations, the ZEA shall:

1.1. Issue a written order by certified mail, return receipt requested, to the subject property owner, ordering that the activity cease and ordering the property owner to either seek to obtain a Zoning Flood Hazard Area Permit prior to continuing with the activity or, if appropriate, ordering that all violations and/or obstructions be removed from the Special Flood Hazard Area ("SFHA") immediately.

1.2. Notify the Building Official/Inspector and request that any building permit(s) in force be revoked or suspended and that a stop work order be issued.

1.3. The ZEA may suspend or revoke a Floodplain Development Permit if it is found that the applicant has not complied with the terms, conditions or limitations set forth in the permit or has exceeded the scope of work as set forth in the application including application plans. Prior to revoking any permit, the ZEA shall issue notice to the permittee, personally or by certified mail, return receipt requested, setting forth the facts or conduct which warrants the intended action.

1.4. Failure to comply with any written order issued under this section shall be considered a violation of these regulations and is subject to the penalties described in Section 605 N.

1.5. In the event violations or obstructions are not promptly removed from the Special Flood Hazard Area ("SFHA"), the ZEA may cause such removal and remediation work to be performed utilizing bond money held in escrow pursuant to Section 605 K. of this regulation or may direct the appropriate agent to cause such work to be done and to place a lien against the property.

1.6. Any person subjected to enforcement action pursuant to this regulation, may appeal any requirement, decision, or determination of the Essex Zoning Board of Appeals, in accordance with Article II, Section 203 of these Regulations. Such person shall provide such information as necessary including appropriate certifications from a registered professional engineer or architect in order to substantiate the claim that the requirement, decision, or determination of the ZEA was in error or unwarranted.

1.7. Nothing contained herein shall prevent the owner of a residential dwelling, commercial or industrial building existing at the time of the adoption of this regulation from repairing, replacing or restoring said building or the components thereof to substantially the same character and form as existed at the time of such adoption.

N. PENALTIES FOR VIOLATION Any violation of the provisions of this regulation or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with the granting of variances or special exceptions, shall constitute a misdemeanor. Any person who violates this regulation or fails to comply with any of its requirements shall, upon conviction thereof be subject to the fines, imprisonment, civil penalties, costs and fees as set out in Section 8-12 of the Connecticut General Statutes, as from time to time amended. Nothing herein contained shall prevent the Town of Essex from taking such lawful action as is necessary to prevent or remedy any violations.

Section 606 – Erosion and Sediment Control

A. SOIL EROSION AND SEDIMENT CONTROL. A Soil Erosion and Sediment Control Plan shall be submitted with any application for development when the disturbed area of such development is cumulatively more than **one-half acre**. The Soil Erosion and Sediment Control Plan shall be submitted as part of the more

comprehensive site development plan as required in Article I, Section 114 B. and 114 C. of these Zoning Regulations. The plan shall contain, but not be limited to:

1. The schedule for grading and construction activities including: start and completion dates; sequence of grading and construction activities; sequence for installation and/or application of soil erosion and sediment control measures; and sequence for final stabilization of the project site.
2. The design criteria for proposed soil erosion and sediment control measures and storm water management facilities.
3. The construction details for proposed soil erosion and sediment control measures and storm water management facilities.
4. The installation and/or application procedures for proposed soil erosion and sediment control measures and storm water management facilities.
5. The operations and maintenance program for proposed soil erosion and sediment control measures and storm water management facilities.

B. SOIL EROSION AND SEDIMENT CONTROL – MINIMUM STANDARDS.

1. Plans for erosion and sediment control shall be developed in accordance with these regulations using the principles as outlined in the Connecticut Guidelines for Soil Erosion and Sediment Control (2002), as amended
2. The minimum standards for individual measures shall be those in the Connecticut Guidelines for Soil Erosion and Sediment Control (2002), as amended. The Commission may grant exceptions when requested by the applicant if technically sound reasons shall be presented.
3. The appropriate method as provided for in Section 608 Drainage and Storm Water Control and the Connecticut Stormwater Manual (2004), as amended, shall be used in determining peak flow rates and volumes of runoff, retention, detention, storage criteria unless an alternative method shall be approved by the Commission.

C. BONDS: The Commission may require bonding to assure the installation and maintenance of erosion and sedimentation control measures, including the cost of replacing or supplementing them if necessary. Such bonds shall be in the form of cash, passbook assignment, or letter of credit, as determined by the Commission, and the form thereof shall be subject to review and approval by the Commission's legal counsel. Insurance company surety bonds shall not be acceptable.

D. CONDITIONS OF APPROVAL.

1. The estimated costs of measures required to control soil erosion and sedimentation, as specified in the approved plan, may be required to be covered in a performance bond or other assurance acceptable to the Commission.

2. Site development shall not begin unless the Soil and Sediment Control Plan shall be approved and those control measures and facilities in the plan scheduled for installation prior to site development shall be installed and functional

3. Planned soil erosion and sediment control measures and facilities shall be installed as scheduled according to the approved plan.

4. All control measures and facilities shall be maintained in effective condition to ensure compliance with the approved plan

Section 607 – Excavation

A. PURPOSE. To prevent or diminish any adverse effect of all filling, excavation, grading or transportation operations upon the health, safety or welfare of the community, any undue annoyance or disturbance of the occupants of premises in the general neighborhood of such operation, any impairment of the usefulness or value of premises involved in such operations and in the general neighborhood of such operations, and any unwarranted adverse effect upon subsurface water resources.

B. OPERATIONS PERMITTED WITHOUT SPECIAL EXCEPTIONS.

1. Necessary filling, excavation, grading or removal in connection with:

1.1. Construction of the foundation of any building or swimming pool or in land incidental to the construction of any such building or swimming pool, or of access way and parking facility, involving the movement of not more than 1,000 cubic yards of earthen material.

1.2. Construction of any single-family dwelling that is not part of a subdivision of land and involving the movement of not more than 1,000 cubic yards of earth material.

2. Any earth removal, filling and/or regrading when the disturbed area of the development is cumulatively ½ acre or less and less than 1,000 cubic yards of earth material.

C. OPERATIONS REQUIRING A SPECIAL EXCEPTION.

1. Earth material operations not specifically permitted under Section 607 B. require a Special Exception as specified under Section 607 E.

2. Application for a Special Exception, which the Commission or its designated agent may grant after public hearing, shall be submitted as specified under Section 607 E. in duplicate to the Commission.

3. Bonds and Filing Fees: See Article I, Section 107. Bonds and Filing Fees

D. REGULATIONS FOREXCAVATION AND FILLNG OF EARTH PRODUCTS.

1. DEFINITIONS See Article VIII - DEFINITIONS:

E. APPLICATIONS FOR SPECIAL EXCEPTION.

1. Application for a Special Exception shall be in accordance with Section 115 and include a soil erosion and sediment control plan which shall contain proper provisions to adequately control accelerated erosion and sedimentation and reduce the danger from storm water runoff on the proposed site based on the best available technology. Such principles, methods and practices necessary for plan approval are found in the Connecticut Guidelines for Soil Erosion and Sediment Control (1985) as amended. Alternative principles, methods and practices may be used with prior approval of the Commission.

2.- Said plan shall be in accordance with Section 606 and include additional information as needed but not be limited to:

2.1. the operations and maintenance program for proposed soil erosion and sediment control measures and storm water management facilities;

2.2. an estimate of the number of cubic yards of material to be filled, excavated, graded or removed and an estimate of the time necessary to complete the operation;

2.3. an estimate of the number, types and hours of operation of trucks and other machinery to be used on the site, and the locations and types of any buildings, including temporary buildings to be erected;

2.4. details of proposed blasting and storing of explosives.

3. A site plan map shall be submitted as per Appendix B.

4. A re-use plan demonstrating that, upon completion of the operation, the property can be used for uses permitted in the zone, including adequate depth to groundwater to allow the installation of septic systems in areas not served by public sewers.

5. Any other information deemed necessary and appropriate by the applicant or requested by the Commission or its designated agent.

F. Issuance or Denial of Special Exception:

1. The Commission shall grant the Special Exception in accordance with Article I, Section 115 C. when the soil erosion and sediment control plan, as filed, complies with the requirements and objectives of this regulation, or it shall deny the Special Exception when the plan does not comply with these regulations.

2. Prior to granting the Special Exception, any plan submitted to the Commission may be reviewed by the Ct. River Coastal Conservation District which may make recommendations concerning such plan, provided such review shall be completed within thirty (30) days of the receipt of such plan. Where the site plan falls within the area regulated by the Connecticut River Gateway Conservation District, the plan shall be submitted to the plan shall be submitted to the CT. River Coastal Conservation.

3. The Commission may forward a copy of the control plan to the Conservation

Commission, Inland Wetlands and Water Courses Commission or other review agency or consultant for review and comment.

G. Inspection:

1. Inspections shall be made by the Commission or its designated agent during development to ensure compliance with the control plan and that control measures and facilities are properly performed or installed and maintained. The Commission may require the permittee to verify through progress reports that soil erosion and sediment control measures and facilities have been performed or installed according to the control plan and are being operated and maintained.

2. Planned soil erosion and sediment control measures and facilities shall be installed as scheduled according to the control plan.

3. Site development shall not begin unless the soil erosion and sediment control plan is approved and those control measures and facilities in the plan scheduled for installation prior to site development are installed and functional.

4. All control measures and facilities shall be maintained in effective condition to ensure the compliance of the control plan.

H. GENERAL STANDARDS AND CONDITIONS.

1. All filling, excavation, grading and transportation operations must comply with the following standards and conditions:

1.1. No filling, excavation, grading or removal which is more than ten (10') feet below the elevation of any abutting street or property line shall occur within twenty-five (25') feet of a property line. Barricades or fences shall be erected as are necessary for the protection of pedestrians and vehicles;

1.2. no processing machinery shall be erected or maintained on the lot within one hundred (100') feet of any abutting street or property line, and any such machinery shall be removed from the lot upon termination of the operation. No other machinery not required for the operation shall be on the site;

1.3. except in an Industrial District, no screening, sifting, washing, crushing or other forms of processing shall be constructed upon the premises;

1.4. proper measures shall be taken to minimize nuisance from noise and dust. The driveway(s) or other access roadway(s) shall be treated in such manner as the Zoning Enforcement Agent may direct to ensure compliance with this section;

1.5. all vehicles moving through the Town of Essex carrying earth materials shall have their loads covered and secured to prevent dust and spillage.

2. Restoration. Upon completion of work, the area of excavated, filled or otherwise disturbed ground shall be prepared or restored as follows:

2.1. Such area shall be evenly graded to slopes not exceeding one foot of vertical rise

to three feet of horizontal distance except where ledge rock makes steeper slopes unavoidable or to such lesser slope necessary for soil stability, safety and reasonable reuse and development of the lot; in addition, the area shall be evenly graded with sufficient slopes, dikes, berms and waterways to assure adequate drainage of the area, to eliminate stagnant pools of water and adjacent area damage;

2.2. all debris and all loose boulders not incorporated into the improvement of the lot shall be buried or removed from the lot;

2.3. a top layer of any arable soil, which shall be free of any large stones, shall be spread to a depth of not less than six (6) inches over the entire area, and the area shall then be seeded with a perennial grass and maintained until the ground shall be completely stabilized and there exists no danger from erosion.

I. EXISTING OPERATIONS. Any operation involving the filling, excavation, grading or removal of earthen material which is in existence and has an overall approval on the effective date of these regulations shall be allowed to be completed in accordance with the overall approval.

J. BONDING. *See Article I Section 107 Bonding and Filing Fees*

1. The Commission shall require that one or more performance bond(s) be posted with the Treasurer of the Town to guarantee completion of all work necessary to fulfill all conditions prescribed in connection with the grant of the Special Exception. It may require that a single comprehensive bond be posted to guarantee fulfillment of all such conditions or it may require that several separate bonds be posted to guarantee completion of separable components of any such conditions. Such bond or bonds, in which the applicant shall be the principal and the surety shall be a bonding company licensed to do business in Connecticut, shall be given in such amount or amounts as the Commission shall prescribe. The Commission may at its discretion accept a cash bond or bonds. A single comprehensive bond, posted to guarantee completion of a separable component of any such conditions, shall remain in effect until completion of such component. No removal shall be commenced unless and until the bond or bonds required hereunder have been posted.

Section 608 – Drainage and Storm Water Control

A. Purpose

1. The purpose of this Section is to encourage development proposals to address drainage and stormwater issues related to new development and to incorporate Low Impact Development (“LID”) planning and design approached in the Town of Essex. This Section seeks to guide land use decisions and does not replace any Federal, State or local stormwater flow control and water quality treatment regulations.

2. Low Impact Development (“LID”) is an approach to land-use planning and project design that seeks to:

2.1. Increase the ability of a developed site to effectively emulate pre-development

hydrologic conditions, including without limitation, stormwater retention and detention, water quality treatment and infiltration functions;

2.2. Minimize overland stormwater runoff from a developed site;

2.3. Maximize retention of trees, native vegetation, under story plants, and native soils;

2.4 Minimize disturbance;

2.5. Minimize conversion of site surfaces from vegetated to non-vegetated surfaces; and,

2.6. Maximize the quantity and use of appropriate native plants on-site

B. Applicability: The provisions of this Section shall apply when Site Plan(s) drawing(s) are prepared as a part of permit applications for Zoning Permit, Site Plan, Coastal Site Plan or Special Exception approvals as follows:

1. For Commercial, Retail, Business and Industrial Developments

2. For Multi-Family Residential Developments of three (3) acres or more, excluding single family and two-family residential construction as a part of a previously approved lot,

3. The total impervious surface area of developments is fifty (50%) percent or greater,

4. Applications for other developments may be required to provide such drainage and stormwater control if deemed necessary by the Commission to protect the health, safety and welfare.

C. General Requirements

1. Measures for retention, detention and controlled release of stormwater runoff shall meet the following standards and shall be designed in accordance with the requirements set forth in the Connecticut Guidelines for Soil Erosion and Sediment Control (2002) and the 2004 Connecticut Department of Environmental Protection Stormwater Quality Manual” as amended;

2. The CT DOT Drainage Manual shall be used as a source document for analysis;

3. Peak discharge from the two (2) year, ten (10) year, twenty-five (25) year and one-hundred (100) year return frequency, 24-hour, type iii distribution of NOAA Atlas 14 (latest version) Middlesex County -Essex, CT. storms shall be analyzed;

4. Rainfall run-off for the entire site development equaling 1" rainfall volume shall be retained on-site utilizing methods described in 5. below;

5. No increase in peak run-off rates from pre-development conditions to post-

development conditions for storms as listed in 3. above shall be allowed to leave the site. Design elements may include, but not limited to:

- 5.1. Detention basins
 - 5.2. Belowground infiltration structures
 - 5.3. Retention ponds
 - 5.4. Roof and parking storage
 - 5.5. Other acceptable measures;
6. Run-off shall be computed utilizing analysis methods as approved by the Commission or the Zoning Enforcement Agent.,
7. Stormwater systems should be designed to trap floatable materials separately from sediment and be accessible for cleaning and maintenance.

Section 609 – Traffic Studies Control

- A. For permit applications with site plans involving fifty (50) or more parking spaces and/or uses projected to generate more than three hundred (300) vehicle trips per day;
1. A traffic impact analysis, prepared by a traffic engineer licensed in the State of Connecticut, indicating the expected average daily vehicular trips, peak hour volumes, access conditions at the parcel, distribution of traffic, types of vehicles expected and effect upon level of service of the street or other roadway giving access to the parcel shall be prepared.
 2. A traffic impact analysis may be waived by the Commission where the proposed use, existing traffic patterns and conditions, and roadway geometry indicate that such an analysis is not required under the circumstances. Refer to Appendix B
 3. The Commission, reviewing permit applications with less traffic impact than specified in A. above, may require a traffic impact analysis to be prepared as a part of the permit application.
- B. The traffic impact analysis shall be prepared utilizing study parameters and criteria established and accepted by the Office of State Traffic Authority ("OSTA").
- C. Traffic impact analysis studies for projects accessing onto Town streets may be conducted at any time during the year using standard projection methods for summer month traffic levels. Traffic impact analysis studies for projects accessing onto State streets shall be conducted during peak summer time intervals as directed by the Commission or the Zoning Enforcement Agent.

Section 610 – Timber Cutting Plan

- A. TIMBER CUTTING PLAN. The applicant shall submit a plan, which shall be

made a part of the coastal site development plan required under Article I, Section 114 B. of these Regulations, describing the existing mix of forest tree species and their approximate height, age and density; and a complete description of the cutting and removal activities to be undertaken in preparing the site for any proposed improvements and for the customary maintenance of the premises.

1. Any tree more than ten inches caliper (diameter at breast height) shall be shown on the site development plan and, unless otherwise permitted by the Commission upon written request, shall be maintained.

2. All existing natural under-growth shall be preserved and maintained where practicable.

3. The Commission shall have the authority to require, and may require, more extensive plantings, or more mature plantings, if conditions on the proposed site demand more extensive screening.

B. The Commission may impose additional requirements as conditions of approval including, but limited to, the provision of additional buffer areas, site development limitations, landscaping and similar stipulation.

Section 611 – Performance Standards (vacant)

Article VII - Special Requirements

Section 701 - Definitions and Prohibitions

- J. Definitions – See Article VIII
- K. Prohibitions – See Article III, Section 305

Section 702 - Residential Conversions (vacant)

Section 703 - Conditions of Residential Multiple Dwelling Development Projects Special Exception

A. PURPOSES. The provisions of this Section 703 are designed to enable a developer of land for multifamily residential use to make such use pursuant to a plan which is in keeping with the overall residential density and open space objectives of these Regulations in order to:

1. Permit a creative approach to the development of residential land by avoiding the conventional gridiron pattern;
2. Accomplish a more desirable environment than would be possible under the strict application of the requirements of Article IV, Section 402 C.;
3. Provide for the most efficient use of land, and thus counteract the effects of urban congestion and monotony;
4. Enhance the appearance of neighborhoods through preservation of natural features, and open space areas;
5. Provide structure to neighborhood design, add to the sense of spaciousness and encourage participation by all age groups in the use and care of local open space tracts within new residential subdivisions; and thereby
6. Help promote the public health, safety, and welfare of the people residing nearby, and to aid in stabilizing property values.

B GENERAL. Applications for projects within this Section 703 shall be by Special Exception Article I, Section 115 C.1. In addition to the conditions prescribed in Article I, Section 115 C.1., the required submissions for a Special Exception for a multiple dwelling project shall include the information under Article I, Section 115 A.7 are as follows:

1. BUILDINGS.

1.1. VACANT

1.2. Only the first and second stories shall be used for dwelling purposes; no space having its floor level below the grade shall be used for dwelling purposes except as a recreation or utility room;

1.3. The minimum distance between any two multi-family dwelling buildings in a multiple dwelling project shall not be less than 60 feet, and not less than twenty-five (25') feet for single-family dwelling buildings, and where the number of such buildings exceeds two, the intervals between them and their orientations shall be varied sufficiently to avoid the uniform appearance of a gridiron pattern and to make efficient use of the entire lot as an integrated whole;

1.4. There shall be in respect of each building a minimum setback line of fifty (50') feet from all streets and all lot lines of adjacent property;

1.5. The required minimum floor area of each family dwelling unit shall be seven hundred (700') square feet. For each room in excess of three, the family dwelling unit shall have an additional 120 square feet of floor area. In determining the number of rooms of a family dwelling unit and its floor area for purposes of this subparagraph, there shall not be included halls, stairways, foyers, closets, porches or bathrooms;

1.6. The maximum number of separate bedrooms in any family dwelling unit shall be three, and the minimum one;

1.7. There shall be provided for each family dwelling unit an enclosed storage space within the dwelling, in addition to closet space, equal to 10 percent of the floor area of such family dwelling unit. In determining the floor area for purposes of this subparagraph, there shall not be included halls, stairways, foyers, closets, porches or bathrooms;

1.8. One or more surfaced areas for use as a clothes line drying area shall be provided at the rear of each dwelling building. Such area or areas shall be surrounded by a closed fence, latticework or shrubbery;

1.9. *Screened* storage of rubbish and garbage shall be in one or more suitable vermin and rodent proof containers having at least a 40-gallon capacity per each family dwelling unit;

1.10. Radio and television facilities shall be installed on the rear of building and shall be served by a master antenna only. No individual external radio or television antennas shall be permitted.

2. UTILITIES.

2.1. Each family dwelling unit shall be connected to a water supply and a minimum daily supply as per the Connecticut Public Health Code of pure potable water shall be made available under adequate water pressure to each family dwelling unit, and shall comply with Article I, Section _____.[^] The water supply system shall be so designed and constructed as to provide adequate fire protection with hydrants installed within five hundred (500') feet of all structures or as required by the Town Fire Marshal;

2.2. Each dwelling building shall be connected either to a municipal sewage disposal system or to a private sewage disposal system which shall have been approved by the Town Health Officer and a licensed engineer as suitable for the local soil conditions,

and shall comply with the requirements of Article I, Section 115._____.^ In no case shall the sanitation requirements be less than those required by the State Department of Health;

2.3. All wires, cables and other conduits and equipment used to transmit utilities to or among multiple dwellings and buildings within multiple dwelling projects shall be installed underground in accordance with, and to the extent permitted by, generally accepted engineering principles.

3. STREETS, TRAFFIC, PARKING.

3.1. All proposed streets associated with any multiple dwelling or multiple dwelling project shall conform to the design criteria and construction standards prescribed by the Essex Subdivision Regulations, as the same may from time to time be amended, in the case of subdivisions. All such streets shall have a right of way not less than 50 feet wide, whether intended to be Town streets or private association streets, and shall be so arranged that they connect in a reasonable way considering traffic problems, the convenience of future occupants and the public, with other proposed or existing streets. Whenever the Commission shall so require, a driveway shall be considered as a street for purposes of this subparagraph. In making such requirement, the Commission shall have regard to the length, location and reasonably foreseeable intensity of use of said driveway;

3.2. The area shall be served from, or have access to an accepted, improved town or state street which provides adequate circulation and access to other sections of the Town. Where such Town street is not deemed adequate to serve the area, the Commission may require participation by the developer in the improvement of said Town street in accordance with the Town Road Ordinance. Ease of entrance to, and exit from, the development with minimum impact on normal traffic flow shall be of prime importance. Interior streets and driveways shall be designed to eliminate through traffic, reduce traffic speeds and provide for adequate circulation within the development and to its facilities and open space. Walkways, courts and paths shall provide pedestrian access to and between residential structures, supporting facilities and community open space and shall be separated from vehicular traffic whenever reasonably possible;

3.3. In accordance with Table VI-1, off-street parking spaces shall be provided at a minimum of 1.5 spaces per dwelling unit. Parking may be provided beneath dwelling units, in separate parking garages or in open parking areas. Parking facilities shall be designed as an integral part of the site development design and arranged to prevent undue concentration of parking facilities. Access to dwelling units from parking facilities shall be by walkway or with structures.

4. OPEN SPACE.

4.1. All land not used for dwellings, supporting facilities, parking, vehicular circulation, or private yards shall be considered open space. It shall be so arranged and defined that its area, permanent use and control can be established. Except when required for Town use, it shall be dedicated for use by the residents of the development

with adequate controls to assure its maintenance, and with restrictions or covenants prohibiting or restricting building thereon;

4.2. The following types of supporting facilities to serve the residents of the development are permitted or may be required by the Commission: recreational facilities such as tennis courts and swimming pools; also, storage for owners' or tenants' boats, trash removal facilities, and school bus pickup shelters.

5. OTHER REQUIREMENTS.

5.1. Housing units may be for rental or for sale in cooperative or condominium ownership. Documentation as to the organization and incorporation of applicable ownership associations shall be submitted to the Commission. All open space, other than that accepted by the Town, and supporting facilities, including streets and driveways, shall be under specified common ownership with provision for maintenance, liability and the rights of access and use by residents of the development which is acceptable to the Commission.

5.2. All signs shall be designed as an integral part of the design concept, and shall otherwise meet the requirements of Article VI, Section 603.

C. BONDS. *See Article I Section 107 Bonds and Filing Fees*

D. REQUIRED CHARACTERISTICS. The minimum lot area shall be determined by the proposed number of family dwelling units. If the lot is served by public water supply, by a company under the jurisdiction of the Public Utilities Regulatory Commission and the State Department of Health, the minimum lot area shall be 40,000 square feet per family dwelling unit; otherwise it shall be 60,000 square feet per family dwelling unit. The only required setbacks are those specified in paragraph Section 703 A.1. Each lot shall contain a contiguous building site of at least 42% of the minimum lot area which is considered buildable land as defined in Article VIII. Maximum building coverage is 10%. The maximum building height is 35 feet.

Section 704 – Condominiums (vacant)

Section 705 – Active Adult Community

A. An active adult community shall be as follows:

1. A residential Community providing housing for older persons occupied by those 55 years of age or older to the extent permitted by Federal and State Fair Housing Laws and any other applicable laws. This restriction shall be incorporated into the respective deeds of the units and shall remain in effect unless modified by the Commission and the owner(s) of the property.

2. Additional allowed uses are the provision of amenities, and accessory or ancillary uses typical in such a residential community.

3. There shall be a minimum of two residential parking spaces required per unit, one of which shall be under cover. The Commission, in its discretion, may require

additional guest parking as follows: guest parking; RV/trailer parking; and, employee parking. All parking shall be suitably landscaped and screened.

B. MODIFICATION: While it is the intention of this section to provide housing for people aged 55 and over, the Commission recognizes that under certain conditions it may not be in the best interest of the Town to restrict the proposed development of 80% of the units to occupants 55 years of age or older. Therefore, the Commission may, in its discretion, reduce the requirement that 80% of the units constructed under this Section 705 A. be restricted to people aged 55 years or older. In deciding whether or not to reduce this restriction the Commission may consider traffic, water supply, size of the structure, the number of units contained in the structure(s), the number of bedrooms within each unit, available parking, proposed recreational facilities, if any neighboring structures are or are not restricted, (elevators within the structure(s)), the effect, if any, on neighboring properties and the location of the proposed development relative to other facilities and medical offices. If the Commission modifies the above restriction, then the units may be sold and/or occupied by persons of any age. However, all of the other conditions of this section must be complied with. The facility owner or manager shall submit a letter annually to the Zoning Enforcement Agent certifying conformance with the Modification.

Section 706 - Open Space Residential Development Subdivisions

A. SINGLE FAMILY RESIDENTIAL CLUSTER DEVELOPMENT. Anything to the contrary in these regulations notwithstanding, lots and structures contained within a single family residential cluster development subdivision, (which development is entitled Open Space Preservation Subdivision in the Essex Subdivision Regulations), shall not be subject to the required characteristics for the zoning district in which the property is located. Rather, the lot and buildings shall be subject to the characteristics as shown in Article IV Table IV-I:

1. Each lot shall contain a contiguous building site of at least 42% of the minimum lot area, which is buildable land as defined in these Regulations.

2. Perimeter Buffer between Cluster Development Subdivision Boundary Line and Boundary Line Of Any Lot Therein - 75 ft.

3. It is not the intent of this regulation to increase the density of land development in Essex. The number of lots in a cluster development subdivision shall not exceed the number of lots which could reasonably be created in a standard subdivision layout as determined in accordance with the Subdivision Regulations.

4. This Section 706 A. shall apply only to property located within the Rural Residence District.

Section 707 - Home Based Business – See Article VIII Definitions H.5.

Section 708 – Sale of Alcoholic Beverages

A. GENERAL. Except as provided in Section 708 A.1. below, any other provision in

these Regulations to the contrary notwithstanding, no building or land shall be used for:

1. ON-OR-OFF-PREMISES SALE OF ALCOHOLIC BEVERAGES. The sale of any alcoholic beverage to be consumed on the premises or the sale at retail of any alcoholic beverage to be consumed off the premises if such building or land is located in a Village Residence, River Road Residential, or Rural Residence District.

Section 709 – Waste Facilities

A. GENERAL. Any other provision in these Regulations to the contrary notwithstanding, no land in any District shall be used for the storage or keeping of garbage, waste or scrap material, debris, motor vehicles which are partially or wholly dismantled, motor vehicle parts, abandoned machinery, junk or similar material except:

1. BUSINESS OPERATION. When stored or kept on premises of the owner as an accessory use to the operation of a commercial, duly- licensed motor vehicle repair business in a District in which such use is permitted;

2. CONSTRUCTION OPERATION. When stored or kept temporarily as an accessory use to the prosecution of a construction operation upon the same premises where such material is stored or kept;

3. INSIDE STORAGE. When stored or kept within a completely enclosed building as an accessory use to the principal use;

4. MOTOR VEHICLE IN REPAIR. One motor vehicle temporarily stored or kept on premises of the owner while such vehicle is being repaired, if stored or kept indoors or in the rear yard and screened as viewed from the street; or

5. ANTIQUES. Antique household furniture, china, glassware or silver when displayed on premises of a dealer as inventory or awaiting delivery to customers in the ordinary course of a regular business of refurbishing or selling such antiques.

B. PRE-EXISTING USES. The accessory use of land for the storage or keeping of material described in this Section 709 A. shall not be considered as establishing a nonconforming principal use.

C. HAZARDOUS WASTE DISPOSAL - Under no circumstances will the deposition of or storage of waste materials from hydraulic fracturing, other petroleum or natural gas extraction operations and/or coal byproducts be permitted.

Section 710 – Trailers, Motor Homes, Boats and Recreational Vehicles

A GENERAL. Any other provisions in these Regulations to the contrary no trailers, mobile homes, boat and/or recreational vehicles shall be used, or placed upon premises in any District except:

1. PARKED OR STORED. When parked or stored on premises of the owner thereof

and not there used for human habitation or other purpose if (1) the number of such trailer, mobile home, boat and/or recreational vehicles on said premises does not exceed one and (2) such trailer, mobile home, boat and/or recreational vehicle is parked or stored indoors or in the rear yard and screened as viewed from the street;

2. CONSTRUCTION OFFICE. When used as a temporary office in connection with the prosecution of a construction operation upon the same premises where such trailer, mobile home, boat and/or recreational vehicle is located; or

3. MANUFACTURER'S INVENTORY. When parked or stored on premises of the owner as inventory or awaiting delivery to customers in the ordinary course of a regular business of manufacturing or selling of trailers, mobile home, boat and/or recreational vehicles.

4. BUFFERS: Rear and side yard setbacks for approved uses within this Section 710 shall be 1.5 times the required minimum rear and side yard for the District to which the use is to be located.

B. The foregoing exceptions, Section 710 A.1, A.2., and A.3, shall not apply to special flood hazard areas as defined by Article VI of these regulations. No mobile home shall be used, or placed upon premises in a special flood hazard area as delineated on the Flood Insurance Map.

Section 711 - Accessory Dwelling Units

A. PURPOSE. The purpose of this section is to allow private property owners to create housing alternatives in the form of accessory dwelling units across the Town of Essex. Accessory dwelling units, as permitted in this section represent a method of increasing residential densities in established neighborhoods and particularly in village centers and key development nodes without negatively impacting established community character.

B. DISTRICTS. An accessory dwelling unit shall be permitted via a site plan review per Article I, Section 114 B. of these regulations in the following districts; Village Residence District (VR), Rural Residence District (RU), Rural Residence – Multifamily (RR-MF), Essex Village District (EV) and Commercial District (C). Where these districts are superimposed by other overlay districts in the Town of Essex, and unless expressly prohibited in the overlay districts, accessory dwelling units shall be permitted in these districts.

1. Accessory dwelling units proposed within a principal structure shall be permitted with a zoning permit as long there are no external changes to the principal structure. A site plan review is required where external changes to the principal structure are proposed.

2. Accessory dwelling units within new or existing detached accessory buildings shall be permitted via a site plan review.

C. DEFINITIONS. See Article VIII of these Regulations.

D. REQUIRED LOT CHARACTERISTICS.

1. The lot shall conform to the minimum lot width and area requirement for the zone in which the property is located or be legally nonconforming.
2. New construction for accessory dwelling units, whether detached from principal structure or involving structural additions or modifications to the principal structure, must conform to all setback and coverage requirements of these Regulations.
3. Parking and access from the street or any other public right-of-way shall serve both the principal and accessory units, and shall not be distinguishable as separate facilities;
4. No additional curb cut shall be created to serve an accessory dwelling unit;
5. Adequate off -street parking as required by these Regulations shall be provided for both uses and such parking shall not be located in the front yard;
6. Where practicable, parking areas for the accessory dwelling unit shall be located to the rear of the principal building.

E. ACCESSORY DWELLING UNIT CHARACTERISTICS

1. Where any portion of an existing principal building has been continuously used for human occupancy, that portion of the building may be converted to an accessory dwelling unit provided that the conversion shall not increase any nonconforming characteristic.
2. An existing enclosed and attached garage area shall not be considered as a portion of a building used for human occupancy with respect to this regulation.
3. No accessory dwelling unit shall be located in a basement unless one wall opens to grade;
4. A detached accessory dwelling unit may only be located in detached garages or barns. A detached accessory dwelling unit may be located in an existing garage or barn structure that meets a minimum fifteen (15') foot side and rear setback and the minimum front yard setback required for any building used for human occupancy in the district where such building is located. A new detached garage or barn structure with a proposed accessory dwelling unit must meet the required setbacks of the district. The living area of the accessory dwelling unit shall not diminish the useable area of an existing garage or barn, nor exceed the ground level gross floor area of such existing garage or barn.

F. MISCELLANEOUS - The accessory dwelling unit shall comply with the following:

1. A detached accessory dwelling unit shall be a minimum size of 400 square feet but shall not exceed 850 square feet. An attached accessory dwelling unit shall be a minimum of 400 square feet but shall not exceed 850 square feet, or 30% of the combined assessed living area of the principal use and the accessory dwelling unit, whichever is less;
2. Have a maximum of *one (1) bedroom*;
3. Be self-contained, with separate cooking, sanitary, and sleeping facilities for the exclusive use of the occupant(s);
4. When located as part of the principal dwelling an accessory dwelling unit and the principal dwelling shall be separated by at least one wall that is common to the interior of both dwellings. A door providing interior access between the accessory and principal dwelling units must be provided, except that in the Rural Residence-Multifamily District (RUM) an interior door is optional and shall not be required.
5. Except as permitted in section Article III, Table III-2 of these Regulations, only one accessory dwelling unit shall be permitted for each lot and no accessory dwelling unit shall be approved as part of a two -family dwelling or any multiple dwelling use;
6. In the case of an accessory dwelling unit in a residential Zoning District, the owner of the property shall occupy either the principal dwelling unit or the accessory dwelling unit;
7. Both the accessory dwelling unit and the principal building/unit shall meet the requirements of the Building and Public Health Codes;
8. Upon establishment of the accessory dwelling unit, the building shall maintain the exterior appearance and style (roof line, roof pitch, building materials, window style and spacing, etc.) of the principal building;
9. Upon establishment of the accessory dwelling unit, the building shall have any secondary entrance incorporated into the principal use to reflect the architectural style of the existing structure;
10. No family dwelling may be used for the renting of rooms to transients (that is, persons residing on the premises for less than thirty (30) consecutive days).

G. PROCEDURES - SUBMISSION OF APPLICATION.

1. An application for Site Plan Review for an accessory dwelling unit , where required under this section shall be made pursuant to Article I, Section 114 B. of these Regulations. Prior to the granting of an approval under this Section, a notarized affidavit to verify that the owner of the property (if in a residential district) is one of the occupants of the subject dwelling shall be submitted to the Commission;

2. No certificate of occupancy shall be issued for a building or use pursuant to this Section 711 without certification in writing from the Zoning Enforcement Agent, the Town Sanitarian, the Town Building Inspector, and the Town Fire Marshal that the building or use is in conformity with the requirements of these zoning regulations and the Public Health, Building, and Fire Code requirements. A copy of the approval containing the condition that the owner is one of the occupants shall be filed on the land records by the owner;

3. Upon change in ownership of the property, the Zoning Enforcement Officer may require an updated affidavit by at least one natural person who is an owner of record of the property indicating that an owner of the property is one of the occupants of the subject dwelling.

Section 712 – Apartments in Commercial Buildings

A. PURPOSE. The purpose of this section is to allow private property owners to create housing alternatives in the form of apartments within commercial buildings. Apartments, as permitted in this section, represent a method of increasing residential densities in established commercial areas and particularly in village centers and key development nodes without negatively impacting established community character.

B. DISTRICTS. An apartment shall be permitted via a site plan review per Article I, Section 114 of these regulations in the following districts: Essex Village District (EV), the Business District and the Commercial District (C). Where these districts are superimposed by other districts in the Town of Essex, and unless expressly prohibited in these overlay districts, apartments shall be permitted in these districts.

C. DEFINITIONS. The following terms and words shall have the meaning hereto assigned to them;

1. APARTMENT. A dwelling unit on the same premises of a commercial use. An apartment shall not be accessory to any commercial use on the same premises unless it is approved as per Article III, Table III-2.

2. LIVING AREA. The area of a dwelling designed for human occupancy other than area set aside for other uses such as storage and basement areas.

REQUIRED LOT CHARACTERISTICS.

1. The lot shall conform to the minimum lot width and area requirement for the zone in which the property is located or be legally nonconforming.

2. New construction for apartments, whether detached from principal structure or involving structural additions or modifications to the principal structure, must conform to all regulatory setbacks and coverage requirements of these regulations.

3. Parking and access from the public right-of-way shall serve both a principal use and the apartment(s).

4. No additional curb cut shall be created to serve an apartment;
5. Adequate off -street parking as required by these Regulations shall be provided for both uses and such parking shall not be located in the front yard setback area;
6. Where practicable, parking areas for the apartment shall be located to the rear of the principal building.

E. APARTMENT CHARACTERISTICS

1. Within development nodes, where any portion of an existing building has been used for a commercial activity, apartments may be located on upper floors or to the rear of street-front uses provided that the conversion shall not increase any nonconforming characteristic.
2. An apartment shall be a minimum size of 400 square feet but shall not exceed 850 square feet.
3. There are no more than four (4) apartments allowed in any one building on a lot.
4. A minimum of 50% of the gross floor area of the building shall be used for commercial purposes. A minimum floor space of 33% of the gross floor area of a building shall be used for commercial purposes for properties in a Commercial district.
5. No apartment shall be located in a basement unless one wall opens to grade;

F. MISCELLANEOUS

The apartment(s) shall conform to the following:

1. An apartment shall have a maximum of two (2) bedrooms;
2. Be self-contained, with separate cooking, sanitary, and sleeping facilities for the exclusive use of the occupant(s);
3. Except as permitted in section 80A.2.U of these regulations, the number of apartments shall be limited by the Public Health Code, Building Code and the Fire Marshal's Office.
4. Commercial buildings where apartments are proposed, both principal and accessory, shall meet the requirements of the Public Health Code, Building, and the Fire Marshal's Office.
5. Upon establishment of the apartment(s), the building shall maintain the exterior appearance and style (roof line, roof pitch, building materials, window style and spacing, etc.) of the principal building;

6. Upon establishment of the apartment(s), if needed, the building shall have any secondary entrance incorporated into the principal use to reflect the architectural style of the existing structure;

7. No commercial dwelling may be purposely used for the renting of rooms to transients (that is, persons residing on the premises for less than thirty (30) consecutive days).

G. PROCEDURES - SUBMISSION OF APPLICATION.

1. An application for Site Plan Review for an apartment or apartments under this section shall be made pursuant to Article I, Section 114 (including the Appendix "A" Application Checklist) of these regulations.

2. No certificate of occupancy shall be issued for a building or use pursuant to this Section 45-1 without certification in writing from the Zoning Enforcement Agent, the Town Sanitarian, the Town Building Inspector, and the Town Fire Marshal that the building or use is in conformity with the requirements of these zoning regulations and the Public Health, Building, and Fire Code requirements.

Section 713 - Residential Life Care District

A. A Residential Life Care Facility within the Residential Life Care District shall be:

1. An integrated facility, which shall provide all of the following:

1.1. One or more residential dwelling units for life use

1.2. A Life Care Health Center licensed by the State of Connecticut under Section 19-13-D 8t of the Public Health Code of the State of Connecticut which may also include domiciliary beds which are licensed by the State of Connecticut under Section 19-13-D6 of said code, and which provides skilled nursing services primarily for residents of the dwelling units and may include medical service personnel support areas such as offices, lounges and dining facilities.

1.3. A common area containing meeting rooms, dining rooms and central kitchen, recreational rooms or areas for the use of residents of such facility and their guests, and offices used for the management and operation of the facility.

2. Residency and/or occupancy in said Life Care Facility shall be restricted to persons sixty-two (62) years of age or older, except that in the event of a married couple, one spouse may be younger than sixty two (62) years of age.

3. Said facility may also include as an accessory use in the common area, a bank, general store, beauty shop and laundry for use of the residents only.

4. In no event shall any such facility contain more than 212 family dwelling units

B. REQUIRED CONDITIONS. In addition to the conditions set forth in Article I, Section 115 C.2., the parcel of land and buildings involved in a Life Care Facility shall conform to the following conditions.

1. The applicant shall demonstrate that its Life Care Facility provides an integrated plan conforming to the requirements set forth in Section 713 A.
2. Where the Special Exception application includes a subdivision or resubdivision as defined in the Essex Subdivision Regulations, the applicant shall furnish any or all of the information required for the approval of a subdivision under the Subdivision Regulations of the Town of Essex, and shall be sent to the Planning Commission for review no less than thirty days prior to the public hearing for Special Exception.
3. Off-street parking spaces shall be provided at a minimum of one space per dwelling unit, point (0.5) five space per patient sleeping accommodation in the Life Care Health Center and one space per employee or staff member on the largest shift.
4. The application shall conform to applicable provisions of Section 703 of these regulations.
5. In addition to bonding required by these Regulations, the Commission may require the applicant to pay to the Town of Essex the costs of inspections required by the Zoning Commission or its agent.

Section 714 - Essex Village District

A. SPECIAL PROVISION RELATING TO MULTIPLE BUILDINGS AND MULTIPLE USES IN ESSEX VILLAGE DISTRICT. When allowed by special exception granted by the Commission under Article I, Section 115 C.2. above, any one or more Special Principal Uses permitted in this District may be combined on the same lot with a single one-family dwelling, whether in the same or different buildings thereon, whether or not Article IV, Section 407 A.2.-3. otherwise provides.

B. EXISTING BUSINESSES. Any "Village Business Use" occupying a portion of a building within the Essex Village District, which use was actually in existence on January 1, 1981, may, without the authorization of a special exception required in Article I, Section 115 C., be expanded to occupy other portions of said building provided that:

1. VILLAGE BUSINESS USE. The other portions to be so occupied existed and were actually in use on the date referred to above for any Village Business Use and have not since said date been used for a use described as:

1.1. One family dwellings; and

1.2. A customary home occupation, as set forth in Article VIII, Section H.5.

3. OTHER REQUIREMENTS. Such use as so expanded meets all other requirements of these Regulations including any additional provision for Off-Street Parking and Truck Loading Space required for such use as so expanded.

4. For purposes of Section 714 B., the term "Village Business Use" shall mean any use described as:

4.1. A professional business offices and financial institutions but not to include check cashing establishments;

4.2. Barber shops, beauty shops, nail salons and similar service establishments but not to include tattoo parlors

Section 715 - Performance Standards in All Districts

A. **BEST MANAGEMENT PRACTICES.** All new applications, excluding residential uses, shall include a Best Management Practices Plan for the use and storage of hazardous materials that are used on the site that meet current federal, state and local standards. In addition, the applicant shall provide an Incident Action Plan that will be utilized in the case of an accidental spill or other adverse environmental incident. Plans shall be approved by the appropriate authority.

B. **ADDITIONAL CONDITIONS.** For applications reviewed by the Commission, as the Commission may require other reasonable conditions as the Commission may deem necessary or appropriate to impose for the purpose of preventing or diminishing:

1. any adverse effect of the use, land, or improvements to be authorized, upon the health, safety, and welfare of the Community,

2. Any undue annoyance or disturbance of the occupants of premises in the general neighborhood of such use, land or improvements, and

3. any impairment of the suitability of such use, land or improvements for the General Principal Uses permitted in the district thereof under these Regulations and predominantly existing therein.

Section 716 - Minimum Conditions of Approval within B, L.I., C., Des M.I., M.I. Districts

A. **MINIMUM CONDITIONS OF APPROVAL.** Each use shall conform to the following special conditions in addition to conditions listed elsewhere within these Regulations for applications reviewed by the Commission:

1. **GENERAL.** No land or buildings shall be used for any purpose that fails to meet the following criteria:

1.1. The use shall be carried on in such a manner and with such precautions against fire and explosion hazards as to produce no serious exposure hazard to adjacent property, and the storage of all flammable or explosive materials shall be in a manner approved by the fire marshal.

1.2. The use shall emit no offensive odors perceptible from any property line of the lot on which the operation is located, and shall emit no noxious, toxic, or corrosive fumes or gases;

1.3. All buildings shall conform to all applicable building and safety codes.

2. ODOR, DUST AND SMOKE. No such emissions shall be discernible beyond the property line or, in the case of multiple uses of the property, beyond one hundred feet of the building generating the emission, except that in no case shall the discharge from any source exceed the following limits:

2.1. Smoke measured at the point of discharge into the air shall not exceed a density of No. 1 on the Ringlemen Smoke Chart as published by the U.S. Bureau of Mines, except that a smoke of a density not darker than No. 2 on the Ringlemen Chart may be emitted for not more than three minutes in any one hour;

2.2. Lime dust, as calcium oxide, measured at the property line of any lot on which the activity creates such dust shall not exceed 10 micrograms per cubic meter of air;

2.3. Total particulate matter measured at all stacks or other points of emission to the air shall not exceed 30 grams per hour per acre of land included in the lot;

2.4. All measurements of air pollution shall be by procedures and equipment which shall be of the latest generally recognized development and design readily available;

2.5. No open burning will be permitted.

3. NOISE LEVELS.

3.1. No noise, due to volume, intermittence, beat frequency, or shrillness, shall be emitted beyond the boundary of the property where it originates that exceeds the noise level regulation standards adopted by the Connecticut Department of Environmental Protection, pursuant to Section 22a-69 of the Connecticut General Statutes, as the same may, from time to time, be amended.

3.2. Noise making devices, which are maintained and are utilized strictly to serve as warning devices, are excluded from these Regulations.

4. HEAT, GLARE, VIBRATION, AND RADIATION. No heat, glare, or vibration shall be discernible without instruments from the outside of any structure, and no nuclear radiation shall be discernible from the outside of the structure with or without instruments.

5. EXTERIOR LIGHTING. No exterior lighting shall shine on adjacent properties or toward any street.

6. STORAGE.

6.1. All materials, supplies, and equipment shall be stored within the structure in accordance with Fire Prevention Standards of the National Fire Protection Association or shall be screened from view from public ways or abutting properties.

6.2. STORAGE AREAS. Storage areas for materials, supplies and products shall not be located in the front of the building and, before commencing any such use of such building or enlargement, all such areas shall be screened by planting, landscaping, or fencing.

7. LOADING AND UNLOADING AREAS. Loading and unloading platforms shall be located at the rear of the building, and before commencing any use of such building or enlargement, areas used for loading and unloading shall be screened from adjacent roads and properties by planting, landscaping, or fencing. See Section 602 I.

B. CONDITIONS NOT APPLICABLE IN THE CASE OF EXISTING INDUSTRIAL BUILDINGS. Any building existing on November 1, 2006, which was previously designed, built or used for a use permitted in a Limited Industrial district may be used for such use without compliance with the conditions specified in Article VI, Section 604 and Article VII 716 A.6-7.

C. CONDITIONS NOT APPLICABLE IN THE CASE OF EXISTING INDUSTRIAL BUILDINGS. Any building existing on February 1, 1992, which was previously designed, built or used for a use permitted in a Municipal and Industrial Service Zone may be used for such use without compliance with the conditions specified in Article VI, Section 606, 610 and 610.

D. CONDITIONS NOT APPLICABLE IN THE CASE OF EXISTING INDUSTRIAL BUILDINGS. Any building existing on November 1, 2006, which was previously designed, built or used for a use permitted in a Limited Industrial district may be used for such use without compliance with the conditions specified in Article VI, Section 604, Section Article VII 716 A.6-7.

E. CONDITIONS OF GENERAL PRINCIPAL USES; CONDITIONS RELATING TO BUILDINGS; CONDITIONS NOT APPLICABLE IN THE CASE OF EXISTING INDUSTRIAL BUILDINGS; REQUIRED CHARACTERISTICS.

1. The provisions of Section 716 are hereby included by reference.

2. MULTIPLE USES. No building intended or used for two or more principal uses shall be built, placed, or used on any land unless the required Lot Area is provided for each such principal use, except that, in determining required Lot Area, two or more principal uses as set forth on Article III, Table III-2 within an existing single building or within more than one existing building within a single existing complex of buildings located on one parcel or contiguous parcels shall be considered a single use. See Article IV, Section 407.A.

Section 717 - Home Animal Agriculture

A. For the purpose of this section, animals shall be described as follows:

1. Small animal: A chicken, (excluding roosters), a duck, goose, turkey, or a rabbit, as well as similar animals as determined by the zoning enforcement officer.

2. Medium animal: A goat, pig or swine, sheep, llama or alpaca, emus, as well as similar animals as determined by the zoning enforcement officer.

3. Large animal: A cow, horse, mule or donkey, as well as similar animals as determined by the zoning enforcement officer.

B. Standards for Small Animals

1. Home animal agriculture for small animals is permitted as an accessory use in RU, RUM, RRR and RLC Districts on lots of ½ acre or more subject to the following:

1.1. On a lot containing at least ½ acre, a maximum of fifteen (15) caged or cooped small animals or 5 free-range small animals may be kept.

1.2. For each additional ½ acre over the first 1/2 acre, fifteen (15) caged or cooped small animals or 5 free-range small animals may be kept.

1.3. No more than fifty (50) small animals may be kept on any lot.

1.4. Suitable enclosures shall be provided to restrict the animals to the property. Cages and coops must be placed no closer than ten feet from rear and side property lines.

C. Standards for Medium and Large Animals

1. Home agriculture for medium and large animals, except for pigs, and including roosters, is permitted as an accessory use in RU, RUM, RRR and RLC Districts on lots of two (2) acres or more in size and subject to the following:

1.1. On a lot containing at least two (2) acres, a maximum of one large animal or two medium animals may be kept.

1.2. For each additional 1/2 acre over the first 2 acres, one large animal or two medium animals may be kept.

1.3. Small animals may be kept in conjunction with medium and large animals providing that there shall be no more than fifty (50) such animals.

1.4. Buildings for housing medium and large animals shall be located at least 100 feet from any property line.

1.5. Manure piles shall be located at least 100 feet from any property line and screened from abutting properties.

1.6. The keeping of any pigs or swine is prohibited less than three hundred (300) feet from a property line and on a lot of less than five (5) acres.

D. Best Practices for State Department of Agriculture

1. Comply with applicable regulations and practices as issued by the CT State Department of Agriculture.

SECTION 82
BUSINESS DISTRICT

82A. USES PERMITTED. In the Business District there shall be permitted:

82A.1. GENERAL PRINCIPAL USES. The following principal uses and buildings:

- (A) One-family dwelling existing prior to the adoption of these regulations (date: September 1, 2011). Changes and/or additions to the one-family dwelling shall not be considered an expansion of a nonconforming use as long as setback and coverage requirements are met;
- (B) Customary home occupation carried on within an existing dwelling by a permanent resident thereof in which not more than two nonresidents of such dwelling are engaged, if such use is secondary in character and intensity to the use of the building as a dwelling and such activity does not noticeably change the apparent residential character of the premises by creating noise, odors, smoke, fumes, vibration, illumination or radio or television interference;
- (C) Professional and business offices and financial institutions not exceeding 1,800 gross square feet area of building.

82A.2. SPECIAL PRINCIPAL USES. The following principal uses and buildings only when specifically authorized in the particular instance by a special exception granted by the Commission subject to the conditions prescribed in 82B as well as the standards of Section 120G and the conditions of Section 130 hereof:

- (A) Conversion of existing residential use to multi-family.
- (B) Corporate headquarters, financial institutions, and business and professional offices. Required off-street parking shall be located to the side or rear of the principal building on the lot with the exception of two handicapped parking spaces.
- (C) Light Manufacturing (see definition, and section 90A.1 (E)). All light manufacturing facilities shall provide a best management plan for the handling, storage, or accidental spill of all hazardous materials; See Section 82B.2. and 3.
- (D) Restaurants and food service establishments excluding fast-food type establishments and/or drive-up window service.
- (E) Barber shop, beauty parlor, or similar service establishment;

- (F) An emergency medical transportation service conducted by a nonprofit organization furnishing ambulance transportation and ancillary in-transit emergency services in a vehicle or vehicles owned and operated by a nonprofit organization;
- (G) A municipal or volunteer owned or operated fire house; police, fire marshal and other municipal office and vehicle garage facilities.
- (H) Farm, truck or nursery gardening, provided that no animals are kept for any purposes.
- (I) A farm stand, provided that the aggregate ground area of the lot on which such farm stand is located covered by the farm stand and by any parking facilities appurtenant to such farm stand shall not exceed the aggregate ground area of the lot on which such farm stand is located which is actively used for the cultivation of the soil, including planting and harvesting crops, tillage, horticulture, forestry, and dairying and including planting, growing and harvesting in greenhouses and/or hoop houses. The facility may contain up to 6,000 square feet of greenhouses and/or hoop houses which shall not be considered part of the square footage of the farm stand.
- (J)
 - 1) The following Indoor recreational facilities: fitness centers, martial arts studios, gymnasiums, movie theaters, assembly halls, dance studios, and establishments for musical or theatrical instruction and rehearsals;
 - 2) The following outdoor recreation facilities: parks and playgrounds; and
 - 3) The following indoor or outdoor recreational facilities: swimming pools, racquet clubs, and skating rinks.
- (K) Artist Studios
- (L) Churches, synagogues and other places of public worship;
- (M) Clubs and fraternal organizations;
- (N) Day-care facility or nursery school;
- (O) Private schools including business, secretarial, and vocational schools.
- (P) Undertaker's establishments;
- (Q) Veterinary hospitals without boarding facilities;

- (R) Electrical, plumbing, heating, landscaping, tree care and tree service contractors and similar businesses (excluding earth moving contractors). This includes storage (subject to the provisions of Section 90C.2) and off-site delivery of related products and materials. A tree care and tree service contractor use shall include as an accessory use and on a seasonal basis only, April 1 through September 30 inclusive, the sale of recycled forestry products associated with the tree care and tree service use limited to mulch, wood chips and compost materials.

EXCEPTION: No special exception shall be required for the establishment of a new use in any lettered subsection of 82A.2., similar to a use in the same lettered subsection which has already been granted a special exception. For the purpose of this section, "similar" shall be defined as not substantially changing the amount of traffic, crowding, or effect on neighboring premises, of the original special exception approval. The determination as to whether a new use is similar to an existing use shall be made by the Commission or by its agent. Said similar new use shall be allowed upon the obtaining of a zoning permit from the Zoning Enforcement Agent in the same manner as for a general Principal use permitted under Section 82A.1.

82A.3. ACCESSORY USES. Any accessory use or improvement but not including:

- (A) SIGNS. Any sign, unless it conforms to the requirements prescribed therefore in these Regulations;

82A.4. SIGNS. In addition to any sign permitted under 111B and subject to the limitations prescribed in 111A., signs as accessory uses as follows:

- (A) RESIDENCE USES. Accessory to a use described in 82A.1.(A), one resident name sign, not exceeding two (2) square feet in area, or, in the case of a customary home occupation, one business name sign not exceeding two (2) square feet in area; and

- (B) OTHER USES. Accessory to a use described in 82A.1.(B) through 82A.1.(D) or in 82.2(A) through 82A.2.(U): (1) Two separate business name signs not to exceed 12 square feet each; (2) One multi-business name sign, each name sign not to exceed two square feet, total sign area not to exceed 12 square feet; (3) One advertising sign not to exceed 18 square feet; (4) A fabric banner, pennant or flag not to exceed 12 square feet; and (5) or other sign as specifically authorized by special exception.

82B. OTHER CONDITIONS

82B.1. LANDSCAPING.

It is the objective of these regulations to provide adequate landscaping to screen commercial, industrial, and/or office buildings (especially utilitarian buildings) from

abutting residential properties and from the street so that the streetscape is in keeping with a natural appearance.

As part of a zoning permit application, site plan, and/or a special exception application, a landscape plan shall be submitted. Prior to the building's occupation, the plantings shall be installed or bonded for the full cost of plant material, any necessary grading, and installation plus 10%. If bonded, the plant material shall be planted in the next suitable planting season. The landscaping shall be permanently maintained by the owner. Minimum requirements are listed below:

1. All lots in a Business District shall provide a strip of land on such lot which is not less than twenty five (25) feet wide, adjacent to and extending for the length of any property line fronting on any public or private street, which strip shall be suitably landscaped and planted with a mixture of deciduous and evergreen trees, deciduous and evergreen shrubs, and other plant material.
2. Any such landscaping strip fronting on any public or private street may be traversed by not more than two driveways and one additional driveway for each 200 feet of lot frontage in excess of 300 feet. Each driveway shall be a minimum of 24' wide and be a minimum of 100 feet apart.
3. Not more than 25 percent of the area of the required front setback from the street shall be used for driveways or for parking, and the balance shall be put in lawn or suitably landscaped and planted and shall at all times be maintained in good appearance (see number 6 below). Parking in the required front setback from the street shall be for passenger vehicles only, and no portion of the required setback shall be used for storage or for any purpose except as herein provided;
4. Any tree of more than ten inches caliper (diameter) measured four feet above the ground shall be shown on plot plans and shall be maintained unless it hampers utilities, structures, or reasonable working room during constructions;
5. All other existing natural growth shall be preserved and maintained where practicable;
6. All deciduous trees shall be a minimum of 2 ½-3" caliper at planting. Evergreen trees shall be a minimum of five-six feet at planting. Shrubs shall be a minimum of 2 ½-3 feet tall at planting unless the mature size is under that height (such as shrubs used as groundcover);
7. Where a property adjoins a Residence District or existing residential use on the side or rear property line, a 25 foot wide landscaping strip shall be planted with conifers spaced in no fewer than two rows, no further than 15-20 feet apart (depending upon the mature height and width of the species), five-six feet tall at planting with a mature height of a minimum of 15' tall, and staggered to provide

maximum screening. An alternative placement of plant material may be allowed depending upon the suitability of plant material species.

8. The Commission may require more extensive plantings, or more mature plantings, if unusual conditions demand additional screening and noise abatement. Upon written request of the owner of the premises, the Commission may, waive the requirements of the landscaping where existing natural growth to be preserved and maintained provides suitable screening;
9. The construction of a sidewalk is mandated along Plains Road. The sidewalk shall be parallel to and one-foot inside the total frontage of the property from the one edge of the front property line and contiguous to the other edge (unless there is a physical constraint that interferes with this location, such as a mature tree, in which case, the sidewalk shall go around the physical constraint);
10. A bicycle path may be required as set forth in the approved Transportation Plan by the Planning Commission.
11. Permanent outside storage areas for materials, supplies and products shall be located in the rear yard and be fenced to the height allowed and/or otherwise screened from view from the property's public service road and/or adjacent properties.
12. Loading and unloading platforms shall be located at the rear of the building, and before commencing any use of such building or enlargement, areas used for loading and unloading shall be screened from adjacent roads by landscaping or fencing;

82B.2. STORMWATER. All new buildings, substantial additions, new site plans and/or revised site plans involving an increase in impervious surfaces shall provide a stormwater management plan that meets the recommendations of the "2004 Connecticut Department of Environmental Protection Stormwater Quality Manual" (as updated from time to time).

82B.3. BEST MANAGEMENT PRACTICES. All new applications shall include a Best Management Practices Plan for the use and storage of hazardous materials that are used on the site that meets current federal, state, and local standards. In addition, the applicant shall provide an Incident Action Plan that will be utilized in the case of an accidental spill or other calamity. Plans shall be approved by the appropriate authority.

82B.4. ADDITIONAL CONDITIONS. Such other reasonable conditions as the Commission may deem necessary or appropriate to impose for the purpose of preventing or diminishing: (A) any adverse effect of the use, land, or improvements to be authorized, upon the health, safety, and welfare of the Community, (B) Any undue annoyance or disturbance of the occupants of premises in the general neighborhood of such use, land or improvements, and (C) any impairment of the suitability of such use, land or improvements for the General Principal Uses permitted in the district thereof

under these Regulations and predominantly existing therein.

82C. REQUIRED CHARACTERISTICS. The lot and the buildings involved in any general or special principal use in a Commercial District shall conform to the following characteristics:

BUSINESS DISTRICT

Minimum Lot Area 30,000 Sq. Ft	Minimum Lot Width 150 Feet	Maximum Building Height 30 feet	Maximum Building Coverage 15%
Front Setback 50 feet	Side Setback 15 feet	Rear Setback 30 feet	

NOTE: The maximum combined coverage of all above ground improvements, including but not limited to buildings, accessory structures, and parking areas, traffic lane areas, turning areas, entrances, and exit areas, shall not exceed 65% of the lot area. The remaining 35% shall be landscaped or left in a natural state.

AMENDED OCTOBER 1, 2000
AMENDED MARCH 19, 2000
AMENDED OCTOBER 17, 2005
AMENDED AUGUST 1, 2007
AMENDED JUNE 15, 2008
AMENDED SEPTEMBER 1, 2011
AMENDED MAY 20, 2013
DECEMBER 28, 2016
MAY 1, 2018
AUGUST 21, 2019

SECTION 90

LIMITED INDUSTRIAL DISTRICTS

90A. USES PERMITTED. In the Limited Industrial District, there shall be permitted:

90A.1. GENERAL PRINCIPAL USES. The following principal uses and buildings which do not exceed a total of 3,500 gross square feet of combined building and outside storage area for new construction on a vacant lot or an increase in any five year period of 2,500 square feet or 15%, whichever is less, for existing buildings and outside storage, and which are in compliance with Sections 90B (as to Uses) and 90C (as to Buildings) hereof, are permitted when authorized by a zoning permit granted by the Zoning Enforcement Agent pursuant to Section 121 of these regulations:

- (A) Corporate headquarters, non-retail financial institutions, and business and professional offices. Required off-street parking shall be located to the side or rear of the principal building on the lot.
- (B) Publishing, printing, photo-engraving, and bookbinding, blueprinting and similar graphic reproduction service;
- (C) Wholesale distributing establishments and storage warehouses excluding self storage facilities;
- (D) Public service building, including service yard;
- (E) Light Manufacturing including (or similar to):
 - 1. Furniture manufacturing, woodworking and millwork;
 - 2. Manufacturing of optical goods, surgical and dental instruments, precision instruments and assemblies, including the machining, finishing and cleaning of small metal parts;
 - 3. Manufacturing, compounding, processing, packaging or treatment of beverages, candy, cosmetics, dairy products, drugs, perfumes,

pharmaceuticals, toilet supplies, and food products excluding fish, meat, sauerkraut, vinegar and excluding also the rendering or refining of fats and oils;

4. Manufacturing, assembling or treating of articles from the following previously prepared materials: bone, cellophane, canvas, cork, feathers, felt, fiber, fur, glass, hair, horn, leather, paper, plastics, precious metals or stones, shell, textiles, tobacco, wood, and yarns.
 5. Metal fabrication, light and sheet metal, machining of parts handled by hand.
 6. Manufacture of small electrical and electronic equipment;
 7. Manufacture and assembly of toys, sporting goods, musical instruments, non-atomic powered clocks and watches.
- (F) Research laboratories;
- (G) Monument and stone cutting works;
- (H) Artisan fabrication of decorative glass;
- (I) Extrusion and stamping of small metal products and plastics;
- (J) Tool and die making, including incidental casting;
- (K) Building, and/or repair of boats and spars from wood, plastics, fiberglass or metal;
- (L) Earth-moving, landscaping, tree care and tree service, and construction contractors including the storage of customary small construction equipment, lumber and building materials on site but excluding the storage of construction machinery such as cranes and derelict (unusable) machinery and/or vehicles. Permanent outside storage areas shall be located in the rear yard and be fenced to the height allowed and/or otherwise screened from view from the property's public service road and/or adjacent properties. Landscaping and tree care and tree service businesses only are allowed storage (subject to the provisions of Section 90C.2) and off-site storage of landscape-related products. A tree care and tree service contractor use shall include the on-site processing of forestry products limited to mulch, firewood, wood chips and compost material.
- (M) An emergency medical transportation service conducted by a nonprofit organization furnishing ambulance transportation and ancillary in transit emergency services in a vehicle or vehicles owned and operated by a nonprofit organization.
- (N) Motor vehicle detailing operations, limited to cleaning, polishing and waxing of interiors and exteriors of automobiles and light trucks (not to

exceed two-ton capacity). Permitted accessory uses include: (1) the sale and installation of electronic automobile accessories or automobile enhancement accessories (to include such items as radios, stereos, mobile telephones, bug shields and pin-striping). However, all automobile accessories sold from the premises must be installed on the premises; and (2) secured indoor storage of motor vehicles limited to vehicles being serviced in the shop. All motor vehicles retained overnight shall be stored within the building. The mechanical washing of motor vehicles is expressly prohibited.

- (O) Farm, truck or nursery gardening, provided that no animals shall be kept for any commercial or retail purpose.
- (P) A farm stand, provided that the aggregate ground area of the lot on which such farm stand is located covered by the farm stand and by any parking facilities appurtenant to such farm stand shall not exceed the aggregate ground area of the lot on which such farm stand is located which is actively used for the cultivation of the soil, including planting and harvesting crops, tillage, horticulture, forestry, and dairying and including planting, growing and harvesting in greenhouses and/or hoop houses. The facility may contain up to 6,000 square feet of greenhouses and/or hoop houses which shall not be considered part of the square footage of the farm stand.
- (Q) Contractor's office for the operation of a contracting business associated with a construction trade, such contractor may include, but is not limited to, an electrician, builder, painter, plumber, carpenter, carpet installer, landscaper, landscaper, nurser, mason, arborist, paver, and other similar service contractors, which may include as an accessory use the interior and/or exterior storage of contractor's equipment and materials used in the construction trade/business and off-site delivery of related products and materials.
- (R) Commercial kitchen for the preparation and packaging of food for off-premises sales only.
- (S) An inland marine and RV facility dealing in the storage of boats, boat trailers and RVs; the servicing, repairing and winterizing of boats and boat trailers; and the brokering of sales of boats and boat trailers.

90A.2. SITE PLAN USES. Any General Principal Use permitted in Section 90A.1 hereof which falls within the following square footages, when specifically authorized by a site plan approval granted by the commission subject to the conditions prescribed in Section 90B. and 90C., as well as the conditions prescribed in Section 118 hereof:

- (A) For new construction on a vacant lot, 3,501 to 7,000 gross square feet of combined building and outside storage area.
- (B) For existing buildings and outside storage areas, an increase in any five year period of more than 2,500 square feet but not more than 5,000

square feet, or more than 15% but not more than 30% whichever is less, in combined building and outside storage.

90A.3. SPECIAL PRINCIPAL USES. The following principal uses and buildings only when specifically authorized in the particular instance by a special exception granted by the Commission subject to the conditions prescribed in Sections 90B and 90C, as well as the standards of Section 120G and the conditions of Section 130 hereof:

- (A) Any Site Plan use permitted in Section 90A.2 which exceeds the maximum square footage allowed for that use.
- (B) Water supply facilities to include pump stations, pressure reducing stations, above or below ground storage tanks and wells.
- (C) A municipal or volunteer owned or operated fire house; fire training facility; police, fire marshal and other municipal office and vehicle garage facilities.
- (D) Sales, storage, and distribution of propane.
- (E)
 - 1) The following Indoor recreational facilities: fitness centers, martial arts, batting cages, golf centers, gymnasiums, movie theaters, dance studios, and establishments for musical or theatrical instruction and rehearsals;
 - 2) The following outdoor recreation facilities: parks and playgrounds; and
 - 3) The following indoor or outdoor recreational facilities: swimming pools, racquet clubs, and skating rinks.
- (F) Dog Day Care Facility- A commercial dog day care provided that:
 - there is no overnight dog kenneling;
 - not occupied by more than 1 dog per every 50 square feet of floor area,
 - must provide a fenced-in outdoor recreational area where fence is a minimum 5-feet in height;
 - use shall not be located within 400 feet of a residential structure
 - shall provide a plan acceptable to the Health Department for waste disposal, including disinfecting applicable indoor and outdoor areas
 - may include accessory activities such as obedience classes

Exception: No new site plan or special exception approval shall be required for the establishment of a new use permitted in subsection of 90A.2., or subsection 90A.3. which is similar to a use which legally and actually existed in the same structure prior to the planned establishment of the proposed new use. For the purpose of this section, a "similar" use shall be defined as a use which does not cause a substantial change in the amount of traffic, required parking, crowding,

environmental impact considering the type of business, number of employees and the Standard Industrial Classification codes, or effect on neighboring premises when compared to the prior legally existing use. The determination as to whether a new use is similar to an existing use shall be made by the Commission or by its agent. Said similar new use shall be allowed upon the obtaining of a zoning permit from the Zoning Enforcement Agent in the same manner as for a General Principal Use permitted under Section 90A.1.

90A.4.ACCESSORY USES. Any accessory use or improvement including the dwelling of a guard, caretaker or superintendent but not including any sign, unless it conforms to the requirements prescribed therefore in these regulations; and

90A.5.SIGNS. In addition to any sign permitted under 111B., subject to the limitations prescribed in 111A. and accessory to a permitted use: (1) one single business name sign not to exceed 12 square feet; (2) one multiple business name sign, each name sign not to exceed two square feet; total sign area not to exceed 12 square feet; and (3) a fabric banner, pennant, or flag not to exceed 12 square feet; and (4) other signs as specifically authorized by Special Exception.

90B. CONDITIONS OF APPROVAL. Each use permitted under Section 90A.1., 90 A.2., or 90A.3. shall conform to the following special conditions (in addition to conditions listed elsewhere):

90B.1.GENERAL. No land or buildings in the Limited Industrial District shall be used for any purpose that fails to meet the following criteria:

- (A) The use shall be carried on in such a manner and with such precautions against fire and explosion hazards as to produce no serious exposure hazard to adjacent property, and the storage of all flammable or explosive materials shall be in a manner approved by the fire marshal.
- (B) The use shall emit no offensive odors perceptible from any property line of the lot on which the operation is located, and shall emit no noxious, toxic, or corrosive fumes or gases;
- (C) All buildings shall conform to all applicable building and safety codes.

90B.2.ODOR, DUST AND SMOKE. No such emissions shall be discernible beyond the property line or, in the case of multiple use of the property, beyond one hundred feet of the building generating the emission, except that in no case shall the discharge from any source exceed the following limits:

- (A) Smoke measured at the point of discharge into the air shall not exceed a density of No. 1 on the Ringelmen Smoke Chart as published by the U.S. Bureau of Mines, except

that a smoke of a density not darker than No. 2 on the Ringlemen Chart may be emitted for not more than three minutes in any one hour;

- (B) Lime dust, as calcium oxide, measured at the property line of any lot on which the activity creates such dust shall not exceed 10 micrograms per cubic meter of air;
- (C) Total particulate matter measured at all stacks or other points of emission to the air shall not exceed 30 grams per hour per acre of land included in the lot;
- (D) All measurements of air pollution shall be by procedures and equipment which shall be of the latest generally recognized development and design readily available;
- (E) No open burning will be permitted.

90B.3. NOISE LEVELS.

- (A) No noise, due to volume, intermittence, beat frequency, or shrillness, shall be emitted beyond the boundary of the property where it originates that exceeds the noise level regulation standards adopted by the Connecticut Department of Environmental Protection, pursuant to Section 22a-69 of the Connecticut General Statutes, as the same may, from time to time, be amended.
- (B) Noise making devices, which are maintained and are utilized strictly to serve as warning devices, are excluded from these Regulations.

90B.4. HEAT, GLARE, VIBRATION, AND RADIATION. No heat, glare, or vibration shall be discernible without instruments from the outside of any structure, and no nuclear radiation shall be discernible from the outside of the structure with or without instruments.

90B.5. EXTERIOR LIGHTING. No exterior lighting shall shine on adjacent properties or toward any street in such manner as to create a nuisance.

90B.6. STORAGE. All materials, supplies, and equipment shall be stored within the structure in accordance with Fire Prevention Standards of the National Fire Protection Association or shall be screened from view from public ways or abutting properties.

90B.7. STORMWATER. All new buildings, additions, new site plans and/or revised site plans involving a cumulative total increase in impervious surfaces of 10% shall provide a stormwater management plan that meets the recommendations of the "2004 Connecticut Department of Environmental Protection Stormwater Quality Manual" (as updated).

90B.8. BEST MANAGEMENT PRACTICES. All new applications shall include a Best Management Practices Plan for the use and storage of hazardous materials that are used on the site that meets current federal, state, and local standards. In addition, the applicant shall provide an Incident Action Plan that will be utilized in the case of an accidental spill or other calamity. Plans shall be approved by the appropriate authority.

90C. CONDITIONS RELATING TO BUILDINGS. No building or enlargement by greater than 50 percent of a building shall be built or placed in a Limited Industrial District and, except as provided in 90D., no building in such District shall be used for use permitted in such District except in conformity with the following conditions.

90C.1. LANDSCAPING. It is the objective of these regulations to provide adequate landscaping to screen commercial, industrial, and/or office buildings (especially utilitarian buildings) from abutting residential properties and from the street so that the streetscape is in keeping with a rural village appearance. Before commencing any use of such building or enlargement, landscape planting, including trees, shrubs, and grass or ground cover, shall be provided and permanently maintained by the owner in the area required for setback from property and street lines and specifically:

- (A) All lots in the Limited Industrial District shall provide a landscaping strip on such lot which is not less than thirty-five (35') feet wide, adjacent to and extending for the length of any property line fronting on any public or private street, which strip shall be put in lawn or otherwise suitable landscaped and planted. This landscaping strip shall be suitably landscaped with an appropriate berm and planted with street trees, ornamental trees, shrubs and lawns.
- (B) The landscaping strip may be traversed by one driveway for a property with less than 300 feet of street frontage. The landscaping strip may be traversed by two driveways for properties with over 300 feet of frontage. Each driveway is not to exceed 24' wide and a minimum of 100 feet apart. Additional driveways/access lanes may be allowed if the property is very large or if warranted by safety considerations because of conditions specific to that property.
- (C) There shall be no parking in the 50 foot front setback from the street with the possible exception of two handicapped parking spaces if this is needed for ease of access to the building.
- (D) No portion of the front setback or any setback shall be used for storage or for any purpose except as herein provided.
- (E) The construction of a sidewalk is encouraged along not only public streets but streets within an industrial complex.

- (F) Any tree of more than ten inches caliper (diameter) measured a yard above the ground shall be shown on plot plans and shall be maintained unless it hampers utilities, structures, or reasonable working room during construction.
- (G) All other existing natural growth shall be preserved and maintained where practicable.
- (H) Where a property adjoins a Residence District on the side or rear, a "green belt" shall be planted and maintained as identified in the approved site plan. The distance between plants may be varied according to the growth requirements of the plant material in order to provide continuous screening. Generally, conifers will be planted in no fewer than two rows that are fifteen (15) feet apart, with the plant material staggered approximately fifteen (15) feet apart to provide continuous screening. An alternative placement of plant material may be allowed depending upon the suitability of the plant material species. Conifer plant material may not be less than five feet in height at the time of planting.
- (I) The commission may require more extensive plantings, or more mature plantings, if unusual conditions demand more extensive screening and noise abatement. The Commission may, upon written request of the owner of the premises, waive the requirements of the planting of conifers above where existing natural growth to be preserved and maintained affords, in the opinion of the Commission, suitable screening no less effective than would be afforded by the prescribed conifers; and
- (J) Whenever the owner or occupant desires to commence the permitted use of such building or enlargement before providing the landscape planting prescribed hereunder, a bond in an amount and form satisfactory to the Commission may be required to cover the cost of the plant material and labor to install such improvements, plus 10% of the amount. Other legal documents may be required to insure access to the property for planting if the applicant is in default. All work shall be performed within twelve (12) months of the bond approval date by the Commission

90C.2.STORAGE AREAS. Storage areas for materials, supplies and products shall not be located in the front of the building and, before commencing any such use of such building or enlargement, all such areas shall be screened by planting, landscaping, or fencing.

90C.3.LOADING AND UNLOADING AREAS. Loading and unloading platforms shall be located at the rear of the building, and before commencing any use of such building or enlargement, areas used for loading and unloading shall be screened from adjacent roads and properties by planting, landscaping, or fencing.

90D. CONDITIONS NOT APPLICABLE IN THE CASE OF EXISTING INDUSTRIAL BUILDINGS. Any building existing on November 1, 2006, which was previously designed, built or used for a use permitted in a Limited Industrial district may be used for such use without compliance with the conditions specified in 90C.

90E. REQUIRED CHARACTERISTICS. The lot and the buildings involved in any use in a Limited Industrial District shall conform to the following characteristics:

DISTRICT
LI

Minimum Lot Area 80,000 Square Feet	Minimum Lot Width 200 Feet	Front Setback 75 Feet	Side Setbacks 25 Feet
Rear Setback 50 Feet	Maximum Building Coverage 25%	Maximum Building Height 35 Feet	

No setback which is defined by a lot line which abuts a railroad right-of-way shall be required for any lot in a Limited Industrial District.

LID CHECKLIST

Applicants must complete and submit the following checklist with the application

Date: _____

Project: _____

Conformance with the following criteria shall be initialed in the spaces provided below by a Connecticut Registered Professional Engineer, Land Surveyor, or Certified Soils Scientist as appropriate. If conditions cannot be met comments addressing each item should be provided by the applicant in the space provided below. Comments will be reviewed with Town Staff at the scheduled Development Staff Meeting and documented.

Item	Description	Verified	Comments
1	An Existing Conditions Plan is provided documenting sensitive natural resources including but not limited to existing wetlands (as designated by a Certified Soils Scientist in Connecticut), streams, ponds, vernal pools, flood zones, stream channel encroachment lines, soil types and infiltration rates, wells, tree lines, property boundaries, and other items that may be requested by the Town.		
2	Utilizing the Existing Conditions Plan as a guide, development has been located to maximize preservation of contiguous natural sensitive areas.		
3	Proposed site developments for residential or two-family dwellings on more than one individual parcel, all commercial, industrial, and retail developments have been guided by the applicable requirements of the Town's Low Impact Development Stormwater Quality Manual and the Connecticut Storm Water Quality Manual.		
4	Bioretention Basins or Rain Gardens have been incorporated within yards, median strips, cul-de-sacs islands, and parking lot islands.		

LID CHECKLIST

Applicants must complete and submit the following checklist with the application

Date: _____		Project: _____	
<p>Conformance with the following criteria shall be initialed in the spaces provided below by a Connecticut Registered Professional Engineer, Land Surveyor, or Certified Soils Scientist as appropriate. If conditions cannot be met comments addressing each item should be provided below. Comments will be reviewed with Town Staff at the scheduled development staff meeting and documented.</p>			
Item	Description	Verified	Comments
5	Dry Wells have been incorporated into the design to control roof and pavement runoff.		
6	Permeable (Porous) Pavement has been incorporated into areas of low traffic, parking lots, residential and light commercial use driveways, walkways, bike paths, etc.		
7	Natural areas including woodlands, regulated wetland areas, naturally vegetated areas have been preserved/ and or replicated to the maximum extent practical.		
8	Post Development stormwater runoff is at or less than the predevelopment runoff.		
9	Stormwater infiltration has been provided by the use of underground storage units, devices, and/or infiltration swales/trenches.		
10	Level spreaders/vegetation have been provided at storm drainage outfalls to enhance water quality and mitigate erosion.		

LID CHECKLIST

Applicants must complete and submit the following checklist with the application

Date: _____ Project: _____			
Conformance with the following criteria shall be initialed in the spaces provided below by a Connecticut Registered Professional Engineer, Land Surveyor, or Certified Soils Scientist as appropriate. If conditions cannot be met comments addressing each item should be provided below. Comments will be reviewed with Town Staff at the scheduled development staff meeting and documented.			
Item	Description	Verified	Comments
11	On-Site retention/detention facilities have been provided to address water quality and storm water runoff.		
12	Rain Barrels, cisterns, and/or other rainwater harvesting techniques to reuse rainwater for irrigation and other non-potable uses are incorporated into the design.		
13	An Erosion and Sedimentation Control Plan conforming to the Standards of the Connecticut Guidelines for Soil Erosion and Sediment Control is included in the design.		
14	A yearly maintenance plan of all components of best management practices associated with storm water management has been provided.		
15	Impervious area percentages for pre and post development have been provided.		
16	When conflicts exist between the Town's Low Impact Development Stormwater Quality Manual and the Connecticut Storm Water Quality Manual the State Manual shall govern.		

ANNUAL MS4 TRAINING

TOWN OF ESSEX – DPW

1 DUMP ROAD

ESSEX, CONNECTICUT

I have received annual training for the Town of Essex Stormwater Pollution Prevention Plan.

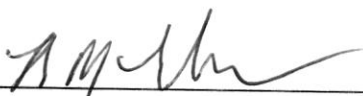
I understand the information and objectives presented.

DATE OF MEETING

2/5/2021

NAMES OF ATTENDEES:

RICH GALLACHER



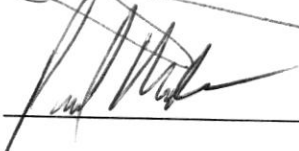
DAVE MARTIN



DWIGHT MASSY

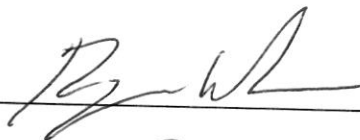


PAUL MACKENZIE



~~MIKE CULLINA~~

SUPERVISOR



RYAN WELCH

DPW DIRECTOR

SWPPP TRAINING ATTENDANCE FORM

Town of Essex - DPW
1 Old Dump Road
Essex, Connecticut

I have received a copy of the Town of Essex "Stormwater Pollution Prevention Plan – Training Document."

I have read and understand the information and objectives of this document.

[illegible]

Training Performed by:

William Drouin, CHMM		09/23/20
Name (Print)	Name (Signature)	Date

STORMWATER POLLUTION PREVENTION TRAINING PROGRAM

Program Description

The stormwater pollution prevention training program is instituted to provide facility employees with the information and techniques required to assure the facility stormwater pollution prevention plan (SPPP) is properly implemented. The training programs will enable facility staff to have an improved understanding of the stormwater system and how to minimize the impact the facility has on the system.

The training program consists of two components. The first aspect of the program is for employees to read the "Operational Procedures for Stormwater Pollution Prevention", which follows. The second portion of the training program is attendance at courses for pollution prevention. The operational procedures and informational courses should be implemented and reviewed on an annual basis for all employees at the facility.

Operational Procedures for Stormwater Pollution Prevention

The most critical component of an SPPP is the implementation of the plan by on-site employees. Following are some recommended operational procedures which will help reduce the amount of contaminants which enter the stormwater system.

1. Good Housekeeping

Good Housekeeping refers to the general upkeep of the facility, including litter control, sweeping of roadways, spill cleanup and control, and maintaining erosion and sedimentation control devices. Good housekeeping practices should be employed by the personnel at this facility to provide a clean and orderly working environment. The goal of good housekeeping practices is to reduce the potential for stormwater pollution from on-site activities and spills.

A. Litter Control

Litter control is a maintenance item that, if possible, should be performed on a daily basis, or at least once/week. The facility should be walked over to assure that litter and debris is not entering or fouling any components of the stormwater management system. If excessive litter enters the stormwater system or adjacent water bodies, installation of fencing or planting a vegetative buffer may be required.

B. Sweeping Roadways

Paved roads, drives, and storage areas should be swept periodically to remove any dirt or sand that has accumulated. Sweeping should routinely be performed once in the spring and again in

late summer. Sweeping of dirt on paved surfaces greatly reduces the amount of sediment entering the stormwater system. Any dirt and grit that enters the stormwater system and accumulates in catch basins should be removed periodically.

C. Maintaining Erosion and Sedimentation Control Devices

Most erosion and sedimentation control devices perform their functions very well when properly maintained. However, if they are not maintained they can be largely ineffective. Maintenance of these structures consists of maintaining the integrity of the structures and the periodic removal of accumulated sediment. These structures should be inspected monthly and after each significant rain event to verify that they remain properly installed and that the quantity of entrapped sediment or debris is not impeding their performance.

D. Spill Control and Cleanup

Promptly remove / remediate all spills in accordance with the level of training that you have received and immediately notify the site manager. To reduce the likelihood of spills, return all chemicals and hazardous substances to their proper storage location as soon as possible, or at the end of the working day.

E. Vehicle and Equipment Washing

Assure that no vehicles or equipment are washed at the site in a manner that allows the wash water to discharge to the stormwater system. All wash water should be discharged to a sanitary sewer system

F. Catch Basins

Properly maintain and periodically clean on-site stormwater control devices including catch basins. Catch basins should be inspected quarterly, and cleaned out at least once a year. Any damage to catchbasins should be repaired promptly.

2. Materials Handling

Materials should be handled in a manner which will reduce their potential exposure to stormwater. This potential can be reduced by the following techniques: storing hazardous materials and chemicals in a building with secondary containment; carefully handling and labeling chemicals and petroleum products; quickly and properly remediating spills; covering with plastic full rolloffs stored outside to prevent stormwater from contacting any stored material; and inspecting incoming vehicles (any vehicle known or suspected of containing unsuitable or contaminated materials will be rejected).

1005 BOSTON POST ROAD
MADISON, CT 06443
Phone 203-245-0568
FAX 203-318-0830
Connecticut Certification PH-0535
www.eclinconline.com



Report of Analysis

Name: Town of Essex - DPW
29 West Avenue
Essex, CT 06426
Attn: Mr. Ryan Welch
Sample Date: 12/14/2020
Receipt Date: 12/14/2020
Report Date: 12/22/2020
Sample Site: Plaza Dr.

Sample ID#: 136777
Sample Type: Water
Sample Source: MS4 Stormwaters
Sampler: Client

CT River FRS-OF-0018

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological Coliform, E. Coli	4.1	MPN/100mL	Colilert-18	0	2/14/2020	JB
Chemical Ammonia as N	1.18	mg/L	ASTM D6919-03	0.05	12/21/2020	KC
Chlorine- Residual, Total	ND	mg/L	SM4500-Cl G	0.02	12/14/2020	JB
Nitrate as N	1.50	mg/L	EPA300.0	0.1	12/15/2020	JB
Nitrite as N	0.02	mg/L	EPA300.0	0.01	12/15/2020	JB
Phosphorous -Total as P	ND	mg/L	EPA 200.7	0.04	12/21/2020	JB
Salinity	0.129	ppt	CALC	0.01	12/14/2020	DB
Surfactants as MBAS	0.057	mg/L	SM5540C	0.05	12/15/2020	CET
TKN as N	2.11	mg/L	4500NorgC	0.5	12/16/2020	KC
Physical Conductivity	267	umhos/cm	SM2510B	1	12/14/2020	JM
PH	6.60	pH	EPA 150.2	1	12/14/2020	JM
Temperature	13.9	C	SM2250B	1	12/14/2020	Client


DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

Comments CET - CT PH-0116.

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Connecticut Certification PH-0535
www.eclinconline.com

ECL **ENVIRONMENTAL**
CONSULTING LABORATORIES, INC.

Report of Analysis

Name: Town of Essex - DPW
29 West Avenue
Essex, CT 06426
Attn: Mr. Ryan Welch
Sample Date: 12/14/2020
Receipt Date: 12/14/2020
Report Date: 12/22/2020
Sample Site: Industrial Rd.

Sample ID#: 136778
Sample Type: Water
Sample Source: MS4 Stormwaters
Sampler: Client

FRS-OF-0026

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological Coliform, E. Coli	17.5	MPN/100mL	Colilert-18	0	2/14/2020	JB
Chemical Ammonia as N	0.06	mg/L	ASTM D6919-03	0.05	12/21/2020	KC
Chlorine- Residual, Total	ND	mg/L	SM4500-Cl G	0.02	12/14/2020	JB
Nitrate as N	0.57	mg/L	EPA300.0	0.1	12/15/2020	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	12/15/2020	JB
Phosphorous -Total as P	ND	mg/L	EPA 200.7	0.04	12/21/2020	JB
Salinity	0.043	ppt	CALC	0.01	12/14/2020	DB
Surfactants as MBAS	0.085	mg/L	SM5540C	0.05	12/15/2020	CET
TKN as N	<0.50	mg/L	4500NorgC	0.5	12/16/2020	KC
Physical Conductivity	80.0	umhos/cm	SM2510B	1	12/14/2020	JM
PH	6.35	pH	EPA 150.2	1	12/14/2020	JM
Temperature	14.4	C	SM2250B	1	12/14/2020	Client


DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

Comments CET - CT PH-0116.

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Report of Analysis

Name: Town of Essex - DPW
29 West Avenue
Essex, CT 06426
Attn: Mr. Ryan Welch

Sample ID#: 136779
Sample Type: Water
Sample Source: MS4 Stormwaters
Sampler: Client

Sample Date: 12/14/2020

Receipt Date: 12/14/2020

Report Date: 12/22/2020

Sample Site: Foot of Main Impaired

CRN-OF -0008

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological Coliform, E. Coli	1986.3	MPN/100mL	Colilert-18	0	2/14/2020	JB
Chemical Ammonia as N	<0.05	mg/L	ASTM D6919-03	0.05	12/21/2020	KC
Chlorine- Residual, Total	ND	mg/L	SM4500-Cl G	0.02	12/14/2020	JB
Nitrate as N	0.67	mg/L	EPA300.0	0.1	12/15/2020	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	12/15/2020	JB
Phosphorous -Total as P	0.14	mg/L	EPA 200.7	0.04	12/21/2020	JB
Salinity	0.122	ppt	CALC	0.01	12/14/2020	DB
Surfactants as MBAS	0.20	mg/L	SM5540C	0.05	12/15/2020	CET
TKN as N	0.79	mg/L	4500NorgC	0.5	12/16/2020	KC
Physical Conductivity	253	umhos/cm	SM2510B	1	12/14/2020	JM
PH	6.69	pH	EPA 150.2	1	12/14/2020	JM
Temperature	11.7	C	SM2250B	1	12/14/2020	Client


DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

Comments CET - CT PH-0116.

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Report of Analysis

Name: Town of Essex - DPW
29 West Avenue
Essex, CT 06426
Attn: Mr. Ryan Welch
Sample Date: 12/14/2020
Receipt Date: 12/14/2020
Report Date: 12/22/2020
Sample Site: Pratt St. Impaired

Sample ID#: 136780
Sample Type: Water
Sample Source: MS4 Stormwaters
Sampler: Client

CRN-OF-0025

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	2419.6	MPN/100mL	Colilert-18	0	2/14/2020	JB
Chemical						
Ammonia as N	ND	mg/L	ASTM D6919-03	0.05	12/21/2020	KC
Chlorine- Residual, Total	ND	mg/L	SM4500-Cl G	0.02	12/14/2020	JB
Nitrate as N	6.17	mg/L	EPA300.0	0.1	12/15/2020	JB
Nitrite as N	0.01	mg/L	EPA300.0	0.01	12/15/2020	JB
Phosphorous -Total as P	ND	mg/L	EPA 200.7	0.04	12/21/2020	JB
Salinity	0.123	ppt	CALC	0.01	12/14/2020	DB
Surfactants as MBAS	0.05	mg/L	SM5540C	0.05	12/15/2020	CET
TKN as N	0.89	mg/L	4500NorgC	0.5	12/16/2020	KC
Physical						
Conductivity	254	umhos/cm	SM2510B	1	12/14/2020	JM
PH	7.34	pH	EPA 150.2	1	12/14/2020	JM
Temperature	13.3	C	SM2250B	1	12/14/2020	Client


DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

Comments CET - CT PH-0116.

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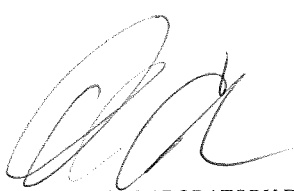
Report of Analysis

Name: Town of Essex - DPW
29 West Avenue
Essex, CT 06426
Attn: Mr. Ryan Welch
Sample Date: 12/14/2020
Receipt Date: 12/14/2020
Report Date: 12/22/2020
Sample Site: Rivers Edge

Sample ID#: 136781
Sample Type: Water
Sample Source: MS4 Stormwaters
Sampler: Client

FRS-OF-0051

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological Coliform, E. Coli	32.7	MPN/100mL	Colilert-18	0	2/14/2020	JB
Chemical Ammonia as N	<0.05	mg/L	ASTM D6919-03	0.05	12/21/2020	KC
Chlorine- Residual, Total	ND	mg/L	SM4500-Cl G	0.02	12/14/2020	JB
Nitrate as N	0.37	mg/L	EPA300.0	0.1	12/15/2020	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	12/15/2020	JB
Phosphorous -Total as P	ND	mg/L	EPA 200.7	0.04	12/21/2020	JB
Salinity	0.049	ppt	CALC	0.01	12/14/2020	DB
Surfactants as MBAS	ND	mg/L	SM5540C	0.05	12/15/2020	CET
TKN as N	<0.50	mg/L	4500NorgC	0.5	12/16/2020	KC
Physical Conductivity	94.1	umhos/cm	SM2510B	1	12/14/2020	JM
PH	6.59	pH	EPA 150.2	1	12/14/2020	JM
Temperature	13.3	C	SM2250B	1	12/14/2020	Client


DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

Comments CET - CT PH-0116.

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FAX 203-318-0830
Connecticut Certification PH-0535
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Report of Analysis

Name: Town of Essex - DPW
29 West Avenue
Essex, CT 06426
Attn: Mr. Ryan Welch
Sample Date: 12/14/2020
Receipt Date: 12/14/2020
Report Date: 12/22/2020
Sample Site: Bookhill Rd. Impaired

Sample ID#: 136782
Sample Type: Water
Sample Source: MS4 Stormwaters
Sampler: Client

FRN-OF-0001

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	292.4	MPN/100mL	Colilert-18	0	2/14/2020	JB
Chemical						
Ammonia as N	0.16	mg/L	ASTM D6919-03	0.05	12/21/2020	KC
Chlorine- Residual, Total	ND	mg/L	SM4500-Cl G	0.02	12/14/2020	JB
Nitrate as N	0.38	mg/L	EPA300.0	0.1	12/15/2020	JB
Nitrite as N	0.01	mg/L	EPA300.0	0.01	12/15/2020	JB
Phosphorous -Total as P	0.15	mg/L	EPA 200.7	0.04	12/21/2020	JB
Salinity	0.042	ppt	CALC	0.01	12/14/2020	DB
Surfactants as MBAS	0.13	mg/L	SM5540C	0.05	12/15/2020	CET
TKN as N	1.03	mg/L	4500NorgC	0.5	12/16/2020	KC
Physical						
Conductivity	77.4	umhos/cm	SM2510B	1	12/14/2020	JM
PH	6.53	pH	EPA 150.2	1	12/14/2020	JM
Temperature	13.3	C	SM2250B	1	12/14/2020	Client

DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

Comments CET - CT PH-0116.

GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER ASSOCIATED WITH INDUSTRIAL ACTIVITY

Stormwater Monitoring Program

The Stormwater Program includes monitoring and reporting at twelve month intervals. This sampling will be done at pre-determined points, where the water empties into the catch basin or discharge stream. All samples must be grabbed during the first 30 minutes into the storm event. A Chain of Custody (included in this packet) must be completed and delivered to the laboratory with the bottles. Please be sure the sample number/location is recorded on both the Chain of Custody and bottles. Signatures as noted are required.

The rain event for sampling will be after a 72 hour dry period. All samples will be grab samples. The history of the rain event, and pH measurements of rain water and sample must be completed immediately in the field and recorded below. pH measurements can be done with the pH paper and diagram included in this packet. Please note that the provided rain water bottle must be filled and included with your other bottles.

The laboratory will provide all sampling bottles. We will also provide a cooler at your request. After sampling, keep the cooler iced so samples are at or below 10° C. Transit time to the laboratory cannot exceed 24 hours.

Sample Location: TOWN OF ESSEX

Time and Date of Sampling: 10am - 11am

Event Starting Time: 9:30 am

Rainfall (inches) at Time of Sampling: .2

Rainfall of Total Event: ?

Time and Date of Previous Rainfall: 12/12

pH of Rain Water: _____

pH of Stormwater Sample: _____

