

Old Lyme Resilient Connecticut 2.0

4-26-22

Town Hall

Present: David Murphy (CIRCA), Mary Buchanan (CIRCA), Katie Lund (CIRCA), Margot Burns (RiverCOG), Tim Griswold (Old Lyme First Selectman), Dan Bourret (Old Lyme Land Use Coordinator)

Overview: CIRCA met with the Town of Old Lyme and RiverCOG to describe the expansion of Resilient Connecticut into the RiverCOG planning region and provide a forum to the local hazard mitigation plan team to comment on the status of actions in the Old Lyme annex of the Hazard Mitigation Plan adopted in 2021. These meeting notes will be provided to the Town and RiverCOG for appropriate filing related to the Hazard Mitigation Plan.

David commenced the meeting by providing an overview of the Resilient CT project and Resilient CT 2.0 future plans. During the discussion, attendees had an open discussion about the Town's needs related to climate change and natural hazards and reviewed some of the Town's hazard mitigation actions. Not all HMP actions were covered during this meeting due to time constraints.

Initial discussion: Attendees held an initial discussion about town needs, which included concerns about sewers, flooding, and erosion due to wave action. See below for more detailed information on each of these concerns.

Sewers:

Old Lyme currently has a sewer avoidance policy for most of the town, but a sewer system for four beach associations has been proposed – the project area would include three privately-managed chartered beach associations (Old Colony Beach Club Old Lyme Shores, and Miami Beach) and the town-managed Sound View area. The current septic situation in this area is preventing some beach residences from being year-round residences.

- The proposed sewer project would include collection and conveyance infrastructure to take the effluent to East Lyme's pumping station and eventually to New London, in addition to each beach association having its own gravity sewers that would drain down to the collection sites.
- Cost estimates (via two rounds of bids) were represented as very high. The private beaches are responsible for raising their share and the town will provide Sound View's share, but the users of the sewers would eventually be paying for their connections and usage. The town is talking to House Rep Courtney and Senators Murphy and Blumenthal to explore additional funding options.
- The proposed pump station (which will be located on a vacant lot on Portland Ave near Pond Road) and the sewer plans have all received zoning approval, and the Town is waiting for the funding.

- If the sewer system is constructed, the pump station will be located outside of the current 100-foot flood zone; it is not clear whether this will continue to be true as flood zones change in the future.
 - o The pump station will have a generator, but it will likely be sufficient for only 2 days; some residents are concerned this is not enough time to operate the pumping station during an outage.
- There are also stormwater management concerns in these beach association areas in addition to sewer, which have led to debates at planning meetings. Some people don't want to approve the sewers until more adequate drainage measures are implemented.
- The private beaches used to have separate private water companies, but these have mostly been folded into Connecticut Water Company, with the exception of Miami Beach. The well fields are near the railroad tracks and are currently relatively safe from saltwater intrusion. There is some concern that moving more water out of the area through the proposed sewer might affect the recharge of the bedrock aquifers that supply the wellfields, and make them more vulnerable to saltwater intrusion.
- Fuss & O' Neill and Woodard & Curran are the engineers used for the project.

Flooding:

- There are consistent flooding concerns related to Swan Brook, including the stream corridor through the beach community and the outfall. The Town-owned outfall comes into Long Island Sound via two 36-inch pipes under the beach, and is an open channel upstream to the north. The pipes cross at least 300 feet of beach. There is a wooden crib protecting the outfall, which has weathered some damage over the years and often is blocked by shifting sandbars.
 - o The engineer is considering a swale instead of a fixed pipe for the downstream section.
 - o The town is aiming for a certificate of permission instead of a permit to address this issue temporarily until there is a new plan. The cost for this will likely be around \$55,000, possibly paid for with ARPA money or else with local funding.
- Pond Road residences are sometimes flooded out of their driveways.
- White Sands Beach: An unnamed stream is enclosed in a concrete structure and an 18-inch pipe that goes by some housing and then under the beach. The grade and routing of the State-owned pipe are believed somewhat problematic, so if the structures remain unchecked the nearby houses can flood. The stream flows from the north where a former tidal marsh is located. Several solutions have been proposed, such as having the water move laterally through the marsh or adding a duckbill.
 - o DEEP is responsible for this pipe so the town's ability to address this is limited. The town does often dig it out, but this is a temporary solution.
 - o The Howard Beach community needs to drive through the White Sands area in order to evacuate, but could find their way blocked by a flood. Some of the CIRCA delineated Zones of Shared Risk reflect this limited egress. In the event of a forecast storm or flood, the fire department goes down to the beach communities with loudspeakers and makes an announcement advising residents to leave.

- The Cross Lane underpass floods consistently, as does the underpass by Point O’Woods and the culvert under the Amtrak rail line. The Mile Creek underpass and the McCurdy underpass are both higher in elevation and reportedly do not flood as often.
- Just before Point O’ Woods on Rt 156, there is a low dip (located after Windward Lane, near Three Mile River). This can get 8-10 feet of water in a big storm.

Erosion:

- Erosion due to wave action is a moderate concern (the former Griswold Point is a notable example of a landscape that has been significantly changed due to erosion). The First Selectman expressed interest in wave attenuation devices (WAD), but foresaw opposition from boat-owners and other beach-users.
- Point O’ Woods is reportedly “silting in”.
- A number of the beaches have groins.
- Katie noted that open space lands facing erosion might be good candidates for living shorelines (as opposed to private lands where landowners might prefer sea walls). Funding may be available from state and other sources for living shoreline projects.

Review of HMP Actions: Due to time constraints, not all actions were discussed. Status updates are included below for the actions that were covered during the conversation.

Activity #	Goal/Objective	Activity Description	Status Reported by Location Planning Team
1	1-1	Business Recovery Plan. Emergency Management is working on long-term recovery for COVID-19, ESF14, Regional Emergency Planning Team. Complete this work and expand to other natural disasters.	This is still needed. David noted that this may be elevated to the COG level.

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2	1-1	<p>Capital Improvement Program.</p> <p>Use Capital Improvement Program (CIP) to set aside funds for infrastructure improvements to reduce loss of life and property during natural hazard (NH) events.</p>	<p>There is a 5-year Capital Plan, but there is presently a town surplus that can be used as needed for projects that reduce flooding or when natural disasters happen.</p>
	1-1	<p>Plan of Conservation and Development.</p> <p>During the next update, add this plan by reference to the POCD</p>	<p>The POCD was updated in 2021.</p>
3	1-1	<p>Design Standards.</p> <p>Use SHPO Best Practices Guide for resilience when evaluating design of improvements to at risk historic and cultural resources.</p>	<p>Most of the historic resources are in the town center historic district where retrofits such as elevations and floodproofing are less needed and likely to alter the historic character of the district. The most at-risk homes in the beach communities are not listed as historic structures, despite their potential eligibility.</p>
4	1-1	<p>Flood Zone Study.</p> <p>Review other flood study work (i.e. CIRCA SLR Study) currently available and prepare recommendations for incorporation the next time there is a FEMA flood study. Evaluate incorporation into planning initiatives before there is a FEMA flood study update.</p>	<p>FEMA will be releasing new maps of the region this year, but it is unclear if any new modeling is being done. Margot will look into this.</p>
5	1-1	<p>Grants. Identify and apply for grants to fund infrastructure improvements and other mitigation tasks identified in this plan.</p>	<p>A bridge on Mile Creek Road was replaced, 50/50 with town funds and state funds. Grassy Hill bridge was slightly elevated. The bridge on 156 will likely be redone. By DOT</p>
6	3-1	<p>Local Sea Level Rise Study.</p> <p>Review and use CIRCA SLR Study, UCONN Sea Grant education outreach, flood susceptibility mapping to investigate possible mitigation actions and to assess legal, financial and policy implications. Establish an ad hoc committee to look at impacts and make recommendations.</p>	<p>No committee or commission has been established. The town sometimes is challenged to identify people to fill commissions.</p>
7	1-1	<p>Possible Open Space Criteria. Acquisition of open space is ongoing. Make flooding and SLR a criterion. Advance an assertive land acquisition plan to reserve vacant land subject to NHs.</p>	<p>The town regularly acquires open space when possible, but mostly focuses on properties that are contiguous with other open space properties. The Town and Land Trust together own 2,000 acres. The Town</p>

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			provides \$75,000 per year to a fund that can be used to purchase land.
8	2-1	Post Disaster School Arrangements. Establish reciprocal arrangements with other school districts for getting students back into classes during extended recovery periods. Working with other Town School Districts. Distance learning post COVID-19 could eliminate the need. Re-evaluate in 5 years.	Not discussed
9	1-1	Potential Financial Impact of Probable Events. Estimate the municipal tax revenue that could potentially be lost in various events to provide the Board of Selectmen and Board of Finance with an idea of how large a “rainy day” fund might be necessary to cover that post disaster period when there would be minimal income and maximum output of public funds at all levels of government.	While this action has not been completed as written here, the First Selectman explained that the commercial tax base is about 5% of the grand list and the residential tax base is about 90%. This presents a concern related to losses in a flood or storm event. As noted above, the Town presently has a surplus that can be used.
10	1-1	Private Property Funds. Evaluate opportunities for public funding for projects on private property where the benefits exceed the costs. Potential to share resources between town and beach communities.	Not discussed, but based on the discussions that occurred, this approach has been challenging in the past.
11	1-1	Regulations. Strengthen existing subdivision regulations to either optimally prevent road or house construction within the floodplain, or alternatively raise structures above BFE. Looking at increasing setbacks to tidal wetlands from 50 to 100 feet.	Not discussed
12	1-1	Critical Facilities. Upgrade as necessary all facility mechanicals, such as generators, in municipal and other critical facilities. Continue to participate in a regional sheltering program with East Lyme and others. Add generator to Sr. Center.	The Old Lyme fire marshal has been working on this. Most buildings now have generators; town staff is not aware of any obvious gaps. The fire marshal can also bring a portable generator to affected locations. Many private homeowners also have their own generators (although the generators aren’t required to be raised above the base flood elevation unless the house is also raised).
13	2-1	Firefighting Infrastructure Analysis. Evaluate existing firefighting infrastructure to identify needs for improvement to cover gaps in availability. Underway with ISO review in 2020.	Not discussed

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14	1-1	<p>Municipal Buildings Capable of being Shelters. Future investment in municipal structures should include funding for new construction or renovation that will assure the structure is compliant with the standards for use as a shelter, to the extent possible. Need 24-hour location to be set up at schools. Town Hall is currently in flood zone.</p>	<p>The senior center can be used as a cooling center and backup or temporary shelter (it has air conditioning and generator). The town hall can be used for warming. The high school is the primary shelter, and can be used as a cooling center; the schools in Old Lyme are more air-conditioned than some of the other towns. Regional school district 18 includes Old Lyme and Lyme.</p>
15	3-1	<p>Promote Self Inspection. Develop a list of techniques for homeowner self-inspection especially for those located in coastal areas.</p>	<p>Not discussed</p>
16	1-1	<p>Risk Reduction. Develop a strategy and funding program to elevate or relocate structures of flood-prone properties or acquire RL properties that request a "buy-out". Encourage owners of repetitive loss and severe repetitive loss properties (residential and commercial) to obtain assistance for hazard mitigation funding from DEEP/FEMA for elevation of structures and repairs where applicable.</p>	<p>Landowners are not interested in selling to town; if anything, people are buying more flood-prone properties to reconstruct or replace houses. With reference to the home being flooded by beaver activity (below), the Town is not inclined to acquire this property.</p>
17	2-1	<p>Upgrade Fire Fighting Infrastructure. Upgrade existing fire ponds to ensure adequate water supply is available. Construct new fire ponds and fire wells where water is not currently available. Upgrade where appropriate and maintain dry hydrants and water sources to ensure adequate fire- fighting capability. Any subdivision more than three homes pond or cistern.</p>	<p>Not discussed</p>
18	2-1	<p>Dam Inventory. Review DEEP requirements (i.e. rules updated for high hazard dams). Need for future inundation studies. Update inventory of dams and assess downstream risks due to catastrophic failure. Include State, Town, and Privately-owned dams. Future studies on Dam inundation are needed and DEEPs database needs to be updated to reflect existing dams not listed.</p>	<p>The Rogers Lake Dam on Town Woods Road was repaired about 5 years ago, paid for by the Town of Old Lyme. There are a few downstream dams that are believed in decent shape. Residents have complained about beavers (Black Hall Pond). A home near this pond (noted above) has experienced very wet or flooded conditions due to beaver activity.</p>
19	2-1	<p>Dune Restoration. Review Sea Grant study on living shoreline projects/education on dunes. Implement dune restoration and marshland protection techniques for flood</p>	<p>No progress has occurred here.</p>

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		storage and surge protection.	
10	2-1	Drought Mitigation. Consider regulatory changes to require moisture sensors for all newly installed irrigation systems.	Not discussed
21	3-1	Risk Assessment. Use GIS to conduct NH risk assessments that identify potentially affected areas and depicts evacuation routes.	Not discussed
22	1-1	Street Tree Program. Implement a tree hazard management program to encourage appropriate planting practices to minimize future storm damage to buildings, utilities and streets.	Old Lyme has worked with Eversource on an extensive program to remove hazardous trees. The Town believes this has saved money on cleanup after storms.
23	3-1	Circulate Existing Literature. Access existing literature prepared by regional groups, the Chamber of Commerce and FEMA and display for public distribution in the Library. Already completed for Town Hall	Not discussed
24	3-1	Drought Education. Coordinate with Connecticut Water Company on public education and public service announcements during droughts. Add recommendations for moisture sensors and other water conservation techniques.	Not discussed
25	3-1	Preparedness Webpage. Annually (or as events dictate) update Town website with NH preparedness information, including hazard areas, evacuation routes deemed appropriate per NH event and locations of shelters. Post on Town website information about recovery assistance following NH events. Update town webpage with the section on Hazard Preparedness for the public. Include maps of evacuation route, storm surge areas, and shelters. Include options for mitigation for residential structures and business recovery and provide links to FEMA, NOAA, DEMHS and RiverCOG websites for additional information.	Not discussed
26	3-1	Neighborhood Mitigation. Engage neighborhood associations annually to participate in implementing the NH Mitigation Plan. Encourage engagement in future HMP updates.	Not discussed
27	2-1, 3-1	Repetitive Loss and Other Flood Prone Properties. Work with property owners to identify funding sources to mitigate properties through elevation or acquisition. Identify means of overcoming past challenge of not having the appetite to be the subgrantee and contract with owners.	The town has not considered buying out landowners; many do not want to leave, as discussed above for action #16.

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28	2-1	Conduct engineering studies to mitigate various Town-owned structures in need of repair, culverts, pipes, bridges, etc., on Town-owned roadways that are causing flooding and overtopping problems. Replace 1-2 annually. Cross Lane Underpass is top priority.	This was discussed through open discussions and through other actions.
29	2-1	Support mitigation projects that will result in protection of public or private property from natural hazards through stormwater management improvements for areas identified by the Town. Identify and implement one per year.	The Town has not been able to make progress on this action, as the logistics have been complex. As noted above, residents in the beach communities have asked for stormwater improvements during sewer project implementation. Residents of Old Lyme Estates have addition concerns as noted below.

Open Discussion:

- There is an existential concern about the elevation of West End Drive and the homes located along the road – “how long is West End Drive going to be there?” The Town believes road elevations are too expensive relative to the benefits that result.
- The Town participates in Sustainable CT and may move from silver to gold status.
- David asked if there is there anything else that we haven’t yet talked about related to climate concerns? The following points summarize the discussion and capture some of the earlier discussions:
 - o Miami Beach experiences consistent flooding when tides flood the brook and then flood the houses. It is unclear if any drainage improvements would help here.
 - o Swan Brook – In addition to the flood risk, some walls are located along the banks of the brook, and it is unclear who is responsible for maintaining these (likely the homeowners).
 - There might need to be a bigger analysis of this watercourse.
 - o White Sands Beach as previously noted.
 - o Old Lyme Estates – Development of the remaining vacant properties has caused concern among existing residents. The area is very flat and low-lying, and the development lacks stormwater collection and conveyance infrastructure. When severe rain events occur (such as the 8-inch rainfall in 2021), the basements reportedly flood. The town doesn’t have the ability to refuse building permits if they are following zoning rules. The whole community is an AE flood zone.
 - **CIRCA will delineate a new nested Zone of Shared Risk around this neighborhood.**

Follow-up:

- Please take a look at the map viewer for the Zones of Shared Risk and offer any corrections/additions. Link here:
<https://experience.arcgis.com/experience/9a4f68dd99f44dc58b93fd85bcfe1255/>
- (Note: the Editor tool within the viewer does not always save reliably, so please email mary.buchanan@uconn.edu with any changes you'd like to see reflected in the Old Lyme ZSR layer.)
- CIRCA will reach out to fire marshal for insight on other HMP actions.