SUBJECT TO APPROVAL

MADISON PLANNING AND ZONING COMMISSION
PLANNING MEETING MINUTES
May 2, 2019

The planning meeting of the Madison Planning and Zoning Commission was conducted Thursday, May 2, 2019, at 7 p.m., in Meeting Room A at Madison Town Campus.

MEMBERS PRESENT
Chairman Ronald Clark, Vice Chairman James Matteson, Secretary Thomas Burland, John K. Mathers, Brian Richardson, Joel Miller, and Giselle Mcdowall.

MEMBERS ABSENT
Joseph Bunovsky, Jr. and Elliott Hitchcock.

ALTERNATES PRESENT
Seonaid Hay.

OTHERS PRESENT
Director of Planning and Economic Development David Anderson, a standing room only crowd featuring First Selectman Thomas Banisch, current and former selectmen, finance officials, board and commission members across the town's environmental and planning spectrum, and MCTV, which taped the meeting.

The planning meeting of the Madison Planning and Zoning Commission was called to order at approximately 7:03 p.m. by Chairman Ronald Clark. Chairman Clark stated that Giselle Mcdowall has been appointed as a regular member of the commission by the Board of Selectmen and is no longer an alternate member.

Presentation from the University of Connecticut (UConn) Institute for Resilience and Climate Adaptation (CIRCA) regarding the growing impacts of climate change and a discussion about what adaptation strategies the Town of Madison can employ to become more resilient.

Chairman Ronald Clark stated that in light of the issues faced, due to sea level rise and climate change, the Planning and Zoning Commission has been looking at its regulations to determine what needs to be changed. Planning and Zoning commissioners need to modify the town's regulations to encourage homeowners to adapt to the phenomenon to protect residents' public safety, local property, and the town's tax base, according to Chairman Clark. He introduced Connecticut Institute for Resilience and Climate Adaptation (CIRCA) Director of Applied Research Joseph MacDougald, who has not only served on Madison's Planning and Zoning Commission and the Boards of Selectmen and Finance, but is also a University of Connecticut (UConn) professor-in-residence, and the executive director of UConn Law's Center for Energy and Environmental Law (CEEL).

The state Department of Energy and Environmental Protection (DEEP) formed a group representing the sciences, engineering and a variety of experts from other fields to tackle the effects of climate change and sea level rise within the state of Connecticut; this group decided on the name Connecticut Institute for Resilience and Climate Adaptation (CIRCA), according to

Mr. MacDougald. Since climate change and sea level rise are causing a major disruption in the environment, it is important for the state of Connecticut to prepare and take action, since the federal government has not taken the initiative, according to Mr. MacDougald. This environmental disruption encompasses the entire biosphere—the earth's crust, its rivers, ponds, lakes, streams, marshes, wetlands, fresh and salt waters, and the earth's atmosphere that supports life, or, in simpler terms, the ecosystem comprising the entire earth and the living organisms that inhabit it. It is this disruption that is causing the bear population to move south and to be seen throughout Connecticut, including in Madison, according to Mr. MacDougald, who showed a photograph of a bear taken in his own yard, during the PowerPoint presentation; it is also the reason aquatic species once only seen in the south have been found 200 miles northward. Mr. MacDougald showed photographs of areas devastated by storms and hurricanes, in particular, a section of Miami, Florida, where the buildings and roads are relatively new, but were inundated by floodwaters. This area of Miami is new enough that legislation and/or local regulations should have been enacted to incorporate climate change, sea level rise, and the more severe storms and hurricanes being experienced, but Mr. MacDougald explained that the law does not respond well. In Florida, octopi are coming out of storm drains, he stated. Hurricanes are more severe, evacuation routes no longer work, and the slowing of the Gulf Stream are climate change issues that need addressing; CIRCA is a state level agency that has been very active and that provides a way to take research and science to policy makers, Mr. MacDougald stated. In terms of sea level rise for Connecticut, CIRCA uses the figure of 50 centimeters by 2050, but for a variety of reasons, a lot of what happens in the future is not what everyone is currently thinking, according to Mr. MacDougal. For instance, the number of properties that will be inundated—experiencing regular flooding—is actually falling, so it is not so much flooding but storms that must be considered, particularly the 100-year storm—the big storm—of which is expected to be four times more likely to happen in Greenwich but eight times more likely to be experienced by Madison, according to Mr. MacDougal. It is the Federal Emergency Management Agency (FEMA) that has requirements for elevating structures to a certain height, known as the base flood elevation, and towns set the heights through zoning regulations. Any policies enacted should be storm focused, since flooding is less immediate, and it is important to achieve a consensus on planning from a number of towns, taking a regional approach, according to Mr. MacDougal. Since there were conflicting definitions of sea level rise, CIRCA proposed a change to state law, seeking legislative endorsement and authority to use the University of Connecticut developed sea level rise standard of 50 centimeters of sea level rise in Long Island Sound by 2050, to update that scenario every 10 years, and to increase the base flood elevation two feet; that law is known as Connecticut General Statutes (CGS) Public Act 18-82 An Act Concerning Climate Change Planning and Resiliency. This law impacts the state's and Madison's coast, road standards, and even what the town of Madison might do with regards to the Surf Club, according to Mr. MacDougal; in addition, Madison's Plan of Conservation and Development must reflect the requirements of this law. Other considerations town officials need to make would include how to modify flood plain ordinances, building height requirements and town infrastructure. Planning for sea level rise incorporates the fact that the water table is rising, leading to failing septic systems and flooded basements.

CIRCA Executive Director and UConn Professor James O'Donnell, who created the models that changed the law, stated that these problems are complicated, and there are no good organizations across the United States that entwine all of the scientific, geological, political and legal expertise required to adopt changes that make sense and are fair, in addressing the issues of climate change and sea level rise. Mr. O'Donnell presented topographic maps of the Connecticut shoreline and the changes the earth experienced when glaciers moved across the state, forming, at one time, a

lake and then the Long Island Sound. As the ice began to recede, rock carried by the glaciers formed a dam, which created the lake, and then rivers began forming, soil was deposited in the lake, and deltas were created. Several people did papers that tracked how fast the glaciers are moving from the arctic, and this tracking has indicated that a sea level rise of 50 centimeters by 2050 is a prudent estimate for planning purposes, according to Mr. O'Donnell. In addition, a PowerPoint graph of New London from 1930 to the present day, in meters, showed that the big peaks are hurricanes, and the smaller peaks are nor'easters; looking at it over time, the results are that the 100-year storms are increasing, from perhaps, one storm in a year, to two 100-year storms a year, and then to three 100-year storms a year. What can be expected is that there will be elevated flood levels, meaning the water level of a particular storm will rise, and there will be increased frequency, or that a storm that was expected to occur every 10 years, on average, will occur roughly every two years, according to Mr. O'Donnell.

Director of Resilience Design and Deputy Executive Director Alexander Felson presented maps depicting Garnet Park Road, Circle Beach Road, Madison Beach Club Road and Island Avenue, to give an opportunity to brainstorm about priorities to make, in order to translate the technical needs and issues into planning. Madison does not have a shallow slope that floods across; instead, it has some high ground and an infrastructure that runs parallel to the coast. Mr. Felson stated that Garnet Park Road, with Bailey Creek and the Neck River, is an interesting place to build housing, and there are marsh systems that need to be protected in flooding. In examining the topography of the area, one map contained an outline that Mr. Felson called the Zone of Shared Risk—Garnet Park Road is a long road with one egress and a portion of the road goes over the marsh. If the road is elevated, the sides have to be made wider, and that will further impact the marsh, but another possibility could be to create a new road, according to Mr. Felson. When local properties are examined and identified as Zones of Shared Risk, towns are then able to make plans, Mr. MacDougal stated. It is a complicated project to elevate houses, raise roads, and to change roads, Mr. O'Donnell stated. Geologically, a lot of towns in Connecticut look like Madison; they're attractive but they are very risky and very expensive to retain, Mr. O'Donnell stated. Circle Beach Road has flooding from the front and a large wetland complex with flooding from behind, according to Mr. Felson. Zones of Shared Risk are distinguished by isolated housing with one egress, the potential for septic system failure, ongoing beach erosion, and seawall overtopping creating maintenance costs, according to Mr. Felson. Madison Beach Club Road and Island Avenue consist of a coastal road and an inland road, Mr. Felson stated. In looking at flood maps, it can be seen that there is a fair amount of risk, he stated, adding that flooding maps reveal that it is critical for Madison to investigate and plan for how to manage flooding. Island Avenue should be considered as a critical road, as a resilience corridor, a Zone of Shared Risk incorporating a subpopulation with similar issues, according to Mr. Felson. There are lots of towns that have resilient planning, where options are looked at over a scale of 10 to 15 years, according to Mr. MacDougal.

In conclusion, it can be expected that flood frequency increases with sea level rise; cost benefits vary with adaptation options; and the CIRCA solution model is combining planning efforts with technical analysis and scientific knowledge. Resilient Connecticut efforts are to be permittable, economic, realistic, sustainable, innovative, scientific, and transferrable.

Director of Planning and Economic Development David Anderson stated that he was hoping town officials would leave with a plan of action, and he asked who should carry the ball on this; there has been some talk about reconstituting the Flood and Erosion Control Board, for instance. Mr. MacDougal stated that the Flood and Erosion Control Board needs a resilience function and

a broader platform. Mr. Felson summarized what Guilford did over a three-year period with resilience planning. Mr. O'Donnell stated that the Zone of Shared Risk hadn't been made clear, until *after* working with Guilford, and that mapping all of Madison's Zones of Shared Risk, as recommended by a local resident in the audience, would be a great idea. It is important that all of the boards and commissions cooperate and communicate with one another, and it is also good to have one group focused on resilience, Mr. MacDougal stated. State resilience funding was discussed on the gubernatorial transition team, Mr. MacDougal stated.

Adjournment: The Planning and Zoning Commission concluded its planning session meeting at the end of the CIRCA program, which was at 8:50 p.m.

Respectfully submitted,
Marlene H. Kennedy, clerk