

Section 31 – Climate Change Resilience

A. The impacts of climate change can adversely affect each Resource Area’s ability to provide and promote the resource area values protected by the Bylaw. (See definitions of “adaptation” and “alter” and “impacts of climate change” “resource area values” and other climate change-related definitions in Section 4 above). Resource Areas are critical to building a community’s resilience/adaptation to the impacts of climate change due to their ability to provide for flood control, storm damage prevention, ~~and other Resource Area Values.~~ extreme temperature mitigation, and other Resource Area Values including but not limited to water supply protection; pollution prevention; erosion and sedimentation control; protection of surrounding land and other homes or buildings; wildlife, plant, and aquatic species protection; habitat protection; and the protection of the natural character or recreational values of the wetland resources.

B. The Applicant shall, to the extent practicable and applicable as determined solely by the Commission, integrate considerations of adaptation planning into their project to promote climate change resilience so as to protect and promote resource area values into the future. These considerations are especially important in Land Subject to Flooding (floodplain) and Riverfront Area and other Resource Areas which protect the interest of Flood Control and Storm Damage Prevention, including Adjacent Upland Resource Areas. These Resource Areas may be directly impacted by extreme weather events expected to be more prevalent or more intense due to climate change, in surface runoff of pollutants, and in wildlife habitat due to changes in temperature.

C. ~~The Applicant shall, to the extent practicable and applicable as determined solely by the Commission, ensure that the project is consistent with other local and state regulations, guidelines, and policies concerning climate change resilience, including, but not limited to: municipal vulnerability preparedness (MVP) and hazard mitigation, clean energy, energy efficiency, green infrastructure, and nature-based solutions.~~

The Applicant shall consider the project’s adaptation to potential climate change impacts by addressing the following in writing:

- (1) Describe project design considerations to limit storm and flood damage during extended periods of disruption and flooding as might be expected in extreme weather events. For complex/larger projects, the Commission may require mapping of potential for flooding in the affected resource area, modeled out to future horizons (e.g., 2030, 2050, 2070). See Vegetative Wetlands Section 21, Land Subject to Flooding Section 23, and Adjacent Upland Resource Area Section 25, of these Regulations.
- (2) Describe project stormwater surface runoff, ~~which that is expected to may~~ increase due to storm surges and extreme weather events and sea level rise, and how this will be managed / mitigated to prevent pollution (including nutrients from fertilizers, roadway runoff, etc.) from entering the resource area in the future, with consideration of

Comment [NS1]: I hesitate the Commission shall ensure that a project is even “consistent” with other state regulations that we do not tasked to administer. While not saying “comply with”, it does beg the question. I think just saying “guidelines and policies” or “guidelines, policies, and practices” is sufficient.

Comment [NS2]: This is vague. I think we need to pick one or two future time periods.

Comment [NS3]: Is this too much of a coastal term?

eliminating or decreasing impervious surfaces as much as feasible. See Stormwater Management Section 33 of these Regulations.

- (3) Describe project vegetation / planting plans and other measures to improve the resiliency of the resource areas to provide resource area values including but not limited to wildlife habitat ~~of the resource area; that is, to enable resource areas~~ to withstand ~~potential temperature and rainfall changes (drought and excess)~~ extreme precipitation / rainfall changes (drought and excess) and extreme temperatures including extreme heat due to climate change. See Vegetation Removal and Replacement Section 24 of these Regulations.
- (4) Describe measures to protect proposed structures and minimize damage to existing and proposed structures due to the impacts of climate change.

Comment [NS4]: What measures can folks take other than modeling stormwater using NOAA+? Will we just get folks saying "I modeled my stormwater using NOAA+ and sized my BMPs accordingly"?

The evaluation of climate change impacts and discussion should incorporate the principles and guidelines from the following materials:

Town of Arlington Hazard Mitigation Plan 2020 Update, Section 8: Hazard Mitigation Strategy and Appendix A: Hazard Mapping

<https://www.arlingtonma.gov/home/showdocument?id=51627>

TOWN OF ARLINGTON Community Resilience Building Workshop Summary of Findings & Recommendations, May 2018. <https://www.arlingtonma.gov/home/showdocument?id=43409>

Resilient MA, Climate Change Clearinghouse for the Commonwealth: includes information on MVP, State hazard Mitigation & Climate Adaptation Plan (SHMCAP), & ResilientMA

Interactive Map:

<https://resilientma.org/>

NOAA's National Weather Service, Hydrometeorological Design Studies Center, Precipitation Frequency Data Server (PFDS) NOAA 14 data:

<https://hdsc.nws.noaa.gov/hdsc/pfds/>

Other materials

U.S. Climate Extremes Index (CEI) <https://www.ncdc.noaa.gov/extremes/cei/>