



TOWN OF LINCOLN

WATER DEPARTMENT

MIDDLESEX COUNTY MASSACHUSETTS

TOWN OF LINCOLN
WATER DEPARTMENT
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Housing Choice - Water Capacity

The Town of Lincoln is considering how a possible housing capacity increase implied by the parameters of the Housing Choice Act (HCA) could affect the availability of safe and reliable drinking water to the town's residents and businesses, including farms. While the HCA attempts to increase housing supply by changing zoning, and by tying that zoning change to the town's favorability in winning important grants, particularly for infrastructure, it is worth noting that it requires no actual increase in housing supply. As a result, the extent and schedule at which any resultant housing supply would be constructed, should Lincoln choose to change its zoning according to the HCA, is unclear.

The Massachusetts Department of Environmental Protection (MA DEP) issues limits on watershed withdrawal amounts as a function of the town's population. Our current withdrawal limit is 0.50 million gallons per day (MGD) average. If the Town of Lincoln's census were to show population growth over time, the MA DEP could increase the amount of water the town would be allowed to withdraw from the Charles River Watershed.

The Town of Lincoln's August (highest demand month due to outdoor watering) average water use is approximately 0.750 million gallons per day (MGD). Flint's Pond has a safe yield of 0.59MGD. The Tower Road Well has a maximum capacity of 0.576 MGD. This provides a combined 1.166 MGD maximum daily flow capacity. Under normal operations, August's average usage represents 64% of the system's maximum capacity. There is additional capacity to spare.

Housing choice could increase housing in Lincoln by up to 635 units over time. Assuming an average of 2.5 residents per unit, times 65 gallons per day per resident (as required by the MA DEP as a condition of the LWD's water withdrawal permit) the amount of additional water demand from 635 units would be 103,188 GPD, or 37.7 MGY. For the high demand month of August, adding 103,188 yields an average daily demand of 0.853 MGD. This represents 73% of max water treatment capacity. The Lincoln Water Department's existing water supply and infrastructure has the capacity to handle 635 additional residential units.

An important caveat is that climate change is making weather patterns more erratic. Drought is becoming an increasing concern that can stress drinking water supply State-wide. How the MA DEP responds to multiple towns across the state, potentially changing their zoning and increasing housing supply, especially in the context of climate change-related droughts, remains to be seen. Drought effects could be highly localized. Emergency interconnections are possible with Wayland, Weston and Lexington, but these have never been tested or utilized. An interconnection with the MWRA is being explored as a possible long-term solution.