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MBTA Communities Housing Act Housing Density Considering Onsite Subsurface Sewage Disposal

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Outline

- MBTA Communities Guidelines
- Title 5 Overview
- Density Defined
- What Impacts Density
- Building Types
- Wastewater Treatment Option
- Water Supply
- Real World Examples
- Questions?



MBTA Communities Act Guidelines

- Released August 10, 2022
- Requires Zoning Ordinance or By-Law that provides for at least one district reasonably sized in which multi-family housing is permitted as of right.
- Minimum Gross Density of 15 units per acre, subject to any further limitations imposed by MGL Chapter 131 Section 40 (Wetlands Act) and Title 5 (State Sanitary Code)
- Must be located within 0.5 miles from a commuter rail station, subway station, ferry terminal or bus station, if applicable.
- Cannot include age restricted housing
- Gross density includes land occupied by rights-of-way and any recreational, civic, commercial and other non-residential uses.

Sensitive Land

- Sensitive land means developable land that, due to its soils, slope, hydrology, or other physical characteristics, has significant conservation values that could be impaired, or vulnerabilities that could be exacerbated, by the development of multi-family housing. It also includes locations where multi-family housing would increase risk of damage caused by flooding. Sensitive land includes, but is not limited to, wetland buffer zones, extending beyond the Title 5 setback area; land subject to flooding that is not a wetland resource area; priority habitat for rare or endangered species; DEP-approved wellhead protection areas in which development may be restricted, but is not prohibited; and land areas with prime agricultural soils that are in active agricultural use.

Determining Reasonable Size

- 50 acres in rapid transit communities, commuter rail communities and adjacent communities (or 1.5% of the developable area)
- No Minimum Area in adjacent small towns which is defined as an MBTA community that (i) has within its boundaries less than 100 acres of developable area, and (ii) either has a population density of less than 500 persons per square mile, or a population of not more than 7,000 year-round residents as determined by the most recently published US Decennial Census of Population and Housing.
- The total number of possible units in a MBTA Community shall be:
 - Rapid transit community 25% of total housing units
 - Commuter rail community 15% of the total housing units
 - Adjacent Community 10% of the total housing units
 - Adjacent small town 5% of the total housing units

Water and Wastewater Infrastructure - multi-family zoning district

- MBTA communities are encouraged to consider the availability of water and wastewater infrastructure when selecting the location of a new multi-family zoning district.
- The Act does not require a town to install new water or wastewater infrastructure or add to the capacity of existing infrastructure to accommodate future multi-family housing production.
- The guidelines recognize the use of private water and wastewater facilities.
- The guidelines envision private developers assisting communities in expanding or upgrading existing infrastructure that has limited capacity.
- While the zoning must allow for a gross average density of at least 15 units per acre, there may be other legal or physical limitations, including lack of infrastructure or infrastructure capacity, that result in **actual** housing production at lower density than zoning allows.
- Guidelines assume developers will design projects that work within existing water and wastewater constraints, and that developers, municipalities, or the Commonwealth will provide funding for infrastructure upgrades as needed for individual projects.

Net Density versus Gross Density

- Density is the number of residential units per acre.
- Defining what portions of a tract of land are used in the density calculation can dramatically impact the calculation.
- Density per usable acre subtracts areas of a tract that cannot be developed such as wetlands, areas of steep topography or areas encumbered by easements.



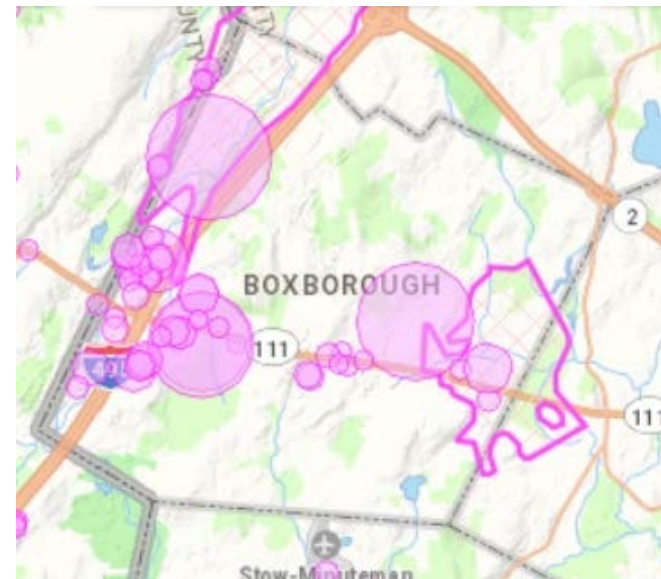
Massachusetts Sanitary Code

- Title 5 requires the proper siting, construction, and maintenance of all on-site wastewater disposal systems.
- Towns may impose stricter local septic regulations.
- 110 gallons per day
- Soil based sizing of soil absorption system (SAS) Long-term Acceptance Rates.
- Maximum 10,000 gallons per day.



Density Restrictions

- The only density restriction within Title 5 is within nitrogen sensitive areas where a limitation of 440 gallons per day per acre is imposed. In accordance with 310 CMR 15.215.
- Wellhead Protection Areas
- Nitrogen Sensitive Embayments
- These are not suitable for higher density housing.



Housing Type Impact on Density

Building Type

Type	Density with Septic	Density with Sewer
Single Family Home	6 units/usable ac.	10 units/usable ac.
Duplex	8 units/usable ac.	12 units/usable ac.
Townhouse	12 units/usable ac.	18 units/usable ac.
Garden Style (3 story surface parking)	20 units/usable ac.	28 units/usable ac.
Mid Rise (w/structured parking)	Not Applicable as would likely exceed 10,000 GPD	Up to 100 units/usable acre



Greater Than 10,000 gallons per day

- Can be cost prohibitive at minimum \$2M in initial construction and start up costs.
- Annual operation, monitoring, testing, reporting and maintenance costs can approach \$100,000.
- Effluent Fields can be 1/3 size of a comparable Title 5 system, leaving more land to develop units.
- As discussed earlier, developers believe project size needs to be 300-400 bedroom to absorb these costs.
- The permitting for these systems and the Groundwater Discharge Permit is through Mass DEP and can take upwards of a year.

Gap in Project Size

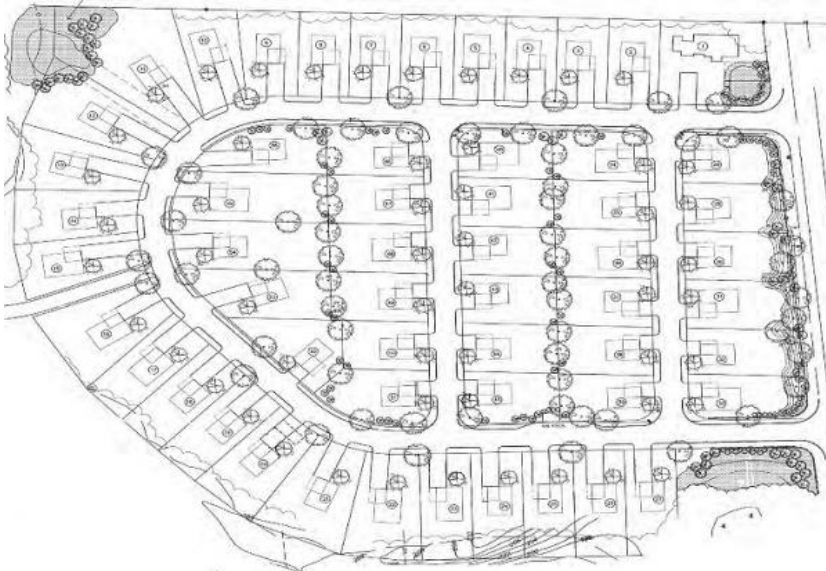
- Title 5 limits septic system to no more than 10,000 gallons per day. This equates to 90 bedrooms at 110 gallons per day/bedroom
- Beyond 10,000 gallons per day, a project would have to implement wastewater treatment at a significant cost to build and operate.
- Developers therefore have to increase project size and type to absorb the costs of such a system to more than 150 units.
- These results in a gap in project sizes between 90 bedrooms and 300-to-400-bedroom rental apartment projects.
- The commonwealth has considered something between a Title 5 septic system and a wastewater treatment facility that would fill the gap in project size while providing the necessary oversight, monitoring and environmental control but has yet to advance the regulatory changes required.

Drinking Water Regulations (301 CMR 22.0)

- Public Water System means a system for the provision to the public of water for human consumption, through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year. Such term includes any collection, treatment, storage, and distribution facilities under control of the operator of such a system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control, which are used primarily in connection with such system.
- A Zone I is the protective radius required around a public water supply well. Protective radii for Public Water System wells are determined by the following equation: Zone I radius in feet = $(150 \times \log \text{ of pumping rate in gpd}) - 350$. In no case shall the Zone I radius be less than 100 feet. There can be no development unrelated to the well system within the Zone I.
- A Zone II is that area of an aquifer that contributes water to a well under the most severe pumping and recharge. The Zone II extends upgradient to its point of intersection with prevailing hydrogeologic boundaries. The Zone II must include the entire Zone I area.
- Interim Wellhead Protection Area (IWPA) is that for public water systems using wells lack a Department-approved Zone II. This Interim Wellhead Protection Area is a radius is proportional to the approved pumping rate which is calculated as radius in feet = $(32 \times \text{pumping rate in gallons per minute}) + 400$.
- The Zone II and/or IWPA is considered a nitrogen sensitive area and any septic system loading is limited to 440 gallons per day per acre within a lot.

Emerson Village Pepperell

- 56 single family homes with on individual site septic systems. Lots as small at 7,000 square feet.
- Large wetland open space lot donated for municipal well. Open space used to meet 440 gallons per day per acre.
- No HOA. Roadways turned over to town as public roads.



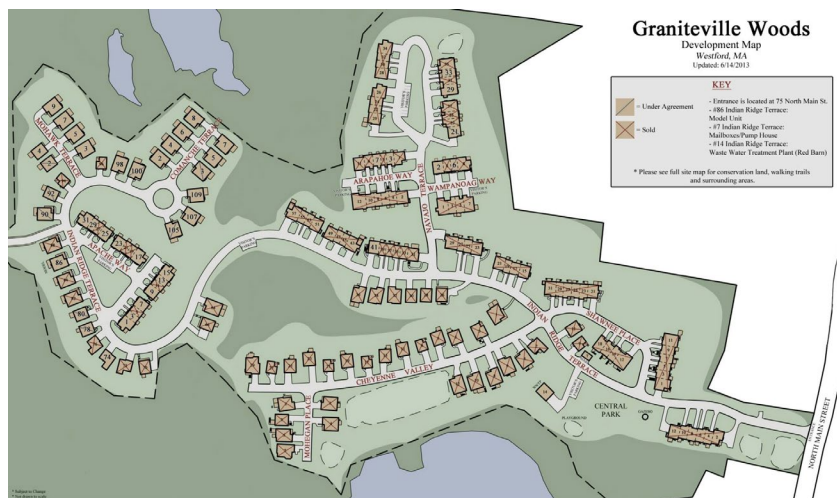
Coolidge at Sudbury

- 120 units of age restricted rental housing built in two phases by B'nai B'rith Housing on two lots totaling 5.5 acres (22 units/ac.)
- Each lot has a Title 5 septic system. Lots are held in separate ownership.
- Town water supply.



Graniteville Woods

- 72-unit condominium project combination of townhouses and detached single family homes.
- Wastewater Treatment Facility
- Large tract of open space donated to the town.
- Town water supply.



Any Questions?

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Please use the Chat Box



THANK YOU!

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