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**MEMORANDUM**

To: Christine Rosenthaul, Old Saybrook Town Planner
From: Linda Krause/Torrance Downes, CRERPA Planners
Date: March 30, 2000

**Subject: Minimum Area of Buildable Land (MABL) - History and Issues**

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**A. What is MABL?**

In Old Saybrook, all new lots must contain a Minimum Area of Buildable Land (MABL) within the lot which meets **technical performance standards** chosen to provide the assurance that a lot can be used for building purposes. **The purpose of the standards is to identify an area which includes those site features which will favor long term, trouble free operation of a septic system and where building can take place without major alterations to the natural characteristics of the site.**

MABL has been in use by many Connecticut towns for more than a decade, including the towns of Hebron (1981), Haddam, Glastonbury, Washington, Weston, Wilton, Madison, Avon and others. It was first adopted in the Estuary Region in 1990 by Old Lyme. This memo provides background information concerning the purpose of the requirement, a discussion of criteria included in the "minimum area", and some thoughts on issues which have arisen as a result of towns' experiences using MABL.

**B. Authorization for a MABL requirement is found in State enabing statutes:**

Zoning Regulations: CGS 8-2 - *"The Zoning Commission ... may regulate density of population; regulations ... shall be designed to set forth standards to protect public health, safety, convenience and property values...(and) ...secure safety from fire, panic, flood and other dangers, to promote health and general welfare, to prevent overcrowding of land, to avoid undue concentration of population, to facilitate the adequate provision for water and sewerage..."*

Subdivision Regulations: CGS 8-25 - *"Such regulations shall provide that the land to be subdivided be of such character that it can be used for building purposes without danger to health or public safety....that proper provision be made for water drainage and sewerage ... and in areas contiguous to brooks, rivers or other bodies of water subject to flooding, including tidal flooding, that proper provision shall be made for flood control measures....."*

**C. Why use the concept of "minimum area of buildable land"?**

Early suburban development typically occurred on lots of an acre or less. Many of these developments experienced water quality problems due to excessive density, and many towns responded by increasing minimum lot sizes to provide more room for septic systems and wells on each lot. This action did not always address the underlying problem of poor site conditions over a large area, because more acreage per lot does not necessarily result in a suitable building area on each lot. Instead of just requiring very large lot sizes, it is possible to insure that there is a suitable building area on each lot by demonstrating that a specific area of the lot meets pre-established standards.

**D. Why have additional criteria for MABL? Why not just use the Public Health Code to assure that there is a place on each lot for a septic system that meets code?**

State DEP and health officials have written that, with the most ideal soils, code compliance can be achieved by clearing and building on about 0.6 acres. Usually, site design requires consideration of factors other than health code compliance, including desirable house location, avoiding brush and fill disposal areas, normal well drilling practices (where the drilling rig can conveniently be set up), sedimentation and erosion controls, the impact of filling (or blasting) on natural drainage patterns. Due to the techniques and realities of construction, any site development affects an area which is much larger than the septic system leach field. Another factor is that there is often a transition area of soils from wetlands to upland soils that is not sharply defined and may affect septic system functioning. In addition, the Connecticut Public Health Code is less stringent (with lesser requirements for separation from groundwater and ledge) than other New England States. The required horizontal separation from a water body is less in Connecticut than any other state.

In their 1988 Report on Pollutant Loadings and Lot Sizes Needed to Support Residential Development in Connecticut, the DEP Water Compliance Unit noted that the rules of the public health code are intended to be construction standards, not a judgmental resource-based regulation. The Public Health Code

sewage disposal requirements were developed empirically with a primary goal of preventing human exposure to raw sewage and its attendant pathogenic and nuisance consequences. Although there have been several recent revisions to the Health Code, it does not currently address such issues at nitrogen dilution, bacterial time of travel, trace organic chemicals or attenuation of viruses. This same report recommended that each lot have an area of "buildable land" that is suitable for construction. This envelope would be the highest and driest area, best suited for septic systems and minimizing wet basements and secure from flooding.

**E. What is the relationship between MABL and the responsibilities of the town Sanitarian?**

The Sanitarian's job is to interpret and eforce the Public Health Code. This regulation does not deal with septic location, design or installation of any septic system. It deals with density (which is a zoning matter) and suitability of land for building purposes (which is a subdivision issue).

**F. Standards for the Minimum Area of Buildable Land**

Another DEP funded study, "Carrying Capacity of Public water Supply Watersheds - A Literature Review of Impacts of Water Quality from Residential Development", describes methods for determining MABL. The following factors should be considered when establishing a MABL:

**size of minimum area**
**topography/slope**
**percolation rate**
**depth to groundwater**
**depth to ledge**
**wetlands soils**
**flood prone areas**
**easements and other encumbrances**

Each town that has adopted a MABL requirement has established its own set of standards addressing a variety of development factors, just a local zoning districts differ from one town to another. The following are typical requirements:

size of minimum area - This varies according to whether there is a public water supply, but generally ranges from 15,000 to 30,000 square feet.

topography/slope - Slope should not exceed 20 percent grade. There is some confusion on how to measure grade (what horizontal increments?)

percolation rate - Percolation should not be slower than 30 minutes per inch.

depth to groundwater - Towns have used a figure of 18 to 24 inches below the ground surface.

depth to ledge - The health code requires a minimum of 2 feet of naturally occurring soil between ground surface and subsurface ledge. When there is less than 4 feet of soil, fill may be placed on the site in a prescribed manner and tested prior to installation. The ledge must be at least four feet below the bottom of the system, and the system will require about two feet of fill. This means that unless there is an adequate amount of natural land above ledge, the system may require four or five feet of fill over a large area of the lot.

wetlands soils - Can this be taken from soil maps, or should it be field-verified?

flood prone areas - Many towns exclude land in the A and V zones.
easements and other encumbrances

**G. How to establish that an area meets the MABL standards?**

The conditions establishing MABL should be determined in the field. Using mapped detailed soils data is not recommended, since the boundaries of soil categories are not specific enough to determine conditions on an individual lot. Soil conditions should be determined in the field. When the MABL requirement was originally adopted in both Old Lyme and Old Saybrook, the then sanitarians of both towns were experiencing health problems, and a large number of test holes were required as a "fail safe" measure if the sanitarian was unable to visually inspect each lot. This requirement for so many test holes may be excessive. The health code requires that holes be dug to meet the needs of the sanitarian. This may be a sufficient requirement when there is an active sanitarian who verifies each soil test individually and personally.

**H. Ongoing Review of MABL Requirements**

With the help of area engineers who design subdivisions and septic systems, local sanitarians and zoning officers, the CRERPA staff is presently reviewing the MABL requirement to see if there are some basic requirements that can be recommended to all Estuary towns. We anticipate developing some recommendations in the next several months.