

## Appendix I - Additional Requirements for Subdivision to be Served by Septic Systems

### General

When it is proposed to utilize septic systems for the disposal of sewage, the soils and soil conditions present on the site are extremely important. The purpose of this Appendix is to specify the requirements which must be met by the owner at the 3 stages of the plat review procedures.

### Sketch Plan Stage

At the Sketch Plan stage, the owner must submit a Natural Resource Inventory showing the location of the property in question and the types of soils found on the property. The proposed Sketch Plan should take the soil types of the official McHenry County Soil Maps into consideration to reasonably ensure the ability generally to obtain ½ acre of suitable soil in one continuous area on each lot. Suitable soils are considered to be soils that are not specified as critical soils in the Soils Standard Manual for Waste Disposal Systems. Further on-site investigation will be required prior to submission of the Tentative Plat.

### Tentative Plat Stage

When a subdivision is to be served by septic systems, the Tentative Plat shall be prepared in accordance with the following additional requirements and procedures:

- A. Soil mapping based upon on-site determination of soil characteristics shall be conducted to determine soil suitability for septic systems. Soil survey and mapping shall be by a Soil Classifier as defined in this Ordinance. To determine soil suitability for septic systems, the following procedure shall be utilized:
  1. There shall be a sufficient number of soil borings throughout the proposed acreage for platting so as to allow intensive mapping of soil characteristics and limiting factors related to suitability for septic systems. The mapping and overlay of such characteristics should be of sufficient detail to minimize the potential for inclusions and to determine the existence of at least ½ acre of suitable soils on each proposed lot. There shall be at least 1 boring on each acre of the proposed subdivision. The location of all borings shall be shown on the soil map overlay. A 200 foot grid system will be established and 1 boring at each grid point shall be performed. In addition, sufficient additional borings shall be completed to adequately identify each soil mapping unit.

2. The McHenry County Department of Health shall be notified at least 24 hours before commencement of on-site boring so that the Department may observe the boring and sampling procedures, if it so desires. Any boring conducted without the Department being notified may not be acceptable.
  3. A map, report and logs of each soil series mapped on the site shall be prepared and included in the Soil Classifier's report. Logs should be available on request.
  4. The date(s) of all field work shall be indicated.
  5. The entire subdivision area shall be mapped showing soil types present with boundaries of each defined considering areas of transition. This mapping shall be coordinated with site topography.
  6. The map shall also depict areas of seasonal high groundwater as determined by the Soil Scientist's observation of the drainage characteristics of the soil; long-term monitoring of observation wells approved by the Department of Health may be used to supplement this information. Boundaries of the following areas shall be defined:
    - a. Seasonal high groundwater or other limiting layer at less than 18".
    - b. Seasonal high groundwater or other limiting layer at 18" to 30".
    - c. Seasonal high groundwater or other limiting layer at 30" to 42".
    - d. Seasonal high groundwater or other limiting layer at 42" to 60".
    - e. Seasonal high groundwater or other limiting layer at greater than 60".
- B. A detailed map showing the soils present and locations of borings.
- C. Only soil types depicted on the site soil map and classified as suitable soils for septic systems may irrefutably be included in the ½ acre of soils suitable for septic systems required for each lot.
1. Soils not considered suitable for septic systems shall not be included in the ½ acre of required soils, and in addition be indicated as being restricted for septic systems on the plat.
  2. If earth fill is intended to be placed as an adjunct to an engineering plan proposed per C.1 above, all areas of filling and/or cutting must be clearly delineated. It should be known that this may influence septic suitability.
- D. Where small lot size dictates, a uniform location of wells and septic systems shall be shown on the lots to eliminate conflicts between wells and septic systems.

- E. Septic system restriction lines shall be shown on the Tentative Plat in conjunction with all drainage easements, detention and retention easements and dry wells, in accordance with the following:
1. **Drainage Easements** must have a 25 foot septic restriction line shown on the Tentative Plat, such line being at least 25 feet from the edge of the drainage easement. If the drainage easement is for pipe or conduit, the restriction line shall be 15 feet beyond the easement. The portrayal shall clearly indicate which side of the line is restricted.
  2. **Pond - type retention facilities** must have a septic restriction line shown on the Tentative Plat at least 50 feet from the maximum perimeter of the pond, at high water level (100 year event).
  3. Dry retention basin and dry wells must have a septic restriction line at least 25 ft. from the easement protection the structure or detention area.
- F. The developer must prove to the satisfaction of the Planning and Zoning Commission that each lot on the Tentative Plat has generally ½ acre of suitable soil in a continuous location.
- G. The signature of the Soil Classifier by whom the soil mapping was done and the report prepared, must be affixed to both the report and the Tentative Plat.

### **Final Plat Stage**

When a subdivision is to be served by septic systems, all septic system requirements of the Tentative Plat stage must continue to be met at the Final Plat stage. The following requirements must also be met during the preparation of the Final Plat and engineering drawings.

- A. All areas restricted for septic systems must be designated on the Final Plat.
- B. Where site-specific engineering has been approved, the engineering plans must include details of such engineering.

## Extensive Areas of Flood Hazard or Critical Soils - Special Procedures

If an extensive area of Flood Hazard or critical soils makes it impossible to obtain the required ½ acre continuous piece of land without restrictions for septic systems on one or more lots, the procedures of this Section may be followed:

- A. Land designated as Flood Hazard is not acceptable for the installation of a septic system, and cannot be included as part of the ½ acre of land suitable for septic systems required on every lot. Consideration of any alterations of such areas is discouraged, and any proposals for changes must be handled on a case by case basis.

*Note: A Conditional Use Permit to fill-in Flood Hazard Land is based partly on the provision of "compensatory storage". In brief, this means that for every cubic yard of fill added to an area of Flood Hazard, one cubic yard of material must be removed from a nearby area of the same Flood Hazard area so that there is no net loss of flood storage volume.*

- B. Removal of native soils and replacement with suitable soils shall be considered a "made-land" situation, and for the most part are not considered acceptable for on-site waste water disposal purposes. Any such consideration of this approach should be only after consultation with the Health Department personnel prior to preparing any plans.
- C. Certain soils are designated as "critical" for septic systems due to a high groundwater elevation. The use of an extensive system of curtain drains or tiling in such a situation will not be permitted due to possible problems with maintenance in the future and the uncertainty as to whether curtain drains are capable of affecting groundwater elevation except in specific situations.
- D. It is suggested that all proposals for site-specific engineering designs be discussed with the Health Department before detailed plans are prepared.