7. SOIL SURVEY STANDARDS

7.1. APPLICABILITY

Development proposals required to submit soil surveys include:

- Major site plans as defined in the site plan standards of the Land Use Code
- Subdivisions as defined in the subdivision standards of the Land Use Code except for those projects which do not involve construction of significant new infrastructure.
- Other projects where the review authority determines that unusual conditions specific to the site warrant a high intensity soil survey.

7.2. STANDARDS

Soil surveys are divided into four levels or classes, depending on the intensity desired. These are the minimum standards for each class of soil survey.

Class A (high intensity)

- Mapping units of 1/8 acre or less
- Scale is 1 inch equals 100 feet or larger
- Ground control – base line and test pits accurately located under the direction of a registered land surveyor or qualified professional engineer.
- Base map with 2 foot contour lines with ground survey, or aerial survey with ground control.

Class B (high intensity)

- Mapping units of 1 acre or less
- Scale of 1 inch equals 200 feet or larger.
- Ground control – test pits located by means of compass by chaining, pacing or taping from known survey points.
- Base map with 5 foot contour lines.

Class C (medium high intensity)

- Mapping units of 3 acres or less
- Scale of 1 inch equals 500 feet or larger.
- Ground control – as determined by the mapper.
- Base map – as determined by the mapper.

7.2.1. Use of the USDA National Cooperative Soil Survey and Classification:

The soil survey shall be designed using the National Cooperative Soil Survey as a guide and the soils classified at the series level. Soil map units will be phases of

soil series.

7.2.2. Map Legend and Map Unit Narratives:

The soil map legend shall include a symbol for each map unit and special symbol for areas too small to be mapped, and the name of each map unit.
The soil scientist shall provide a description for each map unit.

7.2.3. Map Unit Purity:

The soil(s) within an area enclosed by a soil boundary (map unit) will have a minimum of 75 percent of the soil(s) that provide the name of that map unit or similar soil(s). The total amount of dissimilar soils shall not exceed 25 percent of the map unit.

7.2.4. Accurate Soil Boundary Placement:

Soil boundaries must be observed throughout their length and their placement must correspond to changes in soils and/or land forms.

7.2.5. Map Preparation by a Maine Certified Soil Scientist:

All soil surveys submitted for the public record, with the exception of Soil Conservation Service soil surveys, shall be stamped and signed by a Maine Certified Soil Scientist licensed by the Maine Board of Certification for Geologists and Soil Scientists.

7.3. Reserved.

7.4. SUBMISSIONS

The following submissions will support the contention that the development will be built on suitable soils:

High Intensity Soil Survey:

A soil survey prepared by a Maine Certified Soil Scientist (CSS), completed at the appropriate mapping intensity. The soil survey must be mapped at a scale as required by the Maine Association of Professional Soil Scientists (MAPSS) Soil Survey Guidelines (available through the Department of Public Services or through the MAPSS website at http://www.mapss.org/publications.htm). The map must identify the soil mapping intensity under which the mapping was conducted.
The guidelines for each intensity level of soil mapping and the level at which various types of projects must be mapped are as follows:

- **Class A (High-Intensity) Soil Survey**:

  Specific land area, within any project, which is proposed to be used for

phosphorus control measures. Phosphorus control measures include wet ponds, infiltration facilities, and buffer strips.

For residential and commercial subdivisions where any lot is less than 2 acres and on site subsurface wastewater disposal is proposed.

- **Class B (High-Intensity) Soil Survey:**

  For residential and commercial subdivisions where any lot is less than 2 acres with more than 15 lots and 20 acres of area, no on site wastewater disposal is proposed, and new city streets are to be constructed.

  The land area of condominium developments which is to be disturbed during construction. Condominium developments include single or multi-family attached dwellings where greater than 3 acres of new non-vegetated surface is constructed and/or it results in the development of an area exceeding 20 acres.

  Shopping centers, or similar commercial and industrial developments, where large areas are to be utilized or disturbed such that greater than 3 acres of new non-vegetated surface is proposed for construction and/or results in the development of an area exceeding 20 acres.

- **Class C (Medium High-Intensity) Soil Survey:**

  Residential and commercial subdivisions where all lots are greater than 2 acres and on site subsurface wastewater disposal is proposed.

  Golf courses, ski areas and trails, and other multi-use recreational developments.

  Any project which the City has determined will require a hydrogeological investigation.

- **Class D (Medium Intensity) Soil Survey (published by Soil Conservation Service for Cumberland County)**

  All other developments.

  In the event that greater than 50 percent of a proposed development site is currently developed, an applicant may petition the Planning Authority to accept a lower class soil survey. The Planning Authority shall review the request, and their decision on the appropriate level of mapping shall be final.

  A Maine Certified Soil Scientist shall accurately map and mark in the field the boundaries of any hydric soils identified by the Soil Survey.

These standards are a minimum. The Planning Authority reserves the right to request the preparation of a high intensity soil map or require more intense hydric

soil boundary delineation, when special conditions warrant it. All soil maps, with the exception of U.S. Soil Conservation Service Soil surveys, shall be signed and stamped by a Maine Certified Soil Scientist. The soil survey shall meet the standards for the degree of mapping intensity as adopted by the Maine Association of Professional Soil Scientists, dated 4-4-89.

7.4.1. Geotechnical Investigation:

If proposed buildings, facilities or infrastructure require a geotechnical investigation for their design and construction, or a geotechnical investigation is determined to be necessary by the Planning Authority, the applicant shall submit a report of this investigation prepared and endorsed by a registered professional engineer and/or other licensed professionals, as appropriate, for review and approval. This report shall identify all major limitations to the development posed by existing soils and other surface and subsurface features of the site and describe the techniques to be used to overcome these limitations. Depending on the nature of the proposed development, the requirement for a soil survey map and report may be waived if the Planning Authority determines that the geotechnical report will provide sufficient information.

7.4.2. Soils Report:

A report, completed by a Certified Soil Scientist, identifying all major limitations to the proposed development by the soil characteristics, as well as the SCS Hydrologic Soil Group classification for each soil series. A soil report shall not be required for those projects where a Class D Soil Survey is determined to be sufficient.

7.4.3. Site Engineering Report:

A Site Engineering report prepared by a qualified professional such as a soils or geotechnical engineer that describes the techniques to be used to overcome the soil limitations identified in the soil survey. The application will not be considered complete until a Site Engineering Report is submitted if the Planning Authority determines one is required.