Appendix C
Land Use Area Classification Determinants

LAND USE AREA CLASSIFICATION DETERMINANTS
(From Appendix Q-8 of APA Rules & Regulations)

Many criteria and determinants are used in land use planning. Some are common to any planning process. Others vary with the area for which the plan is to be prepared. The needs of inhabitants, the region, and of society define those determinants that receive primary emphasis.

The determinants used in preparing this Land Use and Development Plan were chosen to identify those areas in the park best suited for development. The determinants fall into the following basic categories: (1) natural resources, (2) existing land use patterns, and (3) public considerations. The determinants found within these three categories help identify areas where similar standards are necessary if development is to provide positive values to both the park and the community in which it is located. Furthermore, they identify areas where the potential costs of development to the developer, the community, the prospective purchaser and the environment are so great that serious consideration should be given to alternative uses.

The natural resource determinants identify those areas that are physically most capable of sustaining development without significant adverse impact. Such determinants as soils, topography, water, vegetation and wildlife have been inventoried and analyzed to assure the protection of the basic elements of the park. Existing land uses must also be carefully considered in the planning process, particularly because they are important determinants of the park=s present and future character. These determinants identify the historic patterns of the park=s growth and indicate the types of growth that have been and are presently viable. Future development contemplated under the plan must also be considered in light of its relation to existing development.

The Legislature has found that there is a State interest in the preservation of the Adirondack Park, and therefore a variety of public consideration determinants have been analyzed in the preparation of this plan. In general, public consideration determinants help identify areas that must be protected in order to preserve the essential open space character of the park. These areas may be considered important from a public standpoint for such reasons as their location near important State lands or their present use in an open space condition. Additionally, there may be a substantial State interest in preserving certain critical public considerations.

The following determinants were used in the land area classification process. The land use implications paragraph is a general indication of the manner in which these determinants were utilized in preparing the plan:

A. DETERMINANT: SOIL

1. Characteristic: Poorly drained or seasonally wet soils.

Description: Soil with a high-water content or seasonal high-water table less than 1 ½ feet from the surface.

Land use implications: On-site sewage disposal systems will not function adequately and may pollute groundwater supplies. There may also be a problem of flooded basements, backed-up toilets, broken pavements, cracked walls and similar situations. These problems may lead to community health hazards, environmental problems, inconvenience and economic hardship. Severe development limitations exist in those areas that contain a high proportion of poorly drained or seasonally wet soils. Such areas are capable of sustaining development at only a very low level of intensity.

2. Characteristic: Moderately drained soils.

Description: Soils with a seasonal high-water table 1 ½ to 4 feet below the surface.

Land use implications: A potential for septic system failure or groundwater pollution exists. The New York State Department of Health recommends that the bottom of a septic system tile field be 18 to 30 inches below the soil surface at final grade, with a minimum depth of two feet between the bottom of the tile field and the water table. Special precautions must also be taken to avoid washouts where deep road cuts are necessary. An occasional problem for roads, streets and parking lots on this soil is the Awashboard@ effect caused by frost heaving. Although these soils can tolerate a higher level of development than can poorly drained soils, moderate development limitations still exist.

3. Characteristic: Well-drained soils.

Description: Soils with a depth to the seasonal high-water table of more than four feet.

Land use implications: Areas containing well-drained soils present only slight development limitations. Generally, this type of soil can adequately filter the effluent from septic tank systems and poses few other construction problems.

4. Characteristic: Low permeability soils.

Description: Soils with a permeability rate of less than one inch per hour.

Land use implications: Soils with low permeability characteristics present severe development problems. On-site sewage disposal systems may overflow, causing pollution of surface water. Street, road and parking lot surfaces heave, and building walls and foundations tend to crack. Sanitary landfills may cause acute problems when located on soils with these characteristics.

5. Characteristic: Moderately permeable soils.

Description: Soils with a permeability rate of one inch per 30 to 60 minutes.

Land use implications: Problems experienced in soils with this characteristic are similar to, but slightly less severe than, problems experienced with soils of low permeability. In general, adequately designed and engineered septic systems, roads and structures help solve the problems that these soils can cause, but these alternatives tend to be expensive. Areas containing a high percentage of these soils should not be developed at a high level of intensity.

6. Characteristic: Permeable soils.

Description: Soils with a permeability rate of more than one inch per 30 minutes.

Land use implications: Generally, these soils present only slight development limitations, and they can handle a relatively intense level of development. However, excessive permeability may create a potential for the pollution and contamination of groundwater and nearby uncased wells if on-site sewage disposal systems are employed.

7. Characteristic: Shallow depth to bedrock.

Description: Soils with a depth to bedrock of less than one and 1 . feet.

Land use implications: These soils present severe development constraints. Massive excavation costs are necessary to do even minimal development. On-site sewage disposal systems are not possible under these conditions, as soil depths are not sufficient to provide adequate filtration of effluent. Community sewage systems can only be installed at a prohibitive cost. Shallow soils also present substantial road and building construction problems. These soils should not be developed.

8. Characteristic: Moderate depth to bedrock.

Description: Soils with a depth to bedrock of 1 . to 4 feet.

Land use implications: These soils present moderate development limitations. On-site sewage disposal problems can arise with effluent flowing directly over the bedrock into nearby drainages or groundwater supplies. The more shallow portions of these soils result in increased excavation costs. Intense development should not occur in these areas.

9. Characteristic: Deep soils.

Description: Soils with a depth to bedrock of more than four feet.

Land use implications: Relatively intense development can occur on these soils.

10. Characteristic: Extremely stony soils.

Description: Soils with over 35 percent coarse fragments less than three inches in diameter.

Land use implications: These soils present development problems. Excavation for such purposes as on-site sewage disposal systems, homesites with basements, and streets and roads is costly and difficult. Soils with this description affect the rate at which water moves into and through the soil. The difficulty of establishing a good vegetative ground cover can cause erosion problems. Generally, intense development should be avoided on soils of this nature.

11. Characteristic: Viable agricultural soils.

Description: Soils classified by the New York State Cooperative Extension as Class I and Class II agricultural soils.

Land use implications: Class I and Class II soils constitute a valuable natural resource. While the physical characteristics of these soils will often permit development, their agricultural values should be retained. Consequently, class I and class II soil types found within the Adirondack Park should be used primarily for agricultural purposes.

B. DETERMINANT: TOPOGRAPHY

1. Characteristic: Severe slopes.

Description: Areas with slopes of over 25 percent.

Land use implications: These slopes should not be developed. Development on these slopes presents serious environmental problems. Erosion rates are greatly accelerated. Accelerated erosion increases siltation. Septic systems will not function properly on these slopes. Development costs are likely to be massive because of the special engineering techniques that must be employed to ward off problems such as slipping and sliding. Proper grades for streets are difficult to attain and often can only be accomplished by large road cuts.

2. Characteristic: Steep slopes.

Description: Areas with slopes of 16 to 25 percent.

Land use implications: These slopes present substantially the same environmental hazards relating to erosion, sewage disposal, siltation and construction problems as are found on severe slopes. However, if rigid standards are followed, some low intensity development can take place.

3. Characteristic: Low and moderate slopes.

Description: Areas with slopes of not greater than 15 percent.

Land use implications: Such slopes can be developed at a relatively intense level, so long as careful attention is given to the wide slope variability in this range. Construction or engineering practices that minimize erosion and siltation problems must be utilized on the steeper slopes in this range.

4. Characteristic: Unique physical features.

Description: Gorges, waterfalls, formations and outcroppings of geological interest.

Land use implications: These features represent scarce educational, aesthetic and scientific resources. Construction can seriously alter their value as such, particularly where it mars the landscape or the formations themselves. Consequently, these areas should be developed only at extremely low intensities and in such a manner that the unique features are not altered.

5. Characteristic: High elevations.

Description: Areas above 2,500 feet.

Land use implications: These areas should ordinarily not be developed. They are extremely fragile and critical watershed storage and retention areas that can be significantly harmed by even a very low level of development intensity.

C. DETERMINANT: WATER

1. Characteristic: Floodplains.

Description: Periodically flooded land adjacent to a water body.

Land use implications: These areas should not be developed. Periodic flooding threatens the safety of residents and the destruction of structures. Development that would destroy the shoreline vegetation would result in serious erosion during flood stages. Onsite sewage disposal systems will not function properly and will pollute both surface and ground waters.

2. Characteristic: Wild and scenic rivers.

Description: Lands within one-half mile of designated wild and scenic rivers or of designated study rivers that presently meet the criteria for eventual wild or scenic designation.

Land use implications: The New York State Legislature has found that these lands constitute a unique and valuable public resource. Consequently, these lands should not be developed in order to protect the rare resources of free flowing waters with essentially primitive shorelines.

3. Characteristic: Marshes.

Description: Wetlands where there is found a grass-like vegetative cover and a free interchange of waters with adjacent bodies of water.

Land use implications: These areas present severe development limitations. Continual flooding makes on-site sewage disposal impossible and construction expensive. The filling of these areas will destroy the most productive ecosystem in the park and will lower their water retention capacity. Therefore, these areas should not be developed.

D. DETERMINANT: FRAGILE ECOSYSTEM

1. Characteristic: Bogs.

Description: Sphagnum, heath or muskeg vegetation underlaid with water and containing rare plant and animal communities that are often of important scientific value.

Land use implications: These areas should not be developed. They are sensitive areas whose delicate ecological balance is easily upset by any change in water level or the addition of any pollutants.

2. Characteristic: Alpine and subalpine life zones.

Description: Areas generally above 4,300 feet exhibiting tundra-like communities.

Land use implications: These areas should not be developed. The vegetative matter in these areas cannot withstand any form of compaction or development. These communities are extremely scarce in the park.

3. Characteristic: Ecotones.

Description: Areas of abrupt change from one ecosystem to another, giving rise to extraordinary plant and animal diversity and productivity.

Land use implications: These areas should be developed only at a low level of intensity. Development at higher intensities would modify the vegetative cover and would drastically reduce the diversity of wildlife vital to the Adirondack character. These limited areas serve as the production hub for surrounding areas.

E. DETERMINANT: VEGETATION

1. Characteristic: Virgin forests.

Description: Old-growth natural forests on highly productive sites, including those natural areas identified by the Society of American Foresters.

Land use implications: These areas deserve protection and should, therefore, be developed only at a low level of intensity. Intense development of these areas would destroy illustrative site types, including vestiges of primitive Adirondack conditions deemed important from both scientific and aesthetic standpoints.

2. Characteristic: Rare plants.

Description: Areas containing rare plant communities, including those identified by the State Museum and Science Services.

Land use implications: These areas should not be developed. Development, even at a very low level of intensity, would modify the habitat of these plants and thereby cause their possible extinction in New York State.

F. DETERMINANT: WILDLIFE

1. Characteristic: Rare and endangered species habitats.

Description: Habitats of species of wildlife threatened with extinction either in New York State or nationwide.

Land use implications: These areas should not be developed. Development at even a low level of intensity would modify the habitats of these species and thereby cause their possible extinction in New York State or nationwide. These small areas are often the survival link for entire species.

2. Characteristic: Key wildlife habitats.

Description: Important deer wintering yards, waterfowl production areas and bodies of water containing native strains of trout.

Land use implications: These areas can sustain only a very limited level of development intensity without having a significant adverse affect on the wildlife. Development at greater intensities would alter the habitats, thus making them unsuitable for continued use by wildlife. Development also increases the vulnerability of these critical areas.

G. DETERMINANT: PARK CHARACTER

1. Characteristic: Vistas.

Description: Area viewed from the 40 Adirondack Park vistas identified in the State Land Master Plan.

Land use implications: The intensity of development should vary with the distance from the vista with the purpose of protecting the open-space character of the scene. Development within one-quarter mile of the vista will have a substantial visual impact on this character and should be avoided. Between one-quarter mile and five miles, a low intensity of development will not damage the open-space appearance, whereas intense development would. Relatively intense development beyond five miles will not damage the scene so long as it does not consist of large clusters of buildings or industrial uses.

2. Characteristic: Travel corridors.

Description: Presently undeveloped areas adjacent to and within sight of public highways.

Land use implications: Travel corridors play an important role in establishing the park image to the majority of park users. Unscreened development within these areas would be detrimental to the open-space character of the park. The allowable intensity of development should not be allowed to substantially alter the present character of these travel corridors.

3. Characteristic: Proximity to State land.

(a) (1) Description: Areas within sight and sound of, but not more than one-half mile from, intensively used portions of wilderness, primitive and canoe areas.

(2) Land use implications: Intense development of these areas would threaten the public interest in and the integrity and basic purposes of wilderness, primitive and canoe area designation. Consequently, these lands should be developed at only a very low level of intensity.

(b) (1) Description: Inholding surrounded by wilderness, primitive or canoe areas.

(2) Land use implications: Development at more than a very minimal level of intensity should not be allowed. The development of such parcels would compromise the integrity of the most fragile classifications of land under the Adirondack Park State Land Master Plan.

(c) (1) Description: Inholdings of less than 1,000 acres surrounded by wild forest lands and inaccessible by two-wheel-drive vehicles.

(2) Land use implications: These areas should not be developed at more than a very low level of intensity. Intense development of these areas would constitute a hazard to the quality of the surrounding wild forest lands.

4. Characteristic: Proximity to services.

(a) (1) Description: Areas that are remote from existing communities and services.

(2) Land use implications: Intense development of these areas would be detrimental to open-space character of the park. Development of such remote areas is also generally costly in terms of services provided by local government. Consequently, a low level of development should be permitted.

(b) (1) Description: Areas that are readily accessible to existing communities.

(2) Land use implications: These areas can sustain a high level of development intensity. Local government services can be efficiently and economically provided in such areas. Development here will generally be of positive economic value to a community.

5. Characteristic: Historic sites.

Description: Sites of historic significance from a local, park or national standpoint.

Land use implications: Any development of the site itself or its immediate environs, except restoration, would destroy the site•s historical and educational values.

H. DETERMINANT: PUBLIC FACILITY

1. Characteristic: Public sewer systems.

Description: Areas served by a public sewer system.

Land use implications: Development may occur in these areas in spite of certain resource limitations that have been overcome by public sewer systems. Consequently, these areas can often be used for highly intensive development.

2. Characteristic: Proposed public sewer systems.

Description: Areas identified in a county comprehensive sewerage study where public sewer systems are considered feasible.

Land use implications: Encouraging relatively intense development in these areas will often provide the necessary impetus to establish the proposed systems. These systems will overcome certain health hazards and associated environmental problems that would otherwise be considered limiting.

I. DETERMINANT: EXISTING LAND USE

1. Characteristic: Urbanized.

(a) (1) Description: A large, varied and concentrated community with a diversity of housing and services.

(2) Land use implications: Generally, these areas have the facilities and potential to develop as major growth and service centers.

(b) (1) Description: A small, concentrated community.

(2) Land use implications: Generally, these areas have the potential to develop as growth centers.

2. Characteristic: Residential.

Description: Areas of primarily residential development.

Land use implications: The primary use of these areas should continue to be residential in nature.

3. Characteristic: Forest management.

Description: Large tracts, primarily of northern hardwood or spruce-fir forests, under active forest management.

Land use implications: These areas should be developed at only a minimal level of intensity. They constitute a unique natural resource. The supply of these species of trees, which are uncommon in such quantities elsewhere in the State, is important to insure a continuing supply of saw-logs and fiber for the economically vital wood-using industry of the region.

4. Characteristic: Agricultural lands.

(a) (1) Description: Areas under intensive agricultural management in which there is evidence of continuing capital investment for buildings and new equipment.

(2) Land use implications: These areas are an important resource within the Adirondack Park. These areas are of economic importance in some areas of the park. Consequently, these areas should only be developed at a very minimal level of intensity.

(b) (1) Description: Areas containing less viable agricultural activities frequently interspersed with other types of land uses.

(2) Land use implications: These areas are important to the open-space character of the park and also contain pockets of important agricultural soils. Consequently, they should be utilized for a low level of development intensity.

5. Characteristic: Industrial uses.

(a) (1) Description: Areas containing large-scale economically important industrial activities, located outside of centralized communities.

(2) Land use implications: These areas have been intensively used and are important to the economy of the Adirondack Park. They should remain in active industrial use.

(b) (1) Description: Proposed industrial sites identified by the State Development of Commerce or regional or local planning agencies.

(2) Land use implications: Because they are potentially important to the economy of the Adirondack Park, industrial uses should be encouraged in these areas.