5. Standards and Guidelines for Land Use

5.1 Central Pine Barrens overall area

The following sets forth the standards and guidelines for land use within the Central Pine Barrens.

Standards are to be implemented, and are enforceable, by municipalities, municipal agencies and the Commission, or any other agency with enforcement powers within the Central Pine Barrens. Discretionary decisions regarding standards are to be made by the Commission, under the provisions set forth in Volume I, Chapter 4 of this Plan. These standards are in addition to all other regulatory requirements and do not exempt any entity from complying with applicable federal, state, county, or local laws.

Guidelines are to be utilized by municipalities and municipal agencies with discretionary decisions determined at the municipal level, unless a project is before the Commission due to its location within a Critical Resource Area, because it is a Development of Regional Significance or because there was an assertion of jurisdiction as described in Volume I, Chapter 4 of this Plan.

The municipalities may adopt standards and guidelines which are more restrictive than those contained in this Plan.

~~Present land uses~~ Pre-existing structures or uses (as defined in Chapter 4 of this Plan) that comply with existing laws, including legal non-conforming uses, may be continued in accordance with their current approved use(s)

Pursuant to Section 57-0123(3)(a) of the Act, "...no application for development within the Central Pine Barrens area shall be approved by any municipality or county or agency thereof or the commission, and no state approval, certificate, license, consent, permit, or financial assistance for the construction of any structure or the disturbance of any land within such area shall be granted, unless such approval or grant conforms to the provisions of such land use plan; provided, however, that the commission by majority vote is hereby authorized to waive strict compliance with such plan or with any element or standard contained therein, for an application for development of any person, upon finding that such waiver is necessary to alleviate hardship for proposed development..."

5.2 Core Preservation Area

The Core Preservation Area is to be preserved by a strategy of government land acquisition, the transfer of development rights, conservation easements, gifts, land swaps, and donations.

Development in the Core Preservation Area shall be prohibited or redirected, and hardship exemptions granted by this Commission as provided for in the Act.

Allowable uses within the Core Preservation Area shall be limited to those operations or uses which do not constitute development, or hardship exemptions granted by this Commission pursuant to the Act.

Any existing, expanded, or new activity involving agriculture or horticulture in the Core Preservation Area is an allowable use if it does not involve material alteration of native vegetation. The erection of agricultural buildings, including but not limited to barns, greenhouses and farm stands, required for the production of plants or animals as reflected under ECL Section 57-0107(14), shall constitute an allowable use. If such activity does involve material alteration of native vegetation, the use will require a hardship exemption from the Commission.

5.3 Compatible Growth Area

5.3.1 Applicability and other policies

The Central Pine Barrens Joint Planning and Policy Commission adopts the following standards and guidelines for development and development project sites within the Compatible Growth Area in accordance with applicable state law.

These standards shall be incorporated into local land use and development review procedures, ordinances and laws by the local municipalities. The Commission shall also apply these standards to those development projects that it directly reviews within the Compatible Growth Area.

These guidelines shall be incorporated into land use and development procedures, and utilized by municipalities and municipal agencies on a discretionary basis.

All standards and guidelines for land use in this section are based on the best available scientific evidence and municipal laws and practices.

Agriculture or horticulture in the Compatible Growth Area is encouraged to comply with best management practices. Best management practices are, for purposes of this Plan, the same practices stated in the document entitled *Agricultural Management Practices Catalogue for Nonpoint Source Pollution Prevention and Water Quality Protection in New York State*, prepared by the New York State Nonpoint Source Management Practices Task Force, New York State Department of Environmental Conservation, 2007 ~~the most recent version of *Controlling Agricultural Nonpoint Source Water Pollution in New York State* (Bureau of Technical Services~~

~~and Research, Division of Water, New York State Department of Environmental Conservation, 1991~~and as later amended).

Projects proposed in the Compatible Growth Area must conform to all other involved agency jurisdictions and permit requirements in effect on the project site. The permittee is responsible for obtaining any other permits and approvals.

5.3.2 State Environmental Quality Review Act (SEQRA)

A generic environmental impact statement (GEIS) has been completed for the Plan, including the standards and guidelines for land use set forth in this section.

A supplemental environmental impact statement may be required for individual development projects by the appropriate town or other governmental agency, if a significant environmental effect is identified that is outside the scope of the standards and guidelines set forth in this chapter. If a potentially significant environmental effect is not identified, a Supplemental Environmental Impact Statement or an Environmental Impact Statement should not be required.

The scope of the supplemental EIS should be limited to subjects that are not addressed by the standards or guidelines or the GEIS.

5.3.3 Intent and Compatible Growth Area standards *(amended 5/16/12)*

The Commission recognizes the need for balanced growth and development consistent with the water resource protection and habitat preservation goals provided for in the Act.

Development projects in the Compatible Growth Area are required to meet all of the standards in this chapter unless a permit has been issued under the provisions of Volume I, Chapter 4 of this Plan.

Where standards contained in the Plan differ from state, county, or local ~~law~~requirements, the stricter standard(s) shall apply.

5.3.3.1 Sanitary waste, nitrate-nitrogen and other chemicals of concern

Nitrate-nitrogen, a contaminant that emanates from numerous types of land uses, is a recognized indicator of groundwater quality. The Suffolk County Department of Health Services abides by the New York State nitrate-nitrogen standard for drinking water. In addition to the specific standards for nitrate-nitrogen, other contaminants of concern may be relevant in specific applications or in specific areas. This is particularly true for organic contaminants of anthropogenic origin.

5.3.3.1.1 **Suffolk County Sanitary Code Article 6 compliance**

All development proposals subject to Article 6 of the Suffolk County Sanitary Code (“Realty Subdivisions, Developments and Other Construction Projects”) shall meet all applicable requirements of the Suffolk County Department of Health Services. Development ~~P~~projects which require variances from the provisions of Article 6 shall meet all requirements of the Suffolk County Department of Health Service's Board of Review in order to be deemed to have met the requirements of this standard. Commission approval shall require submission of a final official copy of the SCDHS permit.

5.3.3.1.2 **Sewage treatment plant discharge**

Where deemed practical by the County or State, sewage treatment plant discharge shall be outside and downgradient of the Central Pine Barrens. ~~Denitrification~~ Treatment systems that are approved by the New York State Department of Environmental Conservation or the Suffolk County Department of Health Services may be used in lieu of a sewage treatment plant.

5.3.3.1.3 **Suffolk County Sanitary Code Articles 7 and 12 compliance**

All development projects must comply with the provisions of Articles 7 (“Water Pollution Control”) and 12 (“Toxic and Hazardous Materials Storage and Handling Controls”) of the Suffolk County Sanitary Code, including any provisions for variances or waivers if needed, and all applicable state laws and regulations in order to ensure that all necessary water resource and wastewater management infrastructure shall be in place prior to, or as part of, the commencement of construction. Commission approval shall require submission of a final official copy of the SCDHS permit.

5.3.3.1.4 **Commercial and industrial compliance with the Suffolk County Sanitary Code**

All commercial and industrial development applications shall comply with the provisions of the Suffolk County Sanitary Code as applied by the Suffolk County Department of Health Services, and all other applicable federal, state or local laws. Development projects which require variances from the provisions of the Suffolk County Sanitary Code shall meet all requirements of the Department of Health Service's Board of Review in order to be deemed to have met the requirements of this standard. Commission approval shall require submission of a final official copy of the SCDHS permit.

Guideline

~~5.3.3.1.3~~

5.3.3.1.5 **Nitrate-nitrogen ~~goal~~**

~~Aa~~A more protective goal of two and one half (2.5) ppm ~~may~~shall be achieved for new development projects through an average residential density of one (1) unit per two (2) acres (or its non-residential ~~commercial or industrial~~ equivalent), through clustering, or through other mechanisms to protect surface water quality ~~for projects in the vicinity of ponds and wetlands~~.

5.3.3.2 ~~Other chemical contaminants of concern~~ Reserved

~~In addition to the specific standards for nitrate-nitrogen above, other contaminants of concern may be relevant in specific applications or in specific areas. This is particularly true for organic contaminants of anthropogenic origin.~~

~~Standard~~

~~5.3.3.2.1 **Suffolk County Sanitary Code Articles 7 and 12 compliance**~~

~~All development projects must comply with the provisions of Articles 7 and 12 of the Suffolk County Sanitary Code, including any provisions for variances or waivers if needed, and all applicable state laws and regulations in order to ensure that all necessary water resource and wastewater management infrastructure shall be in place prior to, or as part of, the commencement of construction.~~

5.3.3.3 Wellhead and groundwater protection

The New York State Department of Health requires minimum separation distances for public water supply wells from contaminant sources pursuant to Appendix 5D of 10 NYCRR Part 5, Subpart 5-1 Public Water Supply Systems in order to protect these public water supplies from contamination. ~~advocates the exclusion of potentially contaminating activities from an area extending for 200 feet in all directions from a well site~~. Although this may have been considered adequate to prevent the rapid drawdown of bacterial contamination or its entry into groundwater through poorly constructed wells, it does not necessarily ensure an adequate level of protection against the suite of organic and inorganic pollutants that may threaten community water supplies.

Standard

5.3.3.3.1 **Significant discharges and public supply well locations**

The location of ~~nearby~~ public supply wells shall be considered in all applications involving significant discharges to groundwater, as required under the New York State Environmental Conservation Law Article 17.

Guideline

5.3.3.3.2 **Private well protection**
The Suffolk County Department of Health Services' guidelines for private wells should be used for wellhead protection.

5.3.3.4 Wetlands, ~~and~~ surface waters and stormwater runoff

Freshwater wetlands that exist within the Central Pine Barrens are considered to be an important natural resource, providing flood and erosion control, the filtering of contaminants and sediments from stormwater runoff, and habitat for plants and wildlife, including those species which are designated as rare, endangered, threatened or special concern. Furthermore, such wetlands may also constitute rare ecological community types themselves, such as coastal plain pond shores which in New York State are found only on Long Island

Tidal wetlands existing within the marine environment bordering portions of the Central Pine Barrens are equally valuable natural resources. These wetlands support the reproduction of finfish and shellfish, provide habitat for waterfowl and other species which are designated as rare, endangered, threatened or special concern, and contribute a scenic quality that supports recreational economies.

Surface waters, including freshwater ponds, lakes, streams, rivers, and creeks, occur throughout the Central Pine Barrens. These are considered to be resources of significant value in economic, aesthetic and ecological terms. Their protection is judged to be vital to the dynamics of the pine barrens.

The New York State Department of Environmental Conservation and local municipalities, including the Towns of Brookhaven, Riverhead and Southampton, have the authority to regulate various activities occurring within, adjacent to and in proximity to wetlands and surface waters. In their regulatory processes both the New York State Department of Environmental Conservation and local municipalities have established upland boundaries bordering the landward side of wetlands within which they regulate activities. These upland boundaries, known variously as adjacent areas, jurisdictional areas or regulated areas, have a prescribed numerical width measured as extending a certain distance away from the landward boundary of the wetland. Within these upland boundaries, the New York State Department of Environmental Conservation and local municipalities also require and impose buffer zones of a certain width adjacent to the landward boundary of a wetland and often comprised of existing natural vegetation, which are to be maintained as such in order to ensure permanent protection of the wetland and its functions.

In addition, the Commission has the authority, through its Comprehensive Land Use Plan, to

ensure the continuation of Pine Barrens environments existing within the Compatible Growth Area, such as wetlands, through the protection and preservation of ecological functions, and hydrological functions, including the quality of surface and groundwaters.

Development of lands within the pine barrens inevitably results in an increase of runoff water following precipitation. Runoff water originating from the roofs of buildings, from driveways and from parking lots is usually discharged directly to subsurface dry wells situated on the building lot. However, the great volume of runoff water originating from paved streets and roads is usually discharged by pipes into large open recharge basins or sumps, as also sometimes occurs in regard to parking lots. These basins may cover several acres and require the removal of considerable native vegetation to the detriment of the site's ecology and aesthetics.

Standards

5.3.3.4.1 **Nondisturbance buffers**

Development proposals for sites containing or abutting freshwater or tidal wetlands or surface waters ~~must~~ shall be separated by a nondisturbance buffer area which shall be ~~no less than~~ at least that required by the New York State Tidal Wetland, Freshwater Wetland, or Wild, Scenic and Recreational Rivers Act or local ordinance, whichever is greater. The Commission reserves the right to require a stricter and larger nondisturbance buffer as warranted in a specific , instance, particularly in situations in which the wetland involved is representative of a rare ecological community type, such as a coastal plain pond shore, or provides habitat, including breeding habitat, for species which are designated as rare, endangered, threatened or special concern. Distances shall be measured horizontally from the wetland edge as mapped or determined by the New York State Department of Environmental Conservation, ~~field delineation or~~ and/or the local municipality, as applicable. Development ~~P~~projects which require variances or exceptions from these state laws, local ordinances and associated regulations, shall meet all requirements imposed in a permit by the New York State Department of Environmental Conservation or a municipality in order to be deemed to have met the requirements of this standard. Commission approval, where applicable, shall require submission of a final official copy of all New York State Department of Environmental Conservation and municipal permits(s) ~~and satisfaction of any conditions on such permit~~.

In those rare situations in which a wetland is not subject to the regulatory authority of either the New York State Department of Environmental Conservation or the local municipality and the wetland is located on a project site and a development project proposed for that project site requires a Hardship Waiver approval from the Commission, the Commission shall oversee the

delineation of the wetland boundary (for which the applicant shall have primary responsibility for initial field delineation), shall determine the adjacent area and shall require and determine the width of a nondisturbance buffer in accordance with the provisions of the applicable state statutes utilized by the New York State Department of Environmental Conservation, including Articles 24 and 25 of the Environmental Conservation Law; the applicable state regulations utilized by the New York State Department of Environmental Conservation, including 6 NYCRR Parts 661 and 663; and the applicable local municipal requirements, including the applicable code requirements of the Brookhaven Town Code, the Riverhead Town Code and the Southampton Town Code. In the aforementioned situation, the nondisturbance buffer required by the Commission shall be at least that which would have been required by the State or local ordinance, whichever is greater.

~~5.3.3.4.2 **Buffer delineations, covenants and conservation easements**~~
~~Buffer areas shall be delineated on the site plan, and covenants and/or conservation easements, pursuant to the New York State Environmental Conservation Law and local ordinances, shall be imposed to protect these areas as deemed necessary.~~

~~5.3.3.4.3~~

5.3.3.4.2 **Wild, Scenic and Recreational Rivers Act compliance**
Development shall conform to the provisions of the New York State Wild, Scenic and Recreational Rivers Act, where applicable. Development ~~P~~projects which require variances or exceptions under the New York State Wild, Scenic and Recreational Rivers Act shall meet all requirements imposed by the New York State Department of Environmental Conservation in order to be deemed to have met the requirements of this standard. Commission approval shall require submission of a final official copy of the NYSDEC permit.

5.3.3.4.3 **Stormwater recharge**
Development projects ~~must~~ shall provide that stormwater runoff originating from development on the ~~property~~ project site is recharged on the project site unless the Commission by waiver of this standard approves the discharge of the stormwater to a documented surplus capacity in an off site drainage system.

5.3.3.4.4 **Reduction of Impervious Surfaces**

Development project sites requesting new or expanded development that have been previously cleared and established with impervious surfaces shall reduce previously cleared areas, including impervious surfaces, to comply with the applicable open space standard. Permanent waiver of required parking spaces, removal of unused pavement areas, and vegetative buffers may be counted towards meeting the open space standard. Temporary waivers of paving (e.g., landbanking) of parking shall not be counted toward meeting the open space standard.

5.3.3.4.5 **Natural recharge, drainage, and ponds**

Natural recharge areas and/or drainage system designs that cause minimal disturbance of native vegetation and preserve the native habitat shall be employed, where practical, when also approved by the municipal highway superintendent or public works department head, in lieu of recharge basins or ponds that would require removal of significant areas of native vegetation, and shall count towards satisfaction of Standard 5.3.3.6.2. Creation of ponds shall require approval from the Commission under this standard, but creation of ponds shall not count towards satisfaction of Standard 5.3.3.6.2.

~~***Guideline***~~

~~5.3.3.4.4 **Additional nondisturbance buffers**~~

~~Stricter nondisturbance buffer areas may be established for wetlands as appropriate.~~

~~5.3.3.4.6 **Soil erosion and stormwater runoff control during construction**~~

~~Those development projects for which a stormwater plan is required by another agency shall file a copy of such plans with the Commission when they are available.~~

5.3.3.5 Stormwater runoff

Development of lands within the pine barrens inevitably results in an increase of runoff water following precipitation. Runoff water originating from the roofs of buildings and from driveways is usually discharged directly to subsurface dry wells situated on the building lot. However, the great volume of runoff water originating from paved streets and roads is usually

discharged by pipes into large open recharge basins or sumps. These basins may cover several acres and require the removal of considerable native vegetation to the detriment of the site's ecology and aesthetics.

Standard

5.3.3.5.1 **Stormwater recharge**

Development projects must provide that all stormwater runoff originating from development on the property is recharged on site unless surplus capacity exists in an off site drainage system.

Guidelines

5.3.3.5.2 **Natural recharge and drainage**

Natural recharge areas and/or drainage system designs that cause minimal disturbance of native vegetation should be employed, where practical, in lieu of recharge basins or ponds that would require removal of significant areas of native vegetation.

5.3.3.5.3 **Ponds**

Ponds should only be created if they are to accommodate stormwater runoff, not solely for aesthetic purposes.

5.3.3.5.4 **Natural topography in lieu of recharge basins**

The use of natural swales and depressions should be permitted and encouraged instead of excavated recharge basins, whenever feasible.

5.3.3.5.5 **Soil erosion and stormwater runoff control during construction**

During construction, the standards and guidelines promulgated by the New York State Department of Environmental Conservation pursuant to state law, which are designed to prevent soil erosion and control stormwater runoff, should be adhered to.

5.3.3.6 ~~Natural vegetation and plant habitat~~ Coordinated design for open space, habitat and soil protection

Comprehensive, coordinated planning and design of development proposals within the pine barrens is essential to ensure maximum preservation of open space and habitat linkages. Development projects must ~~shall~~ be designed with full consideration of the existing development and known future plans for the adjacent parcels. Otherwise, inefficient road patterns may result requiring unnecessary clearing and lot layout that may hinder or entirely prevent the preservation of large, unbroken blocks of open space.

Conservation design principles must be utilized in creating development project plans. Conservation design is a method of site planning which emphasizes the preservation of natural, historic or other significant features of a development project site, including its natural landscape and ecology, while allowing other, more appropriate locations on the parcel to be developed. This approach first identifies areas of conservation value to be permanently protected as open space, such as natural vegetation, prime habitat for endangered species, wetlands, fields and meadows, buffer zones, significant topographical features and historic and cultural resources, while shifting development away from these environmentally-valuable areas onto areas of lesser conservation value on a project site. Conservation design ensures the most valuable natural features and functions of a project site are maintained and set aside as open space. At a minimum, it encourages building with contours instead of mass grading, using pervious surfaces such as grassways (instead of paved sidewalks), reducing lot size to preserve larger contiguous natural areas, and incorporates natural landscaping to reduce stormwater management problems. Conservation design also requires ongoing monitoring and permanent protection of areas which have been set aside through covenant, dedication or easement. Conservation design shall be required for all development projects as described in Standard 5.3.3.6.2, "Open space requirement, unfragmented open space and habitat."

One means of complying with the required Conservation Design methodology is ~~T~~the use of the clustering technique within the Central Pine Barrens which preserves open space, preserves habitat, protects important resource areas, improves infrastructure efficiency and furthers the Act's goals of compact, efficient and orderly development in the Central Pine Barrens. When this method of development is applied, development needs to be concentrated on a particular section of a project site by allowing individual lots to be smaller than the required minimum lot size prescribed by the zoning district in which the project site is located and the remaining portion of the project site is set aside as common open space. Accordingly, clustering or

reduced-density plans shall be required for single-family residential developments with the Central Pine Barrens.

Open space is defined as any essentially undeveloped and unimproved, publicly or privately-owned open area, which can be comprised of either land or water, that either remains in its natural state or is used for agriculture and is permanently preserved and will not be developed. Open space includes existing agricultural and forest land, grasslands, wildlife habitat, undeveloped coastal and estuarine lands, aquifer recharge areas, wetlands, undeveloped scenic lands, public parks and preserves as well as water bodies such as lakes and bays. The existing open quality, natural condition or current state of use of open spaces protects, conserves, maintains or enhances natural or scenic resources including waterways and riverine systems, soils, scenic vistas, wildlife preserves, nature sanctuaries and cultural resources or enhances the present or potential value of development which abuts or surrounds it. This open land can be characterized by natural scenic beauty or may also help maintain or enhance the quality and character of the lives of area residents or help preserve their common heritage. Open space is intended to be available, where applicable, for low-intensity recreational activities which have nominal environmental impact and have no effect on the environmental integrity of the open space, including hiking, hunting, nature study, bird watching and orienteering. In no case does open space mean active recreational facilities such as golf courses, amusement parks and ballfields. Additionally, proper management of these areas, including assignment of responsibility for such management, is essential in order to protect open spaces from illegal dumping, clearing, motor vehicle trespass and other abuses.

Buffer areas are defined, for the purposes of this section, as areas incorporated into a development project site design for purposes including, but not limited to, conservation area compliance, habitat preservation, open space protection, separation ~~to~~ between wetlands and development, visual consideration, or mitigation of environmental impacts. These, too, must be properly managed and protected to prevent damage and deterioration.

Clearing is defined, for the purposes of this standard, as the removal, cutting or material alteration of any portion of the natural vegetation found on a development project site exclusive of any vegetation associated with active agricultural or horticultural activity or formalized landscape and turf areas. Excessive clearing of ~~natural~~ vegetation can result in severe soil erosion, excessive stormwater runoff, and the destruction or reduction of pine barrens plant and wildlife habitat, and shall be minimized on development project sites through the provisions of this section. Revegetation of a development project site, or a portion thereof, may be used as a

mitigative tool for the re-establishment of appropriate vegetation on a previously cleared area of a development project site. However, revegetation may not be used to meet the clearing standard.

Further, the *Long Island Comprehensive Waste Treatment Management Plan* (the "208 Study"; Long Island Regional Planning Board, Hauppauge, NY, (1978)) indicated that fertilizers are a significant source of nitrogen and phosphorous contamination to ground and surface waters. Due to their low fertility, soils common to the pine barrens (e.g., Carver, Haven, Plymouth and Riverhead) require both irrigation and fertilizer application for establishment and maintenance of turf and nonnative vegetation. As native pine barrens vegetation is replaced with turf through development, increased contamination and a general change in the ecosystem may be expected. Therefore, the use of non-native, fertilizer-dependent vegetation must be minimized in the Central Pine Barrens.

Over time, non-native species of vegetation have been transported from foreign locations and have become established throughout the United States. This includes the Central Pine Barrens where various types of alien plant species may be found. Unfortunately, some of these species of plants are invasive, i.e. non-native plants that have already or are likely to spread into an established vegetative system or community, develop a self-sustaining population, become dominant in or disruptive to the pre-existing vegetative systems or communities and may result in long-term adverse alteration of such systems or communities. Accordingly, provisions to actively monitor, support, and manage the health and preservation of natural ecological communities in the Compatible Growth Area that may be overtaken or supplanted by invasive species and to prevent and/or reduce the spread and extent of invasive species coverage in the Compatible Growth Area over time, especially proactively in coordination with other local and regional initiatives, are encouraged and supported.

It is recognized that the pine barrens ecosystem has a unique and powerful ability to recover from disturbance and invasion by non-native species returning itself to a diverse and intact local-genotype habitat either naturally or with active ecological oversight, maintenance and monitoring. This concept is known as “self-heal.” Further, it is recognized that native plantings, regardless of how ecologically well designed, cannot compare to the habitat originally found on a project site in configuration or diversity. In fact, plants horticulturally introduced so successfully may suppress whatever seed-bank and diversity remaining on a project site that may otherwise emerge and such introduced plants may be counterproductive to the goals and objectives of the Act and the CLUP. Accordingly, the implementation of a self-heal approach is to be the first method undertaken in place of the reintroduction of horticulturally-generated native plants derived from off-site sources.

Standards

5.3.3.6.1 **Vegetation clearance limits**

The clearance of natural vegetation shall be strictly limited. Site plans, surveys and subdivision maps shall delineate the existing naturally vegetated areas and calculate those portions of the site that are already cleared due to previous activities.

Areas of the site proposed to be cleared combined with previously cleared areas shall not exceed the percentages in Figure 5-1. These percentages shall be taken over the total site and shall include, but not be limited to, roads, building sites and drainage structures. The clearance standard that would be applied to a development project site if developed under the existing residential zoning category may be applied if the proposal involves multi-family units, attached housing, clustering or modified lot designs. Site plans, surveys and subdivision maps shall be delineated with a clearing limit line and calculations for clearing to demonstrate compliance with this standard.

To the extent that a portion of a development project site includes Core property, and for the purpose of calculating the clearance limits, the site shall be construed to be the combined Core and CGA portions. However, the Core portion may not be cleared except in accordance with Section 5.2 of the Plan.

5.3.3.6.1.1 Development project sites which consist of non contiguous parcels shall be treated as if the parcels were contiguous for purposes of determining compliance with Standard 5.3.3.6.1.

5.3.3.6.1.2 Development project sites which consist of parcel(s) that are split among two or more zoning categories shall have a total clearing allowance for the entire site which is the sum of the individual clearances for each separately zoned portion of the site.

5.3.3.6.1.3 Development project sites which are also Residential Overlay Districts and which include the redemption of Pine Barrens Credits shall apply Figure 5-1 based upon the actual resulting average lot size after the redemption of Credits, rather than the base zoning lot size. This actual average lot size shall be used to interpolate

between the two rows of Figure 5-1 which contain the immediately surrounding lot sizes for the actual one under consideration in order to determine the maximum site clearance percentage to be applied to the development project site, as long as the requirements of the Town Code and of Section 6.4.2.2.2 of this Plan are met.

5.3.3.6.1.4 Land cleared for purposes of conducting environmental restoration pursuant to ECL 57-0107(13)(c), immediately after revegetation, shall be considered "natural vegetation", and shall not be considered "cleared" or "previously cleared" land in determining conformance with Standard 5.3.3.6.1.

5.3.3.6.1.5 Persons seeking relief from clearing requirements on individual lots must file a CGA hardship application

5.3.3.6.1.6 For a project site which is split between the Core Preservation Area and the Compatible Growth Area, and within which Pine Barrens Credits have been issued for the Core Preservation Area portion, only the Compatible Growth Area acreage shall be used to determine the amount of clearing allowed according to Figure 5-1 of Standard 5.3.3.6.1.

5.3.3.6.1.7 For those development project sites which propose development entirely and exclusively within the cleared portion of the development project site or was cleared either under a permit from the Commission or pursuant to a nondevelopment provision of the Act, and where no violation of the clearing standard or hardship exemption has occurred, then the "maximum site clearance" provisions of Figure 5-1 are not applicable.

5.3.3.6.2 Open space ~~standard~~ requirement, unfragmented open space and habitat

All development project sites shall provide an open space set aside area or areas equal to or greater than those minimum percentages of open space set forth in Figure 5-Applicants shall prioritize the use, for development, of any existing cleared area on a project site prior to clearing areas of natural vegetation. In no case shall the combined area of existing clearing and new clearing of existing natural vegetation exceed the applicable clearing requirement in Figure 5-1 nor shall the open space set-aside area be less than that required pursuant to the applicable open space set-aside in Figure 5-1. Site plans, surveys and subdivision

maps shall be delineated with open space boundary lines and calculations of open space area provided to demonstrate compliance with this standard.

In determining appropriate areas to designate as open space and how to configure open space areas, the principles of Conservation Design and related tenets, as described in the Commission-adopted document entitled "*Conservation Design Manual for Development Projects in the Central Pine Barrens*," shall be utilized and applied to development projects. In determining which areas of a development project site to set aside as open space, the order of priority, from highest to lowest, shall be as follows:

- Portions of a development project site, including, but not limited to, wetlands; the habitats of endangered, threatened and special concern species; floodplains; archaeological sites and burial grounds and cemeteries, which are statutorily protected from development or disturbance by any federal, state, county, town, or other law or regulation.

- Portions of a development project site which may include, but shall not be limited to, natural areas which provide a connection between areas of open space, natural areas which abut existing open space, habitats of rare species such as certain forest interior-dependent birds, rare ecological communities such as grasslands, assemblages of rare plants, scenic vistas, steep slopes, farmland and significant topographic features such as kettleholes, drumlins and kames.

- When possible, after addressing the prior two priorities, subdivision and site design shall also support preservation of ~~natural vegetation~~ open spaces in large unbroken blocks that allow contiguous ~~open spaces~~ habitat to be established when adjacent parcels are developed. ~~Subdivision and site designs should also be configured in such a way so as to prioritize the preservation of native pine barrens vegetation to the maximum extent practicable~~

Existing forested and wooded areas, old fields and successional vegetation may be used to meet the open space standard and the set aside percentage among types of ecological communities. However, if active farmland is proposed for preservation as open space, as in an agricultural reserve, then active farmland may be used to satisfy the open space standard. ~~It is recognized that t~~The preservation of

nonnative but ecologically important habitats shall be permitted ~~may be consistent with the intent and goals of the plan~~ when such action would achieve one of the aforementioned priorities ~~result in the creation of large contiguous natural open space areas and/or the protection of rare, threatened or endangered species or their habitat~~. Areas of bare soil, formalized landscape, and turf may not be counted towards satisfaction of the open space standard and set aside percentage without prior review and determination of the Commission, unless the entire project site is comprised solely of these areas or is active farmland proposed to be preserved, as in an agricultural reserve.

In determining the areas of a project site to be preserved as open space, preference shall be given to setting aside open space as separate parcels or blocks of land devoid of development but open space may be allowed within lots, particularly in the case of the establishment of agricultural reserves. The clustering technique, reduced density development design, transfer of development rights or other applicable design technique shall be required for development project design in order to achieve the requirements noted above ~~Municipalities are strongly urged to maximize the use of the clustering technique where its usage would enhance adjacent open space or provide contiguous open space connections with adjacent open space parcels~~.

A transfer of development rights within the CGA, which results in the preservation of a large block of unfragmented open space within the vicinity of the subject property being developed and which is included as part of the project site, can be considered by the approving authority in determining compliance with the requirements of this section.

On development project sites for which either new or expanded development has been requested and which are cleared or were cleared pursuant to a nondevelopment provision of the Act, and where no violation of the clearing standard has occurred, the area previously cleared shall be revegetated, with the first approach for revegetation to be used consisting of the "Self-Heal" technique (as defined herein and as described in detail in the Commission's "*Conservation Design Manual for Development Projects in the Central Pine Barrens*") in order to bring the site into compliance with the applicable open space standard. Active revegetation with natural vegetation, as prescribed in the Commission's "*General Planting Specifications and List of Acceptable and Unacceptable Plants*," shall only be undertaken when an applicant has made an adequate demonstration that the "Self-Heal" approach is not feasible or has not been successful and has

received approval to use active revegetation. However, such revegetation shall not be required for active farmland which is being preserved as such.

~~5.3.3.6.2.3~~ **Unfragmented open space ~~and habitat~~**

~~For the purpose of this paragraph, native pine barrens vegetation shall include pitch pines and various species of oak trees, understory and ground cover plants such as blueberry, wintergreen, bearberry and bracken fern, grasses and sedges such as little bluestem, Pennsylvania sedge and indian grass as well as those ecological communities listed in sections 5.6 and 5.7 in Chapter 5, Volume 2 of the Plan.~~

5.3.3.6.3 **Fertilizer-dependent vegetation limit**

No more than 15% of an entire development project site shall be established in fertilizer-dependant vegetation including formalized turf areas. Generally, nonnative species require fertilization therefore, planting of such nonnative species shall be limited to the maximum extent practicable. Development designs shall ~~shall~~ be in conformance with the Commission's *"General Planting Specifications and List of Acceptable and Unacceptable Plants*," which shall be adopted by resolution and periodically amended and updated by the Commission by a majority vote after consideration of other regulations and new scientific research findings applicable to Long Island native ecological communities. Landscaping and restoration plans shall strive to use only Long Island native genotypes, unless the plants are not available. The use of the nonnative plants in the Commission's *"General Planting Specifications and List of Acceptable and Unacceptable Plants"* ~~Figure 5-2~~ is ~~specifically~~ ~~not recommended~~ prohibited in a development design.

5.3.3.6.4 **Native plantings**

Development designs shall ~~consider shall be~~ incorporate the planting ~~suggestions~~ of only those species listed as "recommended" ~~contained~~ in and shall be in conformance with the Commission's "*General Planting Specifications and List of Acceptable and Unacceptable Plants*." Landscaping and restoration plans shall strive to use only Long Island native genotypes, unless the plants are not available. ~~Figure 5-2~~.

Figure 5-2: Planting recommendations

(Native plants are more drought tolerant than nonnative species, are adapted to our local environment, maintain natural ecological diversity, perpetuate fast disappearing native genotypes, and comprise a form of habitat restoration.)

Scientific name *(In alphabetic order)*	**Common name**
Recommended native plants	
Andropogon gerardi	Big bluestem
Andropogon scoparius	Little bluestem
Betula lenta	White Birch
Betula populifolia	Grey birch
Celtis occidentalis	Hackberry
Dennstaedtia punctilobula	Hay scented fern
Epigea repens	Trailing arbutus
Hamamelis virginia	Witch hazel
Ilex glabra	Inkberry
Ilex opaca	American holly
Myrica pensylvanica	Northern bayberry
Parthenocissus quinquefolia	Virginia creeper
Pinus rigida	Pitch pine
Populus tremuloides	Quaking aspen
Prunus maritima	Beach plum
Prunus serotina	Black cherry
Pteridum aquilinum	Bracken fern
Quercus alba	White oak
Quercus coccinea	Scarlet oak
Quercus rubra	Red oak
Rosa virginiana	Virginia rose
Rubus allegheniensis	Northern blackberry
Salix discolor	Pussy willow
Sassafras albidum	Sassafras
Solidago species	Goldenrod
Spirea latifolia	Spirea
Vaccinium angustifolium	Lowbush blueberry
Vaccinium corymbosum	Highbush blueberry

Continued ...

~~Invasive, nonnative plants specifically not recommended~~	
~~*Acer platinoides*~~	~~Norway maple~~
~~*Acer pseudoplatanus*~~	~~Sycamore maple~~
~~*Ampelopsis brevipedunculata*~~	~~Porcelain berry vine~~
~~*Berberis thunbergii*~~	~~Japanese barberry~~
~~*Celastrus orbiculatus*~~	~~Asiatic bittersweet~~
~~*Coronilla varia*~~	~~Crown vetch~~
~~*Eleagnus umbellata*~~	~~Autumn olive~~
~~*Lespedeza cuneata*~~	~~Himalayan bushclover~~
~~*Ligustrum sinense*~~	~~Chinese privet~~
~~*Lonicera japonica*~~	~~Japanese honeysuckle~~
~~*Lonicera maackii*~~	~~Amur honeysuckle~~
~~*Lonicera tartarica*~~	~~Tartarian honeysuckle~~
~~*Lythrum salicaria*~~	~~Purple loosestrife~~
~~*Miscanthus sinensis*~~	~~Eulalia~~
~~*Pinus nigra*~~	~~Black pine~~
~~*Polygonum cuspidatum*~~	~~Mexican bamboo~~
~~*Pueraria lobata*~~	~~Kudzu~~
~~*Robina pseudoacacia*~~	~~Black locust~~
~~*Rosa multiflora*~~	~~Multiflora rose~~
~~*Rosa rugosa*~~	~~Rugosa (salt spray) rose~~
~~*Rudbeckia hirta*~~	~~Black eyed susan~~

5.3.3.6.5 **Receiving entity and protection for open space areas**

Proposed open space protections shall consider use, maintenance and future management of any designated area.

When open space areas are proposed to be dedicated to another party, either a government land preservation and management entity or private not for profit conservation land management organization, a~~A~~pplications must specify the entity to which dedicated open space will be transferred.

Protection of open space areas shall be guaranteed through one of the following three options (1) a transfer of the open space property title to a government land preservation and management entity or a not for profit conservation land management organization, (2) imposition of a permanent conservation easement on the open space area, with the easement grantee being either a government land preservation and management entity or a not for profit conservation land management organization in accordance with New York State Environmental Conservation Law Article 49, or (3) recording of a conservation easement by a private landowner and filed in the Office of the Suffolk County Clerk, with the easement grantee being either a government land preservation and management

entity or a not for profit conservation land management organization in accordance with New York State Environmental Conservation Law Article 49.

In the specific case of open space areas protected as a result of a Critical Resource Area development approval by the Commission, the Commission shall have enforcement authority for any conservation easement(s) on such areas.

5.3.3.6.6 **Buffer delineations, covenants and conservation easements**

Buffer areas shall be delineated on the site plan, subdivision map, project plan and/or survey. Covenants and/or conservation easements shall be imposed to protect these areas as deemed necessary.

5.3.3.6.7 **Invasive plant species mitigation**

Where a development application proposes to set aside an open space area of ten (10) acres or greater on a project site, the applicant shall identify the presence or absence of invasive plant species according to the inventory of unacceptable plants described in the Commission's "*General Planting Specifications and List of Acceptable and Unacceptable Plants*." The identification may include mapping of the areas of invasive plants, a description of the species of invasive plants found in the open space area and a description of the extent of invasive species. Development projects are prohibited from planting species in the Commission's "*General Planting Specifications and List of Acceptable and Unacceptable Plants*." and those listed in applicable State, County, and local regulations including, but not limited to, lists adopted by Suffolk County entitled "*Suffolk County's Do Not Sell/Transfer List of Invasive Species*" (2011) and New York State regulations pursuant to 6 NYCRR Part 575 entitled "*Prohibited and Regulated Invasive Species*."

Guideline

5.3.3.6.7.1 **Invasive Species Mitigation**

When areas of invasive plants have been identified, project applicants may propose to remove and eradicate the invasive plants as part of any environmental mitigation offered pursuant to SEQRA, mitigation in a CGA Hardship Waiver application, Developments of Regional Significance, Critical Resource Area applications, assertions of jurisdiction, or any other municipal or State requirement or obligation. To minimize disturbance to open space and habitat, and in keeping with the conservation design approach for open space outlined in

the Plan to identify and develop appropriate locations on a project site while preserving natural features, protected species, habitats, and cultural resources, a total area of no more than two acres shall be identified and targeted for invasive species removal, unless specified, required or authorized otherwise. Identified invasive species shall be removed entirely by hand; no applications of herbicides or the use of machinery are permitted, unless the applicant makes a demonstration, with sufficient supporting documentation, of need and the removal is expressly authorized by the approving authority.

In the course of removing the aforesaid invasive vegetation, no disturbance may occur to existing native vegetation, native habitat or any local, state, or federally protected species within the two acre area or any other area of open space, unless otherwise permitted. Prior to removal of invasive plant material, a restoration plan must be prepared for the targeted area. As project site conditions vary due to prior disturbance, area of natural cover, location and proximity to other natural and developed landscapes, restoration techniques and opportunities for recovery are also varied and may be adapted accordingly. A range of one or more restoration methods may be applied and include, but are not limited to, the "self-heal" approach, active restoration with nursery stock, and/or transplantation activities. The site specific restoration plan shall be subject to review and approval. The restoration plan must contain specifications including, but not limited to, species, size, spacing, quantity, source of material, and other relevant information, as well as a schedule for planting in the first available planting season and a three year maintenance plan. A three year maintenance plan is required to replace any dead plantings and ensure recovery in the two acre or less area. Removal of invasives may occur within the three year maintenance period. No maintenance shall be required after three years, unless otherwise required by the approving authority. A written annual report in regard to the status of the success of the invasive plant removal and restoration shall be submitted to the approving authority during the three year maintenance period. Notification to the approving authority is required at the end of the three year maintenance period. The invasive species removal and restoration area once it has been successfully restored with native species must be protected, as well as the open space area of which it is a part, in accordance with Standard 5.3.3.6.6, "*Receiving entity and protection for open space areas*."

Figure 5-1: Clearance and Open Space Standards

This table shows total overall development project site clearance and requirement for open space including lots, roads, drainage and other improvements.

For all privately owned parcels:

Zoning lot size as of June 28, 1995, with the exception that in the newly expanded Compatible Growth Area in the Carmans River Watershed created by the New York State Legislature's adoption on June 7, 2013 of an amendment to Environmental Conservation Law Article 57, Section 57-0107(10), the minimum lot size required by zoning shall be based on the zoning in effect on January 1, 2014.(*)	**Maximum overall development project site clearance** (**)	**Minimum Open Space Requirement** (**)
10,000 square feet residential (1/4 acre)	90%	10%
15,000 square feet residential (1/3 acre)	70%	30%
20,000 square feet residential (½ acre)	60%	40%
30,000 square feet residential (2/3 acre)	58%	42%
40,000 square feet residential (1 acre)	53%	47%
60,000 square feet residential (1.5 acre)	46%	54%
80,000 square feet residential (2 acres)	35%	65%
120,000 square feet residential (3 acres)	30%	70%
160,000 through 200,000+ square feet residential (4 - 5+ acres) ~~Clearance Areas and Open Space on lots in this category shall not include the clearance necessary for the construction of driveways and septic systems, except that, in no case shall the total clearance in this category exceed 25%.~~ The total amount of disturbance of natural vegetation shall not exceed the clearance percentage, except on flagpole lots where the area of the pole shall be exempt from the total lot area and the total amount of clearing permitted.	25~~20~~% ~~Clearance limitations on lots in this category shall not include the clearance necessary for the construction of driveways and septic systems. In no case shall the total clearance in this category exceed 25%.~~	75%

Other defined residential zoning lot size	Interpolate from entries above.	Interpolate from entries above.
~~Commercial, Industrial and Other or Mixed Use~~ All other zoning categories, including those categories without defined zoning lot sizes and parcels owned by the State or a public corporation, except for publicly-owned lands dedicated to park purposes, open space or nature preserve or acquired with funds for open space preservation or parkland purposes.	~~65~~60%	40%

Notes:

(*) These entries are the minimum lot sizes required by zoning as of June 28, 1995 or the current zoning, whichever is more protective of the environment by minimizing clearance or maximizing open space, not the size of the subject parcels, with the exception that in the newly expanded Compatible Growth Area in the Carmans River Watershed created by the New York State Legislature's adoption on June 7, 2013 of an amendment to Environmental Conservation Law Article 57, Section 57-0107(10), the minimum lot size required by zoning shall be based on the zoning in effect on January 1, 2014.

(**) In calculating the percentage of land cleared ~~or~~ and the percentage of open space to be retained, the preserved areas in a development should preferably be existing native vegetation. These are maximum clearance and minimum open space standards, and more restrictive standards may be imposed during the review by the Commission, involved agency, or local municipality due to consideration of other standards, especially those addressing preservation of rare or endangered species, or unique flora or vegetation.

5.3.3.7 ~~Species and communities of special concern~~ Protection and conservation of species and communities

The pine barrens ecosystem hosts several species of rare, endangered or threatened animals and plants, as well as species of special concern. The State of New York has identified such species and has enacted laws to protect their number and habitat. The New York State Natural Heritage Program has also identified unique natural communities and habitats of special concern. Additionally, the pine barrens provides breeding, migratory stopover, and overwintering habitat for several dozen species of birds. These include various songbirds such as warblers, tanagers, cuckoos, kinglets, grosbeaks, thrushes, and orioles. This also includes certain other groups of birds including shorebirds, water birds, birds-of-prey, forest interior bird species and hummingbirds.

The U.S. Fish and Wildlife Service estimates that bird strikes with buildings, windows, and other structures account for up to several hundred million bird deaths per year. Many collisions are preventable with appropriate building designs, such as those described in the city of Toronto, Canada's "Bird Friendly Development Guidelines" and the New York City Audubon Society's "Bird-safe Building Guidelines".

5.3.3.7.1 **Special species and ecological communities**

Where a significant ~~negative~~ impact upon a habitat essential to those species identified on the New York State maintained lists as rare, threatened, endangered or of special concern, or upon natural communities classified by the New York State Natural Heritage Program as G1, G2, G3 or S1, S2 or S3, or on any federally listed endangered or threatened species ~~is proposed~~ may occur, appropriate mitigation measures as determined by the appropriate state, county or local government agency or entity shall be taken to protect these species.

Guideline

5.3.3.7.2 **Bird conservation and protection**

All development or portions thereof, including, but not limited to, commercial, industrial, institutional, public, mixed use and tall structures (see definition in Chapter 4), but excluding construction of separate single family homes, shall incorporate structural design and site planning elements which reduce, minimize, mitigate or eliminate to the greatest extent feasible, impacts to birds, both migratory and non migratory. This shall be accomplished through structural and site design elements which shall include, but not be limited to:

- reduction of continuous window surface area;
- external and internal patterning of glass;
- type and location of landscaping with respect to the building proper;
- reduction of reflections, glazing and reflective surfaces that reflect natural surroundings;
- use of angled glass surfaces;
- incorporation of reflection reducing awnings, and other building design and facade elements that eliminate habitat reflections;
- full cutoff lighting that directs all light downward and eliminates spill light and direct upward light; and
- design of tall structures that do not incorporate support wires, lighting patterns, or colors that endanger migration and flight.

5.3.3.8 Soils

Disturbance of, and construction on, steep slopes within the pine barrens involves considerable removal of native vegetation resulting in excessive surface water runoff and severe soil erosion. Steeply sloped areas are also subject to more rapid spread of wildfire than flat ground.

Guidelines

5.3.3.8.1 **Clearing envelopes**

Clearing envelopes should be placed upon lots within a subdivision so as to maximize the placement of those envelopes on slopes less than ten percent (10%).

5.3.3.8.2 **Stabilization and erosion control**

Construction of homes, roadways and private driveways on slopes greater than ten percent (10%) may be approved if technical review shows that sufficient care has been taken in the design of stabilization measures, erosion control practices and structures so as to mitigate negative environmental impacts.

5.3.3.8.3 **Slope analyses**

Project review is facilitated if submissions contain a slope analysis showing slopes in the ranges 0-10%, 11-15% and 15% and greater. In areas with steep slopes, slope analysis maps should be required. This can be satisfied with cross hatching or shading on the site plan for the appropriate areas.

5.3.3.8.4 **Erosion and sediment control plans**

Erosion and sediment control plans should be required in areas of fifteen percent (15%) or greater slopes.

5.3.3.8.5 **Placement of roadways**

Roads and driveways should be designed to minimize the traversing of slopes greater than ten percent (10%) and to minimize cuts and fills.

5.3.3.8.6 **Retaining walls and control structures**

Details of retaining walls and erosion control structures should be provided for roads and driveways which traverse slopes greater than ten percent (10%).

~~**5.3.3.9 Coordinated design for open space management**~~.

~~Comprehensive, coordinated planning and design of development proposals within the pine barrens is essential to ensure maximum preservation of open space and habitat linkages.~~

~~Developments should not be designed without adequate consideration of the existing development and known future plans for the adjacent parcels. Otherwise, inefficient road patterns may require unnecessary clearing and lot layout that may hinder or prevent the preservation of large, unbroken blocks of open space.~~

~~The use of the clustering technique within the Central Pine Barrens preserves open space, preserves habitat, protects important resource areas, improves infrastructure efficiency and furthers the statute's goals of compact, efficient and orderly development in the Central Pine Barrens.~~

~~Additionally, proper management of these areas is essential in order to protect open spaces from illegal dumping, clearing, motor vehicle trespass and other abuses.~~

~~***Standard***~~

~~5.3.3.9.1~~ ~~**Receiving entity for open space dedications**~~

~~Applications must specify the entity to which dedicated open space will be transferred.~~

~~***Guidelines***~~

~~5.3.3.9.2~~ ~~**Clustering**~~

~~Municipalities are strongly urged to maximize the use of the clustering technique where its usage would enhance adjacent open space or provide contiguous open space connections with adjacent open space parcels.~~

~~5.3.3.9.3~~ ~~**Protection of dedicated open space**~~

~~Proposed open space should be protected with covenants, conservation easements or dedications that specify proper restrictions on its use and contingencies for its future management.~~

5.3.3.9 Dark sky compliance.

It is the intent of the Commission to encourage lighting fixtures, practices and systems which will minimize light pollution and glare, conserve energy and resources, provide essential site security, eliminate adverse effects upon nocturnal light sensitive species, and avoid light trespass onto adjoining and nearby properties.

Light pollution is defined, for the purposes of this section, as any adverse effect of man-made light, including, but not limited to, discomfort to the eye, or any man-made light that diminishes the ability to view the night sky, trespasses upon other properties, or disrupts wildlife.

Standard

5.3.3.9.1 **Light pollution prevention**

The candlepower distribution from all lighting fixtures and installations shall be cut off at all angles beyond those required to restrict direct illumination to the specific area or surface being illuminated. Development shall utilize full cutoff lighting that directs all light downward and eliminates spill light and direct upward light. All fixtures shall be noted on the proposed site plan as dark-sky compliant fixtures. All existing exterior fixtures on a development project site shall be retrofitted accordingly. This standard applies only to projects which are not subject to local municipal review and approval.

5.3.3.10 ~~Agriculture and horticulture~~Reserved.

~~Scattered throughout the pine barrens are parcels devoted to agricultural and horticultural uses.~~

~~Guideline~~

~~5.3.3.10.1 **Best management practices**~~

~~Any existing, expanded, or new activity involving agriculture or horticulture in the Compatible Growth Area should comply with best management practices, as defined herein, and relevant requirements including local law. Best management practices are, for purposes of this Plan, the same practices stated in the most recent version of *Controlling Agricultural Nonpoint Source Water Pollution in New York State* (Bureau of Technical Services and Research, Division of Water, New York State Department of Environmental Conservation, 1991 and as later amended).~~

5.3.3.11 Scenic, historic and cultural resources

The Long Island Pine Barrens Protection Act specifies that the Plan shall consider and protect unique scenic, cultural or historic features. Chapters 7 and 8 in Volume 2 of ~~T~~the Plan include an inventory of many of these resources, and separate inventories for these items exist in local, state, county, federal or private inventories.

The Commission's policy is to protect and enhance those landscape based features of a community which define it, provide for its distinction from neighboring communities, provide for natural areas among the communities which complement the protection of the pine barrens ecosystem, and contribute to a regional diversity, both natural and cultural. The standards and

guidelines in this section will promote the protection of these features in the Central Pine Barrens.

Federal, State, and local historic and cultural preservation programs along with the standards in this section promote the protection and preservation of the historic and cultural resources in the Central Pine Barrens which serve as critical components to the region's heritage, economy and tourism. Local historic districts play an important role in preserving distinctive historic neighborhoods and assemblages of historic structures located in the Central Pine Barrens.

In order to minimize adverse visual effects of tall structures, as defined in Chapter 4, Section 4.3.11, careful siting and design standards shall be applied to development projects involving tall structures that are proposed by public corporations identified in New York State Construction Law and any other development projects which are not subject to local municipal review and approval. Potential damage to adjacent properties from the placement and construction of tall structures should be avoided through local structural standards and zoning setback requirements. This section also emphasizes the protection of existing viewsheds along scenic roads and for scenic areas as identified in Figure 5-2, and as further described in Volume II of this Plan, and the avoidance of the unnecessary proliferation of tall structures within the Central Pine Barrens. In addition, the standard for tall structures will promote the protection of community character, historic and cultural resources, and recreational resources from visual and aesthetic impacts.

Guidelines

5.3.3.11.1 **Tall structures and scenic resources**

No development or portions thereof, which is proposed by public corporations or and any other development projects which are not subject to local municipal review and approval, shall meet or exceed the height definition for tall structures in Chapter 4, Section 4.3.11. Tall structures include, but are not limited to, communication and other types of towers, wind energy facilities, signs, buildings and other structures which meet or exceed the definition for tall structures in Chapter 4, Section 4.3.11. Proposed development or portions thereof which meet or exceed the height definition for a tall structure shall require a waiver of this standard from the Commission. This standard requires, in part, the adaptive use and reuse of existing tall structures (see definition in Chapter 4) rather than the construction and placement of new ones when and where feasible and appropriate. Applicants shall complete Part 1 of the State Environmental Quality Review Long Environmental Assessment form, as applicable, to evaluate potential impacts to scenic, historic, and cultural resources, and community character, open space, and recreation for any tall structure proposed. The Commission shall review this information, other land use plans, Volume II: Chapter 7 Cultural Resources: Historic and Archaeological and Chapter 8 Scenic Resources, the New York State Department of Environmental Conservation guidance document DEP-00-2

entitled “Assessing and Mitigating Visual Impacts” and any other technical material relevant to the evaluation of the development project being proposed., This information shall be used by the Commission for determining the appropriateness of design elements including, but not limited to, placement, height and potential impacts, including but not limited to, visual and bird impacts, of any proposed tall structure, and may require mitigation measures as a condition of granting a waiver is granted**.**

5.3.3.11.2~~1~~ **Cultural resource consideration**

Development proposals should account for, review, and provide protection measures for:

1. Established recreational and educational trails and trail corridors, including but not limited to those trail corridors inventoried elsewhere in this Plan.

2. Active recreation sites, including existing sites and those proposed as part of a development.

3. Scenic corridors, roads, vistas and viewpoints as documented in Volume 2 of this Plan, and which are listed in Figure 5-2 (which may be amended from time to time) of Volume I of this Plan and may be located in Critical Resource Areas, and along the Long Island Expressway, Sunrise Highway, County Road 111 and William Floyd Parkway.

4. Sites of historical or cultural significance, including historic districts, sites on the State or National Registers of Historic Places, and historic structures listed on the State or National Registers of Historic Places, recognized by local municipal law or statute.

5. Sensitive archaeological areas as identified by the New York State Historic Preservation Office or the New York State Museum.

5.3.3.11.3~~2~~ **Inclusion of cultural resources in applications**

Development proposals should note established recreation and educational trails and trail corridors; active recreation sites; scenic corridors, roads, vistas and viewpoints located in Critical Resource Areas and undisturbed portions of the roadsides of the Long Island Expressway, Sunrise Highway, County Road 111 and William Floyd Parkway; sites on the State or National Register of Historic Places,

and historic structures and landmarks recognized by municipal law or statute, or listed on the State or National Registers of Historic Places; and sensitive archaeological areas as identified by the New York State Historic Preservation Office or the New York State Museum within a five hundred (500) foot radius of the outside perimeter of the project site, including any project parcels which are physically separate from the bulk of the proposed development area.

A development proposal may be disapproved or altered if the local municipality determines that the development proposal, in its current form, may have a significant negative impact on any of the above resources.

5.3.3.11.4~~3~~ **Protection of scenic and recreational resources**

Protection measures for scenic and recreational resources should include, but not be limited to, retention of visually shielding natural buffers, replacement of degraded or removed natural visual buffers using native species, use of signs which are in keeping in both style and scale with the community character, and similar measures.

5.3.3.11.5~~4~~ **Roadside design and management**

Undisturbed portions of the roadside should be maintained in a manner that protects the scenic features of these areas. Clearing (including that for aisles, driveways, access and parking) is not precluded within these roadside areas, provided that appropriate buffers are maintained, and that manmade structures meet standards consistent with the character of the area.

Figure 5-2: Scenic Roads and Areas in the Central Pine Barrens[1]

(Standards and guidelines shall apply only to the portion of these areas and roadways located in the Compatible Growth Area

Scenic Roads in the Central Pine Barrens Area

- **Sunrise Highway (NYS 27)** from CR 51 intersection east to NYS 24 intersection.
- **Riverhead -Moriches Road (CR 51) and Center Drive** from CR 111 north to Riverhead County Center.
- **Riverhead –Moriches Road (CR 63)** from CR 51 north toward Riverhead
- **Riverhead-Westhampton Road (CR 31) and Riverhead-Quogue Road (CR 104)** from Suffolk Airport north to Riverhead
- **Flanders Road (NYS 24)** from approximately Cross River Drive (CR 105) east to Jackson Avenue
- **Yaphank hamlet and Yaphank-Middle Island Road (CR 21)** from Lower Lake north to Cathedral and Prosser Pines
- **William Floyd Parkway** from northerly edge of Brookhaven Laboratory to Route 25A
- **Rocky Point Road (CR 21)** from approximately Whiskey Road north to northern edge of state preserve
- **North Street and Mill Road** through Manorville hamlet
- **Schultz Road and Wading River-Manorville Road**

Scenic Areas in the Central Pine Barrens

- **NYS Rocky Point Natural Resource Management Area**
- **Prosser Pines County Nature Preserve**
- **Southaven County Park and Carmans River**
- **Brookhaven State Park**
- **Peconic River and associated Coastal Plain Ponds** from Middle Country Road (NYS 24) south to Schultz Road and east towards Connecticut Avenue
- **Swan Pond County Parkland**
- **Manorville-Riverhead Hills** from roughly the Long Island Expressway extending along an arc running southeast and east to CR 51

- **Riverhead Hills**, an extension of the above "arc", running from CR 51 east past Suffolk Community College, Speonk-Riverhead Road to CR 104
- **Cranberry Bog County Nature Preserve** located south of Riverhead County Center
- **Sears Bellows/Maple Swamp/ Flanders Hills County parkland** from Flanders Road (NYS 24) south to Sunrise Highway; from Pleasure Drive east to Bellows Pond Road
- **South Flanders and Henry's Hollow region**
- **Dwarf Pine Barrens**
- **Flanders and Hubbard County Parks, Southampton Town Red Creek Parkland**
- **Quogue Wildlife Refuge**
- **Peconic River** from Connecticut Avenue east to Riverhead hamlet and Flanders Bay
- **Paumanok Path** (Pine Barrens Trail portion) from Rocky Point south, southeast, and east to Sears Bellows County Park, the Red Creek region, and outside the Central Pine Barrens towards Montauk Point
- **Wildwood Lake** south of Riverhead hamlet
- **Artist Lake** immediately south of Middle Country Road in Middle Island
- **Lake Panamoka** approximately one mile north of Middle Country Road, between Ridge and Calverton

A more complete description of each of the scenic resources listed is provided in the Central Pine Barrens Comprehensive Land Use Plan, Volume 2: Existing Conditions, Chapter 8 Scenic Resources, 6/28/1995, reprinted 8/96).

~~5.3.3.12 Commercial and industrial development~~

~~Throughout the Compatible Growth Area, there are parcels of land that are zoned for commercial or industrial use. Future development of these parcels should occur in a manner which is consistent with the goals and objectives of the Act.~~

~~Standard~~

~~5.3.3.12.1~~ ~~Commercial and industrial compliance with Suffolk County Sanitary Code~~

~~All commercial and industrial development applications shall comply with the provisions of the Suffolk County Sanitary Code as applied by the Suffolk County Department of Health Services, and all other applicable federal, state or local laws. Projects which require variances from the provisions of the Suffolk County Sanitary Code shall meet all~~

~~requirements of the Department of Health Service's Board of Review in order to be deemed to have met the requirements of this standard.~~

5.3.3.12 (Reserved)

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Conservation Design and Open Space Management Manual for Development Projects in the Central Pine Barrens

March 18, 2015

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OVERVIEW

The Central Pine Barrens Commission prepared this Conservation Design and Open Space Management Manual as a guide for applicants, developers, and project reviewers to apply Conservation Design principles in the planning phase of a development project in the Compatible Growth Area of the Central Pine Barrens. A central goal of the Long Island Pine Barrens Protection Act (the "Act"), Article 57 of the New York State Environmental Conservation Law Act, is to "protect, preserve and enhance the functional integrity of the Pine Barrens ecosystem resources, including plant and animal populations and communities thereof." (ECL Article 57, Section 57-0121(2)(a)). The Central Pine Barrens Comprehensive Land Use Plan (CLUP) was designed to "accommodate development, in a manner consistent with the long-term integrity of the Pine Barrens ecosystem and to ensure that the pattern of development is compact, efficient, and orderly." (ECL Article 57, Section 57-0121.2(e)). Conservation Design is a method to achieve the goals and objectives of the Act and the CLUP.

Implementation of Conservation Design principles results in habitat and species protection pursuant to existing regulations, the preservation of other significant features including the character of the region, and the continuation of unfragmented open space to support habitat linkages and contiguous open space in the landscape. Section 5.3.3.6 of the CLUP entitled, "Coordinated design for open space, habitat and soil protection," contains the standard that requires the preservation of open space. Research and planning studies from regions similar to the Central Pine Barrens indicate habitat quantity and quality contribute to biodiversity and healthy environments that sustain plant and animal habitat, particularly avian wildlife such as forest interior bird species, among other ecological benefits. As a result of Conservation Design, emphasis is placed on the protection of natural resources and other features such as cultural resources (pursuant to existing regulations) open space is established in accordance with the CLUP, and developed land uses are located in an efficient and sustainable pattern on a project site. See Appendix A for examples of Conservation Design and Self-Heal Restoration.

In developing a project site, the primary goal is to identify and conserve attributes that require protection through existing regulations (e.g., freshwater wetlands, endangered species). The secondary goal is to preserve the total required amount of open space, as described in Appendix B which contains Figure 5-1 of the CLUP – a listing of the amount of clearing permitted and conversely the amount of open space area required in each zoning district in the Central Pine Barrens. The Conservation Design method supports the preservation of significant ecological resources and other features of a project site (e.g., natural, historic, scenic, agricultural resources) and discourages piecemeal and scattered development, pursuant to the Act. In no case are active uses such as ballfields or other recreational uses or facilities permitted to be developed in open space. Passive hiking trails may be permitted.

Proper management of open space is essential in order to protect open spaces from illegal dumping, clearing, trespass, and other abuses of the environment. Open space is protected

through legal mechanisms such as covenants or conservation easements, pursuant to the CLUP. Aside from habitat protection and other benefits, maintaining large unfragmented blocks of open space fosters stronger opportunities for public land stewardship and management.

Self-heal restoration is also covered in this Manual. As defined in Chapter 4 of the CLUP, Self-Heal, Self Restoration or Auto Restoration is a process in which revegetation of a previously-disturbed site, such as one on which natural vegetation has been removed or degraded and which may have areas of bare soil and disturbed soil horizons, is allowed to occur without importation of plant material, active planting, transplanting of vegetation obtained from off-site or reseeding of vegetation. Instead, existing live seed banks, rhizomes, roots, etc., which remain beneath or adjacent to the disturbed area, are permitted to re-colonize the disturbed area. Under this process, active monitoring is undertaken for a prescribed period of years to ensure that invasive plant species do not overtake the restoration and physical intervention to remove the invasive species may also be conducted. Implementation of self-heal restoration is outlined herein and examples are provided of a residential land use development and commercial site plan where this method is applied. Appendix C contains general planting recommendations and a list of acceptable and unacceptable plants that may be used in development projects.

INTRODUCTION

The topic of Conservation Design principles is discussed in Chapter 5 of the Comprehensive Land Use Plan, particularly Section 5.3.3.6.2 entitled "*Open space requirement, unfragmented open space and habitat*." This guide is intended to complement that chapter section. Support for Conservation Design is established in the Act. The approach to implement Conservation Design principles is summarized in this guide. A variety of sources were researched to prepare this manual including other municipal planning agencies and organizations that implement Conservation Design. A list of references is provided at the end of the document.

PURPOSE AND NEED

Application and use of Conservation Design techniques is consistent with the requirements of the Act. ECL Article 57, Section 57-0121, "Central Pine Barrens comprehensive land use plan; interim regulations," states that the Central Pine Barrens Comprehensive Land Use Plan shall be designed to:

- *"...protect, preserve and enhance the functional integrity of the Pine Barrens ecosystem and the significant natural resources, including plant and animal populations and communities, thereof... "*
- *"...protect the quality of surface water and groundwater..."*
- *"...discourage piecemeal and scattered development..."*
- *"...accommodate development, in a manner consistent with the long term integrity of the Pine Barrens ecosystem and to ensure that the pattern of development is compact, efficient and orderly."*

As noted above, the Act describes specific development criteria which encourage and promote the use of Conservation Design. It is important to note these criteria highlight development project design and configuration, with a particular emphasis on discouraging "piecemeal and scattered development" and encouraging development which is "compact, efficient and orderly."

In a later portion of ECL Article 57, Section 57-0121, specific criteria are set forth for the compatible growth area where development is supposed to occur. Here, under paragraph 4, the Act states:

"*4. The land use plan with respect to the compatible growth areas shall be designed to:*

a) preserve and maintain the essential character of the existing Pine Barrens environment, including plant and animal species indigenous thereto and habitats therefor;
b) protect the quality of surface and groundwaters;
c) discourage piecemeal and scattered development;
d) encourage appropriate patterns of compatible residential, commercial, agricultural, and industrial development in order to accommodate regional growth influences in an orderly way while protecting the Pine Barrens environment from the individual and cumulative adverse impacts thereof;

e) accommodate a portion of development redirected from the preservation area. Such development may be redirected across municipal boundaries; and

f) *allow appropriate growth consistent with the natural resource goals pursuant to this title*

Again, as before, the Act emphasizes avoidance of "piecemeal and scattered development" and encourages "appropriate" and "orderly" development patterns which also protect the Pine Barrens ecosystem and preserve its essential character and habitats. Again, these are criteria which are consistent with the elements of Conservation Design.

Finally, Section 57-0121, paragraph 6, declares that the land use plan must include and address the "identification and mapping of critical resource areas" (such as wetlands and other sensitive ecological resources), provide development standards including minimum lot sizes, clearing allowances and wetland setbacks and "land protection mechanisms" including conservation easements, clustering and planned unit development. Collectively, these elements support Conservation Design which in turn will ensure continued preservation of wildlife habitat, communities of natural vegetation and open space systems.

PRESERVATION OF OPEN SPACE, OPEN SPACE CONFIGURATION & APPLICATION OF CONSERVATION DESIGN

As noted in Chapter 5 of the Central Pine Barrens Comprehensive Land Use Plan, Conservation Design is a system which promotes preservation of open space via preservation of the significant natural resources and environmental features of a site.

The Northeastern Illinois Planning Commission and Chicago Wilderness (2003) define Conservation Design as

> *"Conservation design is a design system that takes into account the natural landscape and ecology of a development site and facilitates development while maintaining the most valuable natural features and functions of the site. Conservation design includes a collection of site design principles and practices that can be combined to create environmentally sound development. The main principles for conservation design are:*
>
> 1. *flexibility in site design and lot size,*
> 2. *thoughtful protection and management of natural areas,*
> 3. *reduction of impervious surface areas, and*
> 4. *sustainable stormwater management."*

Behan Planning Associates, LLC (2009) speaks of the creation of Conservation Subdivisions which are:

> *"... an alternative method of subdividing properties which allows natural areas of land to be preserved by constructing the same project in a smaller area. This allows more natural or undeveloped areas to remain*

undisturbed, reinforcing the surrounding beauty and acting as buffers to continued development. It also encourages the preservation of certain areas of land or features to be conserved and showcased as part of a richer landscape design..."

Conservation Design prioritizes the preservation of natural, historic or other significant features of a development project site, including its natural landscape and ecology, while allowing other, more appropriate locations on the parcel to be developed.

CONSERVATION DESIGN METHODOLOGY

When applying Conservation Design principles, one would first identify the significant natural resources of a site that should be preserved. This would include assets such as existing natural vegetation (including forest and woodland, old fields and successional habitats); habitats for rare, endangered, threatened or special concern wildlife; wetlands; rare ecological communities such as dwarf pine plains and pitch pine-scrub oak barrens; aesthetic resources such as scenic views and buffers; geological and topographical features such as kettleholes, swales, ridges, kames, drumlins and steep slopes and historic and cultural resources such as historic houses, cemeteries and Native American archaeological sites.

After addressing the significant natural resources on a site, an applicant would then seek to set aside such open space areas in as unfragmented fashion as possible while also seeking to link these preserved open space areas with existing open space areas or potential future open space areas on adjacent parcels. This more regional view seeks to maximize the preservation of the largest, least fragmented blocks of open space (and habitat) as possible. The end result would be that development would be situated on remaining areas of a site, away from the aforementioned area of higher environmental value, which would comprise the preserved open space of the project site.

It should be noted, however, that preservation of the significant natural resources on a project site (such as endangered species habitat or wetlands) should take precedence over the degree of open space fragmentation or linkage to adjacent open space, as those resources are required to be protected under existing regulations.

In addition, on the area to be developed, other green methodologies should be applied to increase the sustainable nature of the project. This includes working with existing contours in place of significant excavation and grading, installing pervious surfaces where possible to reduce generation of stormwater and planting landscaping comprised of native plants to retain indigenous species and reduce fertilizer and irrigation requirements.

One of the simplest means of applying the required Conservation Design methodology is the use of clustering in which, in the case of single-family residential development, residential lots are concentrated on a portion of a project site by allowing individual lots to be smaller than the required minimum lot size prescribed by the applicable zoning district. The remainder of the site

is then preserved as open space. Similar cluster layouts are also possible in commercial site plans or mixed use developments.

CONSERVATION DESIGN APPROACH

While certain species, habitats, and other site features may require protection through existing regulations, Conservation Design provides flexibility in site and subdivision design to achieve the goals outlined in the Act and in the CLUP.

The open space shall include any species, habitats, or other areas that are required to be protected under existing regulations, and the remaining area of required open space shall serve to support the long-term preservation of existing resources. In order to achieve a successful Conservation Design project, the initial objective is to identify the significant attributes of a site including, but not limited to, and in no particular order:

- Wetlands
- Endangered species and their habitat
- Wildlife habitat
- Cultural, archaeological, or historic resources, sites or structures
- Woodlands
- Grassland and successional habitats
- Scenic views
- Hiking trails
- Agricultural land
- Hedgerows
- Steep slopes and other prominent topographic features

Once the significant features of a site are identified, refer to Figure 5-1 of the CLUP to determine the total amount of open space required on a project site. The goal is to connect sensitive ecological resources and/or other features (e.g., steep slopes, historic structures) within the boundaries of a project site and to connect to adjoining open spaces, where available, and achieve compact, efficient, and orderly development. No active recreational uses are permitted in the required open space area to remain natural.

Cover Types

A wide range of existing conditions appear on development project sites in the CGA, each presenting a set of unique circumstances and opportunities including, but not limited to, a variety of ecological communities and/or pre-existing developed land uses. Existing land uses on a project site may be comprised of areas that are entirely natural (e.g., wetlands, woodlands, grasslands), partially natural areas alongside partially developed areas, entirely cleared sites, or any combination thereof.

Legal Protection Measures

The entire area of open space must be legally protected through the recording of a legal instrument such as a Declaration of Covenants and Restrictions, Conservation Easement, Agricultural Reserve Easement, Scenic Easement, other applicable mechanism, or combination thereof. The Commission may recommend that covenants, for example, specify proper restrictions on use of open space and proper contingencies for its future management (Central Pine Barrens Handbook, 1994). In addition, future maintenance, protection, and management of open space shall be identified in the legal instrument recorded in the Office of the Suffolk County Clerk. Any contingencies or reserved rights must be identified and specified in the document.

Self-Heal Restoration

The subsequent section discusses the self-heal restoration methodology and process, pursuant to CLUP Standard 5.3.3.6.2 of the CLUP. Self-heal restoration is generally a process in which revegetation of a previously disturbed site is allowed to occur without active replanting. It relies on natural recolonization to occur on a project site without immediate physical intervention. It may comprise the open space on a significantly disturbed parcel that is poised for redevelopment. Except where excessive excavation has occurred and natural soils have been removed, the soil is expected to contain the fertile seeds, rhizomes, roots, etc. of a natural pine barrens habitat that could regenerate as a pine barrens ecosystem. Areas of a project site previously cleared of natural vegetation are allowed to undergo natural succession to recover, be reclaimed, and be retained as open space. Monitoring of the self-heal area and maintenance of invasive species is encouraged in the process to ensure the resulting habitat supports natural species representative of the region.

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EXAMPLES OF SITE LAYOUTS

This section lists and briefly describes the 15 graphically depicted examples of site layouts of Conservation Design and Self-Heal Restoration. The graphics are located in Appendix A.

Conservation Design Site Plan

This site plan contains open space in accordance with the open space standard.

Conservation Design Commercial/Industrial Site Plan

This site plan contains open space in accordance with the open space standard. The project site is adjacent to existing off-site open space.

Conservation Design Residential Subdivision 1

This is a clustered subdivision with the existing wetland on the project site protected in unfragmented open space.

Conservation Design Residential Subdivision 2

This site contains two separate wetland habitats, both of which require protection pursuant to existing regulations. In order to achieve the as of right subdivision yield and the required amount of open space, the two areas of open space containing freshwater wetlands are bisected by a road and two dwellings.

Conservation Design Residential Subdivision 3

This site contains steep slopes and an extensive riverine wetland system with surface waters. The subdivision is clustered and each lot adjoins the open space. The project site is adjacent to existing off-site open space.

Conservation Design Residential Subdivision 4

This subdivision is clustered to protect the existing steep slopes and habitat in the open space. The project site is adjacent to existing off-site open space.

Conservation Design Residential Subdivision with Agricultural Reserve Lot

This site is under active agricultural production. The subdivision achieves the as of right yield with one large lot containing a dwelling and agricultural reserve to protect existing active agricultural resources and production and avoids the necessity of granting the agricultural easement to a public entity. The project site is adjacent to existing off-site agricultural lands.

Conservation Design Residential Subdivision with Agricultural Reserve

This site is under existing agricultural production. The subdivision achieves the as of right yield with the open space as a separate agricultural reserve granted to a public entity, a non-profit, or held by the landowner to lease or continue farming to preserve existing agricultural resources and continue agricultural production.

Conservation Design Multi-family Development Project

This site contains steep slopes and a freshwater wetland habitat. This is a multi-family residential development. Existing resources are protected in the required open space. The central park area is an active community park not included in the required open space. The project site is adjacent to existing off-site open space.

Conservation Design Reduced Density Residential Subdivision with Conservation Easements

This reduced density subdivision creates lots that are twice the minimum lot area of the zoning district. The open space contains woodlands and steep slopes. The project conforms to the open space requirement, however, the open space is situated in the privately owned lots and is protected through conservation easements.

Conservation Design Mixed Use Development Project

This is a large development project with mixed land uses including commercial, residential, active parkland, and the required amount of open space, as per the CLUP Standard.

Conventional Residential Subdivision with Fragmented Open Space

This is a standard yield subdivision that fragments open space in buffers protected by covenants and restrictions and situated within the privately owned lots. Buffers in private lots have a high potential for disturbance.

Conventional Site Plan with Fragmented Open Space

This site plan fragments open space in buffers to be protected in covenants but which will remain as part of the development parcel.

Residential Subdivision with Self-Heal Restoration Open Space

This project site is entirely cleared. The subdivision is clustered to conserve the required amount of open space, which will undergo the self-heal restoration process.

Self-Heal Restoration Site Plan

This project site is entirely cleared and contains an existing building to be demolished. The project will conserve the required amount of open space, which is currently a cleared area containing gravel and debris. The existing infrastructure will be demolished and removed. The required open space will undergo natural succession and be monitored through the self-heal restoration process.

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SELF-HEAL IMPLEMENTATION, SELF RESTORATION OR AUTO RESTORATION

As defined in Chapter 4 of the CLUP, Self-Heal, Self Restoration or Auto Restoration is a process in which revegetation of a previously-disturbed site, such as one on which natural vegetation has been removed or degraded and which may have areas of bare soil and disturbed soil horizons, is allowed to occur without importation of plant material, active planting, transplanting of vegetation obtained from off-site or reseeding of vegetation. Instead, existing live seed banks, rhizomes, roots, etc. which remain beneath or adjacent to the disturbed area are permitted to re-colonize the disturbed area. Under this process, active monitoring is undertaken for a prescribed period of years to ensure that invasive plant species do not overtake the restoration and physical intervention to remove the invasive species may also be conducted.

Continued maintenance and monitoring after the prescribed period is encouraged.

As noted in Chapter 5, Section 5.3.3.6.2 of the CLUP, the Self-Heal approach is to be utilized as the first technique for revegetation on previously cleared and/or disturbed portions of sites undergoing new development. The following is a detailed description of the procedures and criteria to be followed when implementing the Self-Heal method:

1. An applicant shall prepare a self-heal restoration plan, subject to review and approval by the approving agency, which includes both narrative and graphic elements and which describes the restoration project site and describes how the self-heal approach will be implemented on the site. The plan must include and implement a schedule for any preliminary work which must be undertaken to render the site receptive to self-healing such as removal of surface layers of debris and existing invasive plants. The plan must also provide for monitoring of the re-emergence and re-colonization of native species, the frequent hand removal of invasive species to facilitate the re-emergence and re-colonization of native species and monitoring of invasive species over a period of 3 to 5 years, with the term prescribed by the approving agency. (Monitoring may be extended beyond the 3 to 5 year period by mutual consent of the approving agency and the applicant.) The plan must provide a detailed description of the number of personnel to implement the plan, the labor effort required, the number of man-hours required over the course of the self-heal restoration project, sampling points from which monitoring will be conducted, a photographic documentation effort which includes photographs of the self-heal area taken prior to project commencement, the qualifications of the personnel involved and other information deemed necessary.

2. In order to render the restoration site conducive to successful self-healing, the restoration site must be prepared, if warranted, so that it is receptive to self-healing. This may include the scraping or removal, from the surface, of foreign or related material, such as impermeable concrete or asphalt and thick layers of mulch or wood chips or piles of debris, that may retard or impede self-heal, especially its rate of self-restoration. It may

also be necessary to regrade and re-contour the restoration area prior to allowing the self-heal process to commence.

3. As part of the self-heal process, invasive species must be removed from the restoration area. Any invasive species present on the restoration site shall be removed by hand to allow the site to revert to its natural state where it has the potential to recover on its own. Where invasives are presently co-mingled with or alongside native species, the invasive species shall be removed selectively with the native species allowed to remain and survive. All invasive plants which have been removed shall be transported from the project site and disposed of in a lawfully-approved location and manner.

4. Invasive species shall be identified according to the inventory of unacceptable plants described in Commission's "General Planting Specification and List of Acceptable and Unacceptable Plants" (attached as Appendix B) and other widely-accepted lists of invasive plants.

5. The applicant shall employ the self-heal approach on the entire disturbed area within an area designated as open space (with the exception of land to be preserved as active farmland).

6. A qualified professional who has expertise in identifying both native Long Island plant species and non-native and invasive species of plants, possesses the ability to identify native and non-native invasive plant species at different stages of their life cycles and who has demonstrated experience in undertaking similar types of ecological restoration projects at a minimum of 5 previous sites and over a minimum of at least 2 years, shall be required to prepare the self-heal restoration plan and supervise its implementation.

7. No less than once per year the applicant shall submit a written status report on the progress of the self-heal area in achieving success, which includes both a narrative and photographs, a description and listing of species of native plants which have re-colonized the area and a description and listing of invasive species which have been removed.

8. A determination as to whether or not the self heal approach has been successful shall be issued by the approving authority three to five years after project commencement. The success of the self-heal effort may be affirmed prior to three years at any time when the self heal area appears to have restored itself naturally and/or reverts to native vegetation naturally without active planting. Success shall include revegetated areas covering a minimum of 85% of the self-heal restoration area and a minimum of 85% of the restoration area shall be comprised of native species, or to the maximum extent practicable.

If, after the expiration of the required monitoring period, the approving authority has determined that the self-heal effort has failed and has not produced clear and convincing evidence of recovery to the area's prior natural state (including a failure to achieve the minimum coverage percentages noted above and a confirmation that hand removal of invasive species has failed to prevent them from dominating the site), then the applicant must notify the approving authority and prepare and submit, to the approving authority for its review, a restoration plan for active restoration. The active restoration plan must aim to replant the "self-heal" area with native species from either nursery stock and/or natural, native, healthy transplanted or salvaged plant material, which shall be sourced from other sites in the Central Pine Barrens that were cleared in preparation of site development. The active restoration plan must contain relevant information including, but not limited to, planting specifications, species, size, quantity, spacing, identification of the source(s) of material, a planting schedule, and a three year maintenance schedule. Planting activity must occur within the next available planting season after the self-heal approach has failed. A three year maintenance schedule is required to ensure survival and replacement of dead plantings. If dead plant material (e.g., trees, shrubs) is removed and replaced, the three year period is restarted for the replacement plantings. All plantings must be tracked accordingly. Since the self-heal or restoration area will be within the open space area, the self-heal or restoration area, as well as the open space of which it is a part, must be protected in accordance with Standard 5.3.3.6.6, "Receiving entity and protection for open space areas." The self-heal area or restoration area shall be considered natural once it has become re-established as a naturally-vegetated area. This requirement shall not preclude other restoration requirements on the project site including, but not limited to landscaping, revegetation, and/or other active planting requirements.

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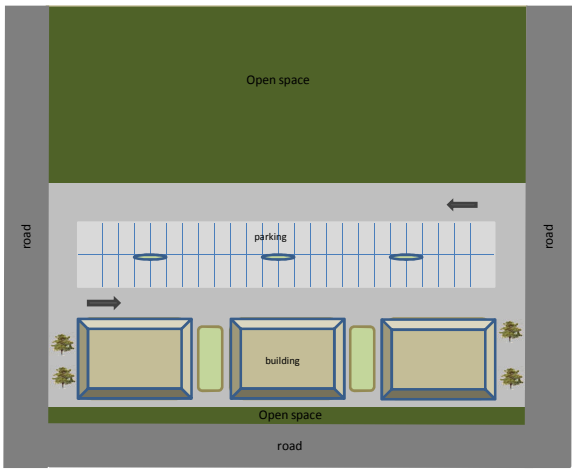
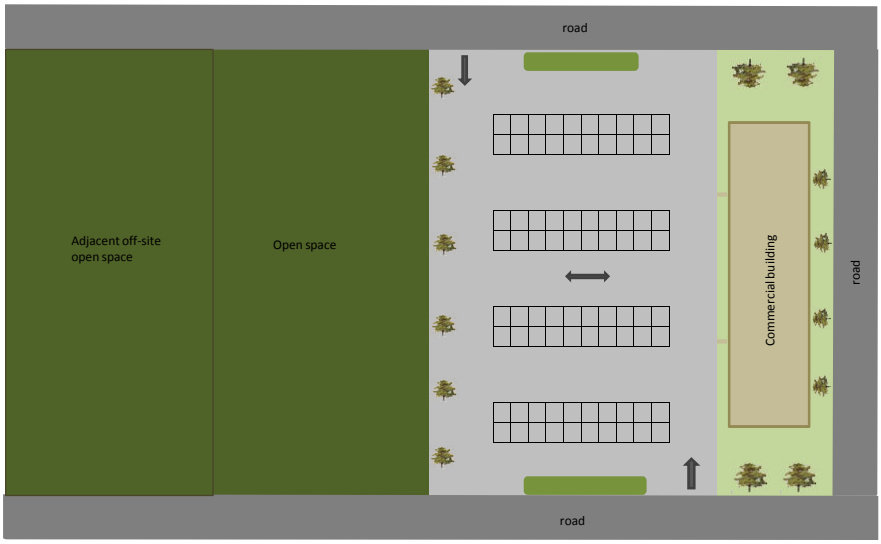
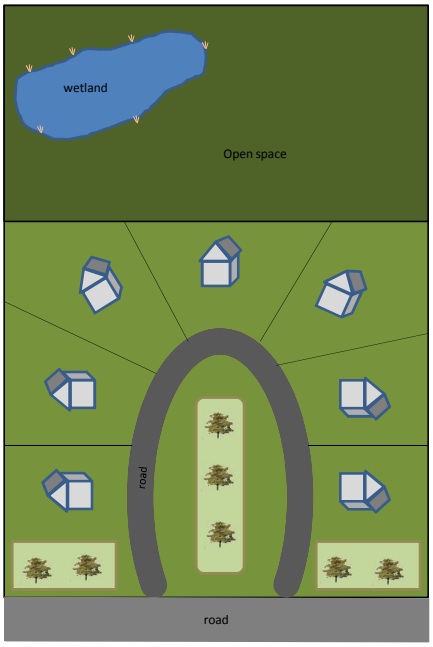
Appendix A:
Examples of Site Layouts Demonstrating Conservation Design Opportunities and Self-Heal Restoration

Conservation Design Site Plan



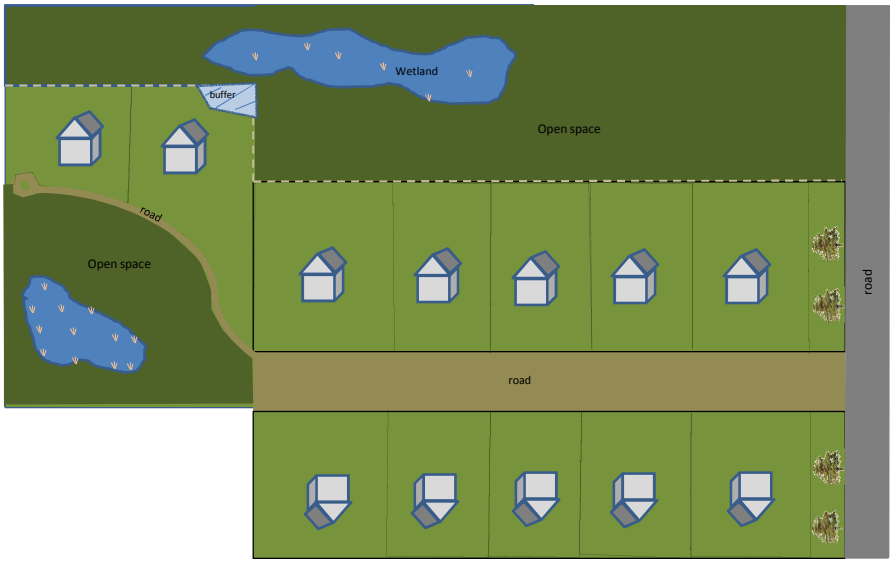
Conservation Design Commercial/Industrial Site Plan

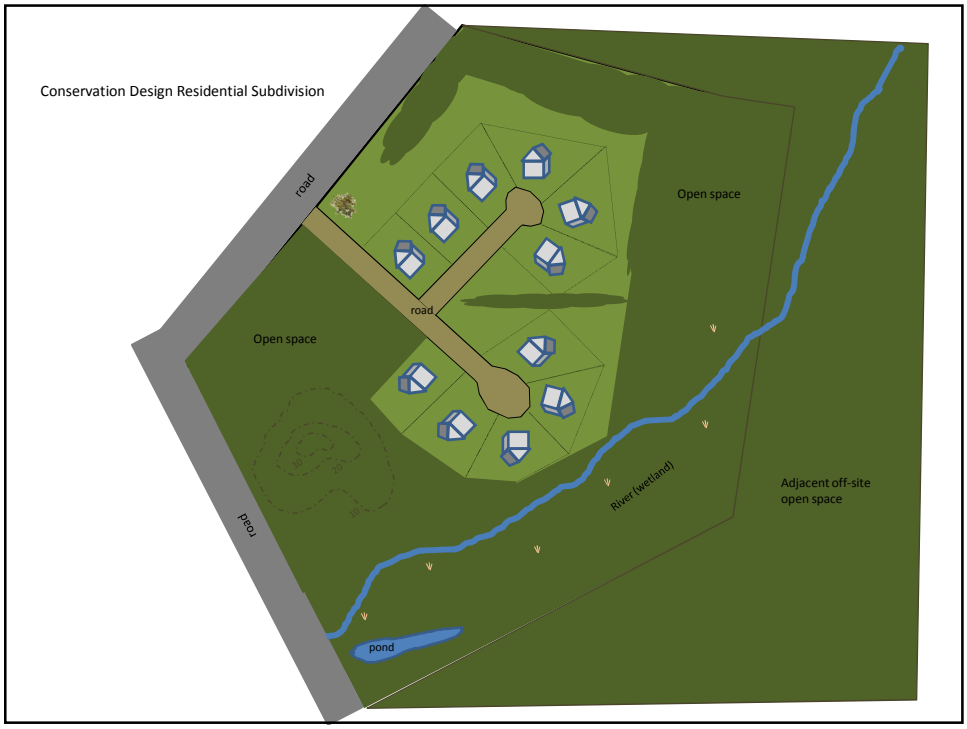


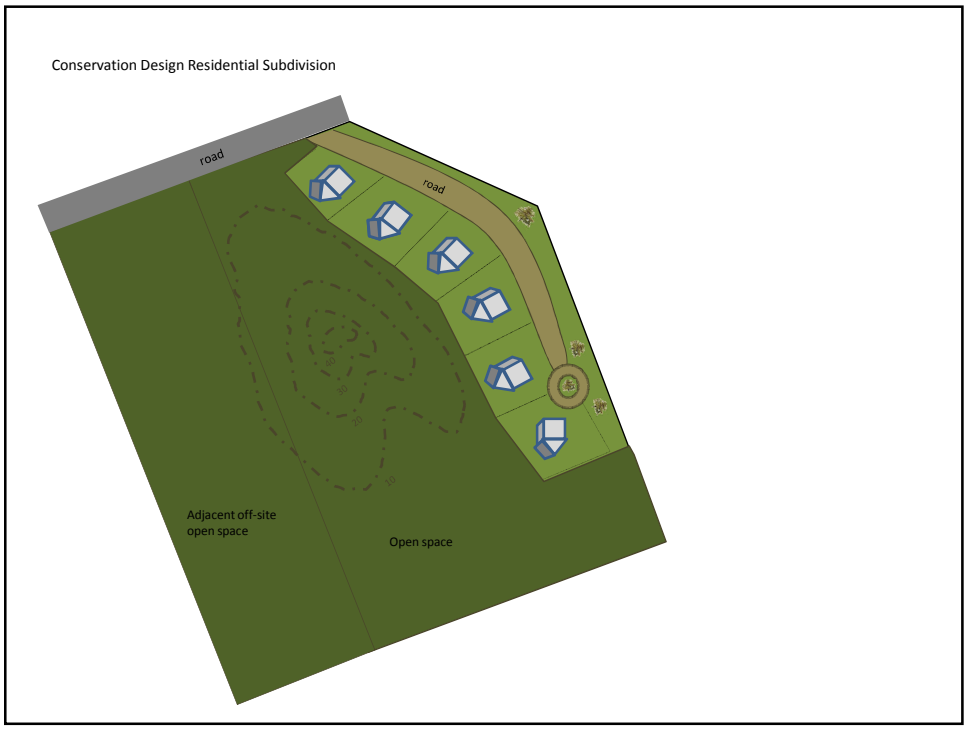


Conservation Design Residential Subdivision

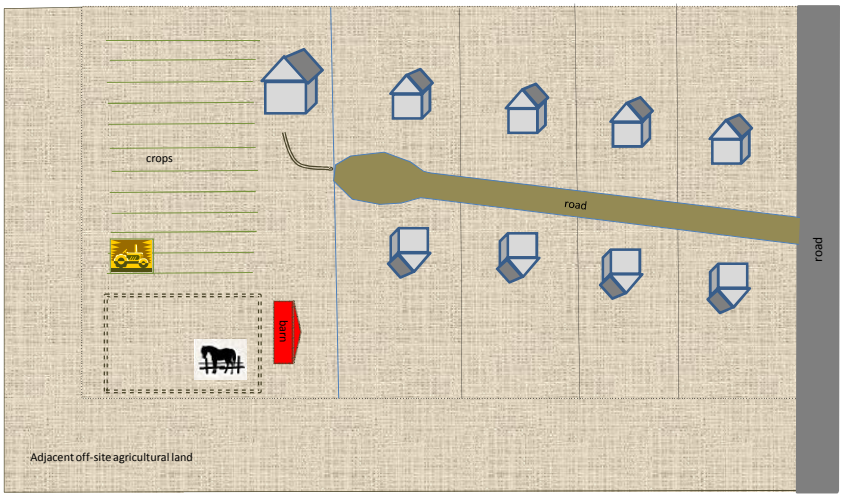
Conservation Design Residential Subdivision



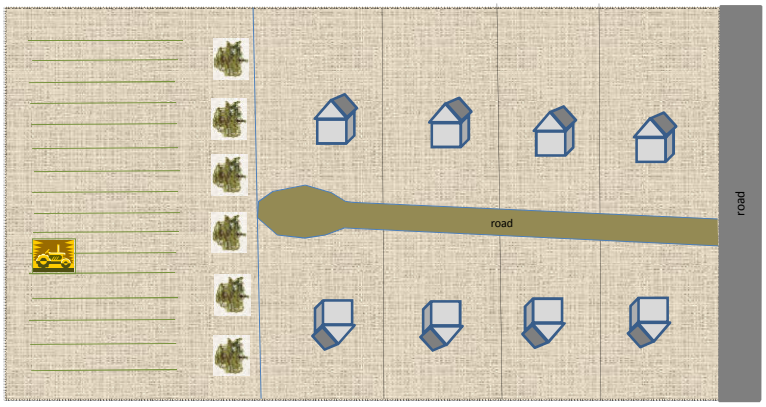

Conservation Design Residential Subdivision
road
road
road
Open space
Open space
River (wetland)
Adjacent off-site
open space
pond


Conservation Design Residential Subdivision
road
road
Adjacent off-site
open space
Open space

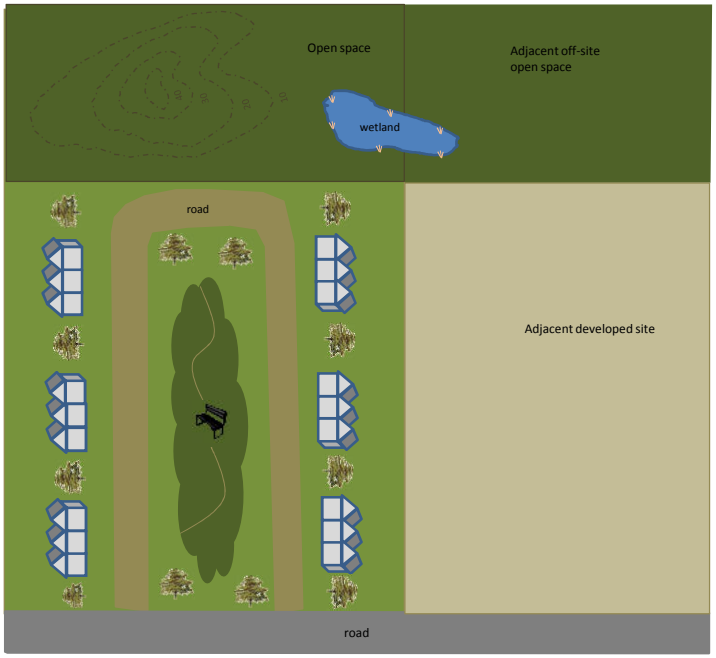
Conservation Design Residential Subdivision with Agricultural Reserve Lot



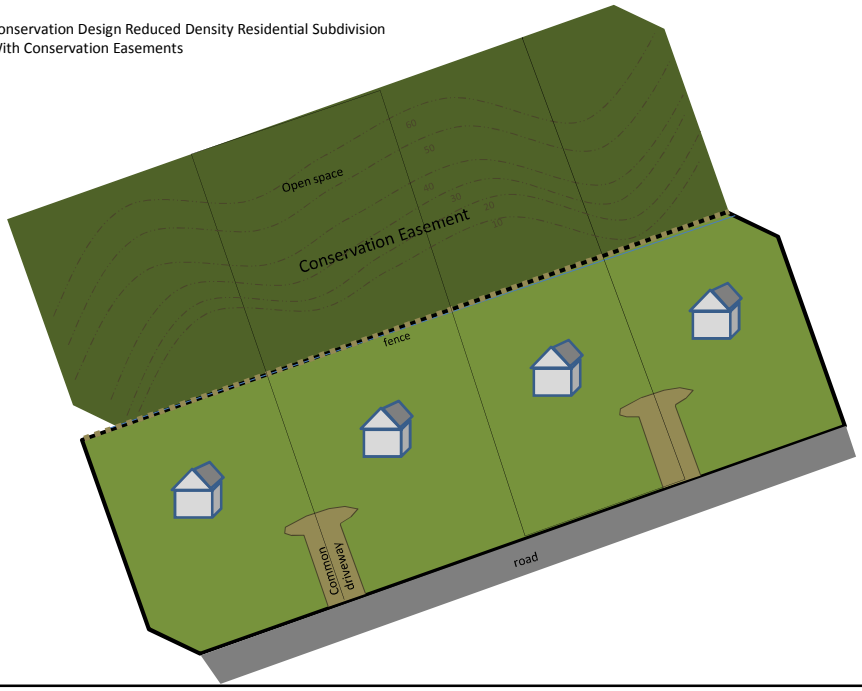
Conservation Design Residential Subdivision with Agricultural Reserve



Conservation Design Multi-family Development Project

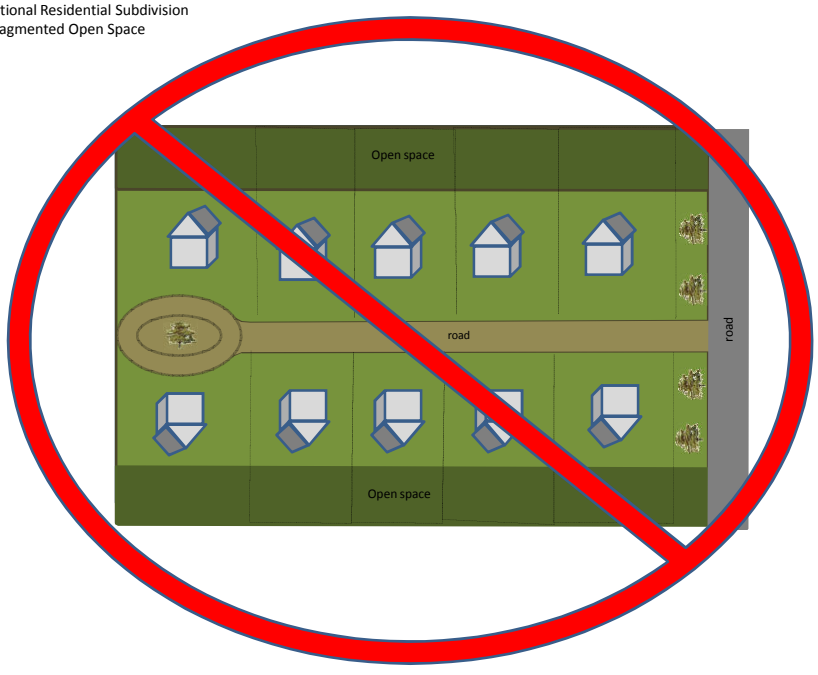


Conservation Design Reduced Density Residential Subdivision
With Conservation Easements

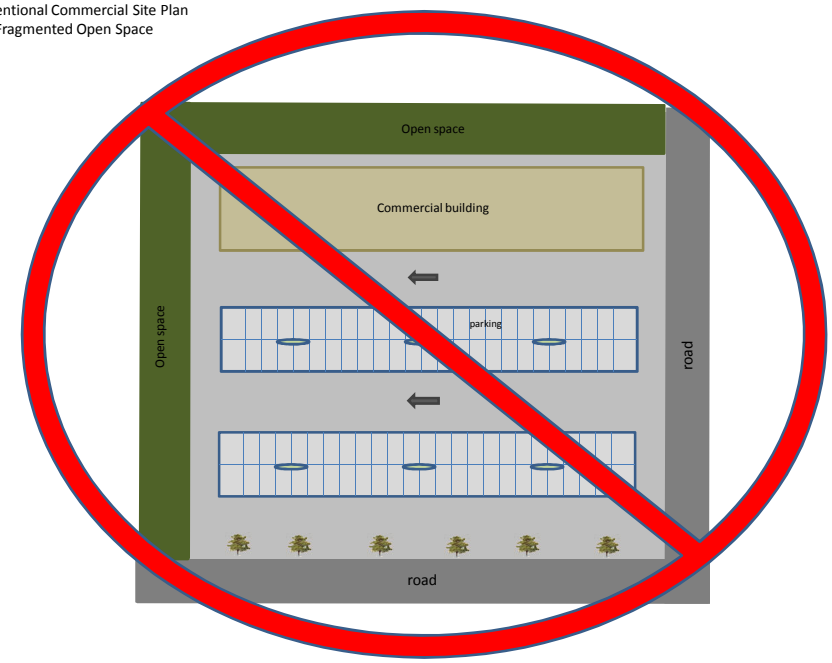


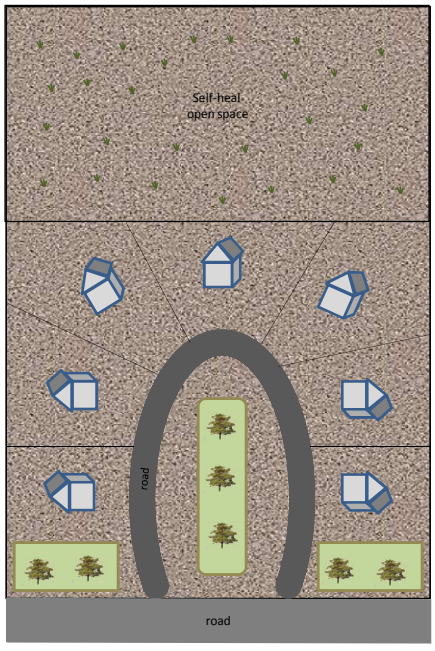
Conservation Design Mixed Use Development Project

Conventional Residential Subdivision
With Fragmented Open Space

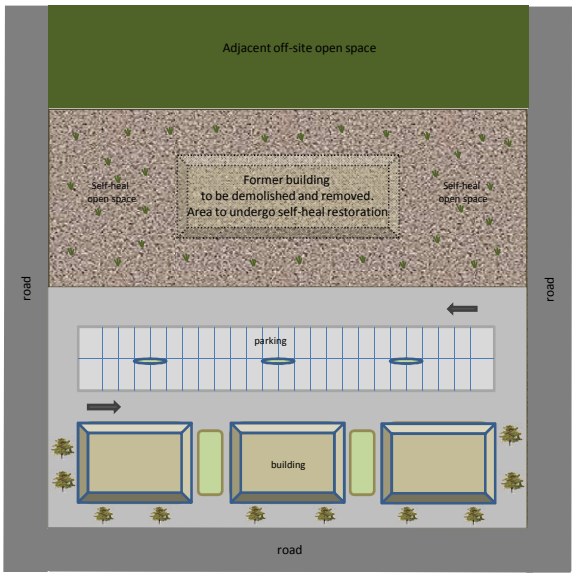


Conventional Commercial Site Plan
with Fragmented Open Space





Residential Subdivision with Self-Heal Restoration
Open Space



Self-Heal Restoration
Commercial Site Plan

Appendix C:

Commission General Planting Recommendations and List of Acceptable and Unacceptable Plants

(3/18/15)

Native plants are more drought tolerant than nonnative species, are adapted to our local environment, maintain natural ecological diversity, perpetuate fast disappearing native genotypes, and comprise a form of habitat restoration.

Planting, vegetation and reforestation requirements should be tailored to individual sites so as to re-establish as much as possible the appropriate Long Island ecological community type(s).

General Planting Specifications:

These General Planting Specifications should be considered as guidelines and sizes, types of vegetation and planting configuration can be varied to address the constraints and parameters of a particular project site and to achieve restoration goals for a particular project site.

Deciduous Trees: 2 ½ – 3 ½ inches caliper, 10 feet on center, balled and burlapped
Evergreen Trees: only pitch pines and American holly, not white pines); minimum 4-5 feet in height, balled and burlapped
Shrubs: minimum 2-3 gallon container or, where required, 4-6 gallon container grown, 4 feet on center.
Groundcovers: minimum 1 gallon container grown, 2 feet on center.
Natural grasses: plugs only, 12 inches on center.
Notes: - Mulching with native leaf litter, pine needles, or finely shredded wood is desirable.
-Temporary irrigation but typically, no permanent irrigation, may be useful.
-An 85 % or better survival rate over 2-5 years, is a desirable measure.
-Allowance may be made for supplementation with native wildflowers 12 inches on center.

Recommended native trees:

Acer rubrum	Red Maple
Alnus rugosa	Speckled Alder
Alnus serrulata	Common Alder
Amelanchier canadensis	Shadbush
Betula lenta	**Black Birch**
Betula populifolia	**Gray Birch**
Carpinus caroliniana	American Hornbeam or Ironwood

Carya glabra	Pignut Hickory

Celtis occidentalis	**Hackberry**
Cornus florida	Flowering Dogwood
Crataegus crusgalli	Hawthorne
Diospyros virginiana	Persimmon
Fagus grandifolia	American Beech
Fraxinus americana	White Ash
Hamamelis virginiana	**Witch Hazel**
Ilex opaca	**American Holly**
Juniperus virginiana	Eastern Red Cedar
Liquidambar styraciflua	Sweet Gum
Liriodendron tulipifera	Tulip Tree
Magnolia virginiana	Swamp Magnolia or Sweet Bay Magnolia
Nyssa sylvatica	Black Gum
Pinus rigida	**Pitch Pine**
Populus tremuloides	**Quaking Aspen**
Prunus serotina	**Black Cherry**
Quercus alba	**White Oak**
Quercus bicolor	Swamp White Oak
Quercus coccinea	**Scarlet Oak**
Quercus ilicifolia	Scrub Oak
Quercus prinus	Chestnut Oak
Quercus rubra	**Red Oak**
Quercus stellata	Post Oak
Quercus velutina	Black Oak
Sassafras albidum	**Sassafras**
Tilia americana	American Linden

Recommended native shrubs:

Amelanchier canadensis	Shadbush
Aronia arbutifolia	Red Chokeberry
Aronia melanocarpa	Black Chokeberry
Clethra alnifolia	Sweet Pepperbush
Comptonia peregrina	Sweetfern
Gaylussacia baccata	Black Huckleberry
Ilex glabra	**Inkberry**
Ilex verticillata	Winterberry
Kalmia angustifolia	Sheep Laurel
Kalmia latifolia	Mountain Laurel
Leucothoe racemosa	Fetterbush
Lindera benzoin	Spicebush
Lyonia ligustrina	Maleberry
Lyonia mariana	Staggerbush

Myrica pensylvanica	Bayberry
Myrica pensylvanica	**Northern Bayberry**
Prunus maritima	**Beach Plum**
Rhododendron viscosum	Swamp Azalea
Rhus copallina	Shining Sumac
Rosa palustris	Swamp Rose
Rosa virginiana	Pasture Rose
Rosa virginiana	**Virginia Rose**
Rubus allegheniensis	**Northern Blackberry**
Salix discolor	**Pussy Willow**
Sambucus canadensis	American Elder
Spirea latifolia	**Spirea or Steeplebush**
Vaccinium corymbosum	**Highbush Blueberry**
Viburnum acerifolium	Maple-leafed Viburnum
Viburnum dentatum	Arrowwood
Viburnum lentago	Nannyberry
Viburnum nudum	Witherod
Viburnum prunifolium	Black Haw
Viburnum recognitum	Northern Arrowwood

Recommended native grasses, wildflowers, groundcovers, etc.:

Aguilegia canadensis	Wild Columbine
Andropogon gerardi	**Big Bluestem**
Andropogon scoparius	**Little Bluestem**
Andropogon virginicus	Broom Sedge
Arctostaphylos uva-ursi	Bearberry
Asclepias tuberosa	Butterfly Weed
Aster linariifolius	Stiff Aster
Aster novae-angliae	New England Aster
Aster novi-belgii	New York Aster
Baptisa tinctoria	Wild Indigo
Carex pensylvanica	Pennsylvania Sedge
Dennstaedtia punctiolobula	**Hay-scented Fern**
Deschampsia flexuosa	Common Hairgrass
Dryopteris cristata	New York Fern
Epigaea repens	**Trailing Arbutus**
Gaultheria procumbens	Wintergreen
Geranium maculatum	Wild Geranium
Hudsonia ericoides	Golden Heather
Liatris spicata	Blazing Star
Lobelia cardinalis	Cardinal Flower
Lupinus perennis	Blue Lupine

Maianthemum canadense	Canada Mayflower
Monarda didyma	Beebalm
Monarda fistulosa	Bergamot
Monarda punctata	Horsemint
Onoclea sensibilis	Sensitive Fern
Osmunda cinnamomea	Cinnamon Fern
Osmunda regalis	Royal Fern
Parthenocissus quinquefolia	**Virginia Creeper**
Pteridium aguilinum	**Bracken Fern**
Sisyrinchium angustifolium	Blue-eyed Grass
Solidago species	**Goldenrod**
Vaccinium angustifolium	**Lowbush Blueberry**
Vernonia noveboracensis	New York Ironweed
Viola pendata	Birds Foot Violet

Invasive, nonnative plants specifically not ~~recommended~~ acceptable:

Acer platanoides	**Norway Maple**
Acer pseudoplatanus	**Sycamore Maple**
Ailanthus altissima	Tree of Heaven
Akebia quinata	Chocolate Vine
Albezia julibrissin	Mimosa
Alliaria petiolata	Garlic Mustard
Ampelopsis brevipedunculata	**Porcelain Berry Vine**
Anthriscus sylvestris	Wild Chervil
Aralia elata	Japanese Angelica Tree
Artemisia vulgaris	Mugwort or Common Wormwood
Berberis thunbergii	**Japanese Barberry**
Cabomba caroliniana A. Gray	Cabomba or Carolina Fanwort
Cardamine impatiens L.	Narrowleaf Bittercress
Carduus nutans	Nodding Thistle
Caulerpa taxifolia	Marine Killer Algae
Celastrus orbiculatus	**Asiatic or Oriental Bittersweet**
Centaurea maculosa (biebersteinii)	Spotted Knapweed
Cirsium arvense	Canada Thistle
Cirsium vulgare	Bull Thistle
Clematis terniflora	Yam Leaf Clematis
Coronilla varia	**Crown Vetch**
Cynanchum louiseae nigrum a/k/a Vincetoxicum nigrum	Black Swallow Wort
Cynanchum rossicum a/k/a Vincetoxicum rossicum	Pale Swallow Wort
Datura stramonium	Jimsonweed

Egeria densa	Brazilian Water Weed
Eleagnus angustifolia	Russian Olive
Eleagnus umbellata	**Autumn Olive**
Euonymus alata	Winged Burning Bush
Euphorbia cyparissias	Cypress Spurge
Euphorbia esula	Leafy Spurge
Froelichia gracilis (Hook. Moq.)	Cottonweed
Glaucium flavum Crantz	Sea Poppy or Yellow Horned Poppy
Glossostigma diandrum	Mudmat
Hedera helix	English Ivy
Heracleum mantegazzianum	Giant Hogweed
Hermerocallis fulva	Day Lily
Hesperis matronalis L.	Dame's Rocket
Humulus japonicus	Japanese Hops
Hydrilla verticillata	Hydrilla
Hydrocharis morsus-ranae	European Frog Bit (aquatic)
Impatiens glandulifera royle	Tall Impatiens or Purple Balsam
Lepidium latifolium	Tall Pepperweed or Perennial Pepperweed
Lespedeza cuneata	**Himalayan Bushclover**
Ligustrum obtusifolium Sie.& Zucc	Border Privet
Ligustrum sinense	**Chinese Privet**
Lonicera bella	Bell's Honeysuckle
Lonicera japonica	**Japanese Honeysuckle**
Lonicera maackii	**Amur Honeysuckle**
Lonicera morrowii	Morrow's Honeysuckle
Lonicera spp.	Bush Honeysuckle
Lonicera tartarica	**Tartarian Honeysuckle**
Lonicera xylosteum L.	Dwarf Fly Honeysuckle
Ludwigia hexapetala	Water Primrose
Ludwigia peploides	Floating Primrose Willow or Water Purslane
Lythrum salicaria	**Purple Loosestrife**
Microstegium vimineum	Japanese Stiltgrass
Miscanthus sinensis	**Eulalia or Chinese Silvergrass**
Morus Alba	White Mulberry
Myosotis scorpioides L.	Forget-me-not (aquatic)
Myriophyllum aquaticum (Vell.) Verdc a/k/a M. brasilense	Parrot Feather or Brazilian Water Milfoil
Myriophyllum spicatum L.	Eurasian Water Milfoil
Najas minor Allioni	Eutrophic Water Nymph
Nasturtium officinale	Watercress
Nelumbo nucifera	Pink Lotus
Nymphoides peltata	Yellow Floating Heart
Paulownia tomentosa	Princess Tree
Phalaris arundinacea L.	Reed Canary Grass

Phragmites australis	Common Reed Grass (non native genotype)
Phyllostachys spp.	Bamboo
Pinus nigra	**Black Pine**
Polygonum cuspidatum	**Mexican Bamboo or Japanese Knotweed**
Polygonum perfoliatum	Mile A Minute Vine
Polygonum sachaliensis (Fallopia)	Giant Knotweed
Potomogeton crispus L.	Curly Leaf Pondweed
Pueraria lobata	**Kudzu**
Pyrus calleryana	Bradford Pear
Ranunculus ficaria	Lesser Celandine
Rhamnus cathartica	Common Buckthorn
Robina pseudoacacia	**Black Locust**
Rosa multiflora	**Multiflora Rose**
Rosa rugosa	**Rugosa Rose or Salt Spray Rose**
Rubus phoenicolasias Maxim.	Wineberry
Rudbeckia hirta	**Black Eyed Susan**
Salvinia molesta	Giant Salvinia or Chinese Lespedeza
Senecio jacobaea	Tansy Ragwort or Stinking Willie
Silphium perfoliatum L.	Cup Plant
Solanum dulcamara	Climbing Nightshade
Trapa natans	Water Chestnut
Verbascum thapsus	Common Mullein
Vinca minor	Periwinkle
Vitex rotundifolia L. F.	Beach Vitex or Roundleaf Chastetree
Wisteria spp.	Wisteria

Appendix B:

Figure 5-1: Clearance and Open Space Standards

This table shows total overall development project site clearance and requirement for open space including lots, roads, drainage and other improvements.

For all privately owned parcels:

Zoning lot size as of June 28, 1995, with the exception that in the newly expanded Compatible Growth Area in the Carmans River Watershed created by the New York State Legislature's adoption on June 7, 2013 of an amendment to Environmental Conservation Law Article 57, Section 57-0107(10), the minimum lot size required by zoning shall be based on the zoning in effect on January 1, 2014.(*)	**Maximum overall development project site clearance** (**)	**Minimum Open Space Requirement** (**)
10,000 square feet residential (1/4 acre)	90%	10%
15,000 square feet residential (1/3 acre)	70%	30%
20,000 square feet residential (½ acre)	60%	40%
30,000 square feet residential (2/3 acre)	58%	42%
40,000 square feet residential (1 acre)	53%	47%
60,000 square feet residential (1.5 acre)	46%	54%
80,000 square feet residential (2 acres)	35%	65%
120,000 square feet residential (3 acres)	30%	70%
160,000 through 200,000+ square feet residential (4 - 5+ acres) ~~Clearance Areas and Open Space on lots in this category shall not include the clearance necessary for the construction of driveways and septic systems, except that, in no case shall the total clearance in this category exceed 25%.~~ The total amount of disturbance of natural vegetation shall not exceed the clearance percentage, except on flagpole lots where the area of the pole shall be exempt from the total lot area and the total amount of clearing permitted.	25~~20~~% ~~Clearance limitations on lots in this category shall not include the clearance necessary for the construction of driveways and septic systems. In no case shall the total clearance in this category exceed 25%.~~	75%

Other defined residential zoning lot size	Interpolate from entries above.	Interpolate from entries above.
~~Commercial, Industrial and Other or Mixed Use~~ All other zoning categories, including those categories without defined zoning lot sizes and parcels owned by the State or a public corporation, except for publicly-owned lands dedicated to park purposes, open space or nature preserve or acquired with funds for open space preservation or parkland purposes.	~~65~~60%	40%

Notes:

(*) These entries are the minimum lot sizes required by zoning as of June 28, 1995 or the current zoning, whichever is more protective of the environment by minimizing clearance or maximizing open space, not the size of the subject parcels, with the exception that in the newly expanded Compatible Growth Area in the Carmans River Watershed created by the New York State Legislature's adoption on June 7, 2013 of an amendment to Environmental Conservation Law Article 57, Section 57-0107(10), the minimum lot size required by zoning shall be based on the zoning in effect on January 1, 2014.

(**) In calculating the percentage of land cleared ~~or~~ and the percentage of open space to be retained, the preserved areas in a development should preferably be existing native vegetation. These are maximum clearance and minimum open space standards, and more restrictive standards may be imposed during the review by the Commission, involved agency, or local municipality due to consideration of other standards, especially those addressing preservation of rare or endangered species, or unique flora or vegetation.