

New Jersey Pinelands Commission
Clustering Opportunities in the Pinelands

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October 1, 2004

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CLUSTERING OPPORTUNITIES IN THE PINELANDS

Introduction

A driving force for the establishment of the Pinelands Protection Act was the realization that a vast tract of relatively unspoiled land would eventually be lost through the effects of scattered and piecemeal development. While each new development by itself may not have caused irreparable harm to the unique Pinelands ecosystem, the continuation of the development patterns occurring in the 1960's and 1970's would in time be the death knell for the Pinelands. The state and federal Pinelands legislation, and the Comprehensive Management Plan (CMP) developed in response to that legislation, have as a primary purpose the preservation and protection of the Pinelands' essential character, which is that of an area with unbroken landscapes. The plan seeks to maintain this character by channeling growth to areas already experiencing development and by protecting outlying areas through a variety of management techniques.

The Pinelands Regional Growth Areas and, to a lesser extent, the Pinelands Towns and Villages, were designed to accommodate most of the anticipated growth in the Pinelands Area. The other lands in the Protection Area, i.e., in the Forest, Rural Development, and Agricultural Protection Areas, have varying degrees of large lot zoning. An initial assumption in designating the management areas and their overall densities was that these densities, coupled with the management standards set forth in the CMP, would protect the Pinelands character.

The plan has been very effective in protecting many features of the Pinelands. There is growing concern, however, about the impacts on the landscape caused by large lot development. Because of this concern, the Pinelands Commission directed the staff to reexamine the plan in terms of how it provided for clustering opportunities, and to identify ways to promote clustering as a land management technique.

The Clustering Concept

Cluster developments have been around forever. A publication by the American Planning Association refers to cluster developments as "the most fundamental and enduring form of human settlement, limited only by the material resources and the ingenuity of the society building them." (Planning Advisory Services Report #356, 1980). Historical reasons for concentrating development included protection, socialization, and proximity to important resources such as natural resources, and transportation corridors.

The advent of zoning codes in the 20th century, while serving an admirable purpose, had the possibly unintended effect of discouraging cluster developments. Most ordinances specify a minimum lot size

for various types of development in each zoning district. The result has often been one of “cookie cutter” residential developments. Lots tend to be of uniform size. There is minimal open space. “Open” areas are basically the unbuilt portions of each lot.

Even large lot development, while purportedly intended to maintain the rural character of an area, effectively alters that area’s character. What was once an unbroken landscape becomes a series of access roads, driveways, and lawns. The type of open space provided through large lot development is sometimes referred to as “borrowed” open space. The area appears rural only as long as the abutting properties remain undeveloped in a similar fashion (*Land Preservation: Old Challenges, New Ideas*—Montgomery County, PA, Planning Commission, 1992).

There is an alternative. In its simplest form, clustering is a type of development that allows reduced minimum lot sizes in exchange for the preservation of open space or some other desirable feature of the property, e.g., a historic site, a scenic vista, etc. The overall density remains the same, but the individual building lots are smaller than that which would occur under a “conventional” lot layout. The benefits of clustering include protection of sensitive areas, provision of usable open space, maintenance of rural character through establishment of wooded buffer areas, reduced site improvement costs due to reduced internal roadways and utility extensions, and more of a neighborhood “feel.”

Clustering is a somewhat dated term, which has been replaced by other phraseology for a number of years, especially in the planning literature. The term “cluster” is often used interchangeably with “lot size averaging”, and simply means that individual lots are smaller than the normal minimum lot size, with the average for the development as a whole meeting the minimum per lot. Critics of cluster developments in this most simplified form cite several drawbacks. These disadvantages include the fact that many cluster ordinances do not specify a minimum percentage of open space or that the percentage is negligible in terms of it being a viable entity. Another problem is that the open space land often includes nonusable land, and there is no requirement that a majority of the lots have direct access to the open area. In general there is no overall design for connection of that open space to similar uses on adjacent parcels or as part of a community-wide conservation network.

A more contemporary term for the clustering concept is **conservation subdivision design**. Conservation designs involve a substantial open space area, generally 50% or more of the parcel, and the bulk of this land is “unconstrained” land, that is, land which does not have features which would preclude its development, e.g., wetlands, steep slopes. In addition, the design takes into account special features of the property which, while not being constraints to development, are elements which are desirable for conservation. These features might include wooded areas, established meadows, hedgerows, etc. Another objective for conservation designs is to afford the maximum number of lots direct access to the open space area.

An initial task in proposing a conservation subdivision may be to prepare a “yield plan,” which is essentially a plan showing how many units would be possible under conventional zoning. As an alternative to the conventional layout, the site planner then looks at the land anew and determines the

areas that should be eliminated from consideration for development, either because of site constraints, e.g., wetlands, steep slopes, or for other conservation objectives, such as scenic vistas. The next steps are to outline the potential development area(s), then lay out the possible units (as determined in the “yield plan” exercise). The final steps involve delineating the street and walkway areas and then drawing in the lot lines. Randall Arendt provides a more complete discussion of this process as well as several examples in his book *Conservation Design for Subdivisions: A Practical Guide for Creating Open Space Networks* (1996. Island Press, Washington, D.C.)

It should be noted that there is some confusion among the general public both about the various terms and their application in the Pinelands. This has become evident in the responses received from municipalities to the “clustering questionnaire” mailed out in June 2004 (See discussion of questionnaire on page 18. Appendix A contains the complete text of the questionnaires.) Many people associate clustering with higher density development, which is understandable because cluster developments are the exception rather than the rule in rural areas. One respondent used as his idea of clustering, Radburn, which is one of the first cluster developments in New Jersey, and a classic often cited in planning literature for its excellence in design. Radburn is located in Fair Lawn, Bergen County, NJ and includes approximately 670 units and a residential density of well over 5 units/acre. It seems that most people associate clustering with more urban or infill areas, or with Planned Unit Development-type configurations. Respondents tended to see clustering as carrying higher densities than they wanted in their communities. While this is not the intent of offering clustering as an option, particularly for the Forest or Rural Development Area, this apparently is the perception.

Another area of misunderstanding concerns the cluster-type programs within the Pinelands plan itself. The Density Transfer Program is in a sense a cluster approach, because it enables an individual to build on a smaller lot in one area by deed-restricting a certain number of acres off-site. The CMP also authorizes municipalities to designate specific sending and receiving districts for the density transfers, thereby essentially establishing overlay cluster zones. The Pinelands Development Credit program also makes clustering more feasible, in that it promotes developments at higher densities. Respondents to the questionnaire often referred to these programs interchangeably.

For simplicity, the term “clustering” is used throughout this report, although the intent for the Forest and Rural Development Areas clearly is clustering for conservation purposes. The application of this concept may or may not involve off-site properties.

Clustering in its original sense should not be seen as a tool for directing growth. Rather it is a tool for sensitive site design. (Maryland Office of Planning, Publication #94-10, October 1994). The Pinelands CMP and the corresponding local master plans and ordinances determine the overall densities and maximum amount of growth for an area. The purpose of offering the cluster concept is to provide alternatives so that this development can occur in the most environmentally sensitive pattern. Minimum standards are still applicable, but there is greater flexibility in the site design as it relates to minimum lot sizes, setbacks, and other development criteria.

Depending on the management goals for an area, a cluster ordinance generally specifies which qualities are being targeted for protection through this type of site design. The regulations establish a minimum amount or percentage of open space, and set guidelines for the use and maintenance of the lands so set aside. If the goal is to maintain rural character, for example, the ordinance will contain provisions for a high degree of open space protection and strict site design criteria. There will frequently be requirements that the site show connectivity to open space areas in adjacent developments. The table below (Table 1) lists some of the most frequently mentioned advantages and disadvantages of clustering.

Table 1 Advantages and Disadvantages of Clustering	
Advantages	Disadvantages
reduces expenditures for infrastructure because of shorter pipes, road frontage, etc.	review process may be more time-consuming and therefore more costly to municipality, especially if town is unaccustomed to this type of development proposal
protects other important resources, e.g., historic structures, scenic vistas	public perception is that clusters are “denser” development
more flexibility in types of wastewater system, e.g., individual, community, community leach field, etc.	public and private distrust of alternative wastewater systems; community systems are more expensive, review and permit system is greater, and maintenance may be more complicated
houses and septic systems can be located on most appropriate soils	lot sizes smaller than 3.2 acres would cause Pinelands water quality standard to be exceeded on the lots, even though standard should be met at development property line
smaller lots may lead to less non-point source pollution	will increase level of soil compaction in development area, but overall level of compaction on the parcel should not be more than with conventional development; similarly overall rate of run-off should not be greater than with conventional development
reduces level of landscape fragmentation	if open space areas are not contiguous and/if individual developments are at a distance from each other, may still fragment landscape
good comprehensive planning for open space provides contiguity of parcels	lack of comprehensive planning for open space may create “orphan” open space parcels
good design produces attractive developments and increased appreciation in real estate values	poor design can create unattractive development and negative public perception of clustering as concept
creates “neighborhood feel,” greater sense of community	community/homeowners’ association may be ineffective, forcing municipality to assume responsibility for open space and other communally owned features
saves on municipal services, e.g., trash, snow removal, school bus routes	property tax assessments and therefore taxes paid may be lower because lots are smaller
disturbance may be clustered away from threatened and endangered species habitats	3.2 acre lot size brings few, if any, of the benefits of clustering

Many regional planning agencies as well as individual municipalities promote the concept of clustering either through mandatory provisions or by offering incentives. Selected examples are discussed below.

Regional Agencies

The **Adirondack Park Agency** (New York State) implements a regional plan for an area of approximately six million acres, half of which is privately owned. The Adirondack Park Land Use and Development Plan (APLUDP) classifies all private land into six categories, ranging in intensity from hamlet to resource management. In those areas where there are prescribed densities, they range from approximately 1 acre up to more than 40 acres per building. The agency especially encourages clustering in the Rural Use (8.5 acre average lot size) and Resource Management (42.7 acre average lot size) areas. Developers who opt to cluster may receive a 10% density bonus. In addition to this density incentive, the Agency can mandate clustering. It does this by calling up for a hearing, applications which are not utilizing clustering. Faced with a hearing which is a prerequisite for denial of an application, the developer generally revises his plans.

One aspect of the APA regulations which tends to work against clustering is the threshold for applications to the regional agency. The requirement for applying to the Agency is different for each management area. For example, in the Rural Use area, a builder can develop five lots without obtaining permission from the APA if the lots are at least six or 7 acres. In the low intensity zone one can create up to nine lots if larger acreage are involved. According to staff at the APA, this provision works as a disincentive to clustering, because a developer can avoid going to the regional agency by creating scattered, large lot projects. There are also regulations which specify that agency jurisdiction activates once a parcel is subdivided a given number of times. This is another drawback to clustering, which staff is interested in having changed. (John Banta, 518-891-4050)

The **Columbia River Gorge Commission** is a bi-state (Oregon and Washington) agency which administers a plan for this 292,500 acre National Scenic Area. The primary focus of the plan is to protect forest, recreational and agricultural land uses. The plan channels residential uses to existing developed areas and allows it in other areas only to the extent the developments will not detract from the recreational, forest or agricultural value of that area. The plan discourages the creation of new parcels and allows development of existing parcels in accordance with strict guidelines. Areas designated as “Residential” carry minimum lot sizes of 1, 2, 5 and 10 acres. Clustering is “encouraged” in the five and 10 acre areas where individual lots in clusters may go down to one acre and two acres, respectively. Commission policy is to offer density bonuses to applicants who cluster and permanently protect open space.

The drawback to the regulations lies in the criteria a developer must meet to exercise the cluster option. The local government must find that clustering will provide opportunities not available through conventional parcel-by-parcel development, and they can only reach this finding if, inter alia, the development: is located in an area with existing screening vegetation that will buffer the

development from key viewing areas; reduces interference with movement of deer and elk in winter range, and; increases the likelihood of agricultural or forest management on the undeveloped land left by the cluster development. Faced with these criteria, no project has yet been able to exercise the cluster option, and there are no plans to revisit the criteria in the next plan review.(Gary Pagenstecher, 509-493-3323)

The **Central Pine Barrens Joint Planning and Policy Commission** oversees an area of approximately 102,500 acres within the central and eastern portions of New York's Suffolk County. Similar to the Pinelands CMP, the New York act and plan designate a core preservation area and outer Compatible Growth Area. The plan strongly urges municipalities 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." The plan also promotes clustering through its Pine Barrens Credit program.

Unlike the NJ Pinelands CMP, the New York plan sets standards for development rather than directly affecting zoning. The town and county regulations, including the local zoning, have continued to determine densities. Fortunately the towns had clustering provisions in their ordinances prior to the Pine Barrens act, and continue to allow clustering to occur. The Commission directly reviews an application only when a proposed development: 1) is not in compliance with all codes; 2) when the project satisfies the criteria for a "Development of Regional Significance" (generally 300 units and above), or; 3) when the project is in a designated Critical Resource Area.

There has been a downside to the land use patterns established through clustering in this region. Some of the developments have created fire management issues. This stems from the clustered housing being scattered in the midst of forested areas which have high fire hazard potential. (Ray Corwin, 631-224-2604)

The **Cape Cod Commission** is a regional planning and regulatory agency which is charged with preparing and implementing a regional land use policy plan for all of Cape Cod. The Commission reviews and regulates Developments of Regional Impact (DRI), which include subdivisions involving 30 or more acres, lots or units. Open space requirements vary according to the location of the development, but some open space is required for every development. In lands designated as "Significant Natural Resource Areas," applicants must set aside as open space, two acres for each acre they develop. The applicant must submit two site plans, one showing conventional development, from which the Commission determines how many units the property is entitled to. The second site plan shows a cluster configuration. Applicants are not required to cluster but most applicants do opt for this approach. The Commission and the local towns also allow developers to meet their open space requirement off-site.

The Commission also works with the fifteen towns on the Cape to ensure that the local and regional plans are consistent. The Commission encourages towns to incorporate cluster provisions in their land use ordinances for any developments of five or more units, and all but one of the fifteen towns do so. Under Massachusetts law, municipalities may not require developers to set aside open space, so the

local clustering provisions are optional rather than mandatory.

There are two factors that work against the Commission's direct implementation of its clustering policies. The first is that approximately 80% of the land currently being subdivided falls below the DRI threshold. The second factor is a State law which provides for a comprehensive permit for the provision of affordable housing. Where a developer includes in his project a minimum of 25% affordable housing, he may bypass both the Commission and local zoning requirements and review. This has resulted in a significant drop in the number of applications which come before the Commission. (Dorr Fox, 508-362-3828)

Ebey's Landing National Historical Reserve (Washington State) is a 25 square mile area in the Puget Sound Region which contains a mixture of federal, state, county and private property. A local Trust Board, composed of local residents, a representative from State Parks, and one from the National Park Service, administers and manages the Reserve as a unit of the National Park System. The Vision Statement for the Reserve is to have new development "designed and sited to respect the cultural landscape and to protect the key landscape features that are of historic significance." The Board has designated ten distinct land areas within the Reserve and established preservation principles for each area. Although large developments are generally not encouraged anywhere, clustering is seen as a way to minimize the impact of such developments. The principles also stress siting development along the periphery of areas such as the prairies in order to minimize their visual impact. Applicants may obtain a 100% density bonus for clustering. In the agricultural areas, which make up about a third of the NHR, clustering is mandatory, and a maximum lot size of 1.5 acres is prescribed. (Rob Harbor, 360-678-6084)

County and Municipal Agencies

Montgomery County, Pennsylvania, encourages compact site design and open space preservation through an approach called the Land Preservation District (LPD). This technique allows for the preservation of large percentages of open space--75% of the tract--without offering any density bonuses. Land Preservation Districts may be created on parcels of ten acres or greater. The recommended number of units in an LPD is 5 to 25, in order to foster a small neighborhood feel. While the standard lot size in much of this area is 2 acres, the county proposes that individual lots in an LPD may be as small as 10,000 sq ft assuming centralized sewer and water are available. The county suggests various alternative to conventional on-site septic to facilitate lot sizes smaller than the 1-2 acre range. These options include; 1) community drain fields or sand mounds, which can be incorporated in a landscaped berm located in the common open space; 2) a spray system, or centralized lagoon system consisting of several ponds equipped with aerators, also integrated into the landscaping scheme; or 3) individual systems with their tanks on-site pumping over to their own drain fields within the common open space.

The ordinance also allows the creation of a limited number of estate lots in the LPD's. These larger lots must be at least 5, 10, or 15 acres in area, depending on the overall size of the LPD, and are

located within the bounds of the protected area lands. However, only one acre of an estate lot may be developed and the remainder must be left in its natural state or used for agriculture, if appropriate. As a result potential home buyers have more options and sizable tracts of land are protected and kept as open space, presumably the best of both worlds.

The unusual aspect of the LPD is that conventional developments are seen as conditional uses. Developers must show why they should be allowed to build on the traditional two-acre lots, rather than proving why a cluster development is desirable. This is a turnaround from the approach seen in many ordinances, and echoes the preservation goals of the county.

A similar approach to the “table-turning” occurring in Montgomery County also exists in rural **Michigan** under the **PEARL** program (for “Protecting the Environment, Agriculture and the Rural Landscape”). This model open space zoning amendment recommends that towns require open space development designs (OSDD) in various resource-related overlay districts, and permit traditional large-lot developments only in exceptional cases. Types of criteria a developer would have to meet to build a conventional development include the site size being too small or the resulting open space being poorly situated to be of beneficial use or to make a contribution to the preservation of the environment or landscape. (Livingston County Planning Department, 1991, as cited in R. Arendt’s *Rural by Design*, p241)

Routt County, Colorado, allows homes to be clustered on smaller lots than the base zoning permits, in exchange for preservation of at least 100 acres of open space. The intent of this program is to aid ranchers in the Steamboat Springs area by allowing them to sell off small parcels while preserving most of their property as ranch land. The Land Preservation Subdivision Exemption program allows participants a base density of one unit per 35 acres, plus one bonus unit for every 100 acres preserved. An example of how this program works is the 285-acre Blue Valley Ranch. Instead of the eight 35 acre lots which would have been the “by right” allotment, the owner preserved 200 acres, or 70% of the property and was able to carve out the remaining acreage into 10 lots averaging eight acres. (APA Planning Practice, “From Ranchland to Conservation Community,” Susan Ernst Corser, August 2003)

The town of **Canton, Maine**, allows cluster developments where the Planning Board finds that the benefits of the cluster approach will prevent the loss of natural features without increasing the net density of the development. As part of the application process, the developer submits two sketch plans, one showing conventional development and the second as a cluster development showing open space and significant natural features. The number of lots permissible under the conventional development plan determines the maximum number that may be built in the cluster option. Cluster developments must meet all town requirements with the exception of lot size. The total area of the common land must equal or exceed the total area by which the lots are reduced.

Some towns in New Jersey have chosen to offer density bonuses where the developer preserves a minimum portion of the tract as open space. This is the case in **Chesterfield Township, Burlington County**. As part of the Land Development Ordinance that also establishes the structure for a

comprehensive TDR approach for compact development in the planned village and agricultural land retention, the township offers a clustering option where a developer receives a density bonus for preserving fifty percent of the property as open space. **Plainsboro Township, Middlesex County** also uses this incentive approach. While much of the remaining vacant land in the township is zoned for six acre lots, applicants who cluster and preserve 75% of the tract receive much higher densities. The township also has a noncontiguous cluster provision, called an “Internal Zone Cluster Ordinance,” which permits density transfer among noncontiguous parcels if 75% of the tract is preserved. (New Jersey Future, *Smart Conservation: The “Green” Side of Smart Growth*, 7/2003)

In some localities, clustering is mandatory. For example, **Readington Township, Hunterdon County**, mandates clustering for development on tracts of over 40 acres in its Agricultural Residential zone. In the AR zone, which constitutes over 50% of the municipality, houses may be built on 1.5 acres, as opposed to the traditional six acres per lot, and 50% of the tract must be kept as open space. The ordinance lists additional restrictions concerning development in this zone, including: 1) each building lot must have at least 65,000 sq ft of contiguous usable land, i.e., not wetland; 2) no development of any sort, e.g., detention basins, road disturbance, may be part of open space calculations; and 3) each building lot must have two acceptable septic sites, one approved and one in reserve, and these sites must be monitored for two months during the wet season prior to Board of Health approval. While there is no requirement in the ordinance that the open space connect to open space on adjacent parcels, strict stream corridor provisions tend to make this a reality. The township promotes clustering elsewhere in the community through optional provisions. In the Rural Residential zone, developers may reduce their lot sizes from the conventional 3 acre minimum to 2.0 acres if they preserve 1/3 of the tract as open space, and may build on 1.5 acres if they preserve 50%. All open-space areas must be deed restricted to preclude further development except recreational development approved by the township or agricultural use. (Source: Mayor Julia Allen, Readington Township)

Clustering is also mandatory in **Washington Township, Morris County**, where the intent is to protect the rural character of Long Valley. Local zoning makes clustering mandatory for all parcels exceeding 40 acres as well as any parcel that abuts preserved farmland or open space. The clustering, or lot-averaging requirement as it is referred to in the ordinance, extends down to minor subdivisions. There are no density incentives offered. Whereas local zoning is five acres throughout the town, individual homes in clusters are generally built on 2-2.5 acre lots. The development review process initially involves the applicant preparing a concept plan from which the Planning Board determines how many lots the property is entitled to. The Planning Board has sole authority to decide what form the development should take, and directs the applicant to prepare either a cluster/lot averaging subdivision plan or a conventional subdivision plan. There have in fact been a few cases, based on site-specific conditions, where the Board directed the applicant to use a conventional layout. The ordinance specifies that, in a cluster, at least 50% of the tract be preserved as open space, and that 30% of that open space area be developmentally unconstrained, i.e., no wetlands, steep slopes. The township also offers clustering as an option on tracts of 10 acres or greater which do not abut preserved land. The provisions are almost identical to those for mandatory clustering, including the fact that there are no density bonuses. While the ordinance is currently being challenged, the

interesting aspect of the challenge is that it is coming from a local resident who is unhappy with the layout of a cluster development rather than from the development community. (Source: Virginia Kasper, Washington Township Planning Board Coordinator, and Section 217-62 of the Washington Township Codebook)

Clustering in the guise of density transfer is also occurring in many areas of New Jersey. Density transfer programs are essentially noncontiguous clusters, and are specifically allowed under the New Jersey Municipal Land Use Law. In the Pinelands, density transfers are permitted within the Forest Area and the Rural Development Area. Towns which provide for this practice are scattered throughout the State, and the underlying goals for transfer programs vary from area to area. As an example, **Roosevelt Borough's (Monmouth County)** objectives are to concentrate development in small lots and therefore preserve its farms and open space. Its Planned Community Development ordinance allows developers to build on 1/4 acre lots if they enter into purchase agreements with landowners in a designated 500-acre expanse of farmland, where the zoned lot size is a 10 acre minimum. While the maximum use of this option will significantly increase the number of units built in Roosevelt, this is regarded as a fair trade-off for preserving a substantial portion of the Borough.

Washington Township, Mercer County, is also using the density transfer approach in the creation of the new Washington Town Center. The developer is transferring density from a 300-acre sending area of farmland to realize a pedestrian-oriented, neotraditional town center around the village of Robbinsville.

It is obvious that there are many different approaches to cluster developments. A key to creating and implementing a cluster program is determining what the goals are for the area, and what features one wishes to promote, preserve, and protect.

The Pinelands Experience

The Pinelands plan promotes clustering, both on an on-site and an off-site basis, through several different techniques. Most prominent is the CMP's overall policy to direct most new construction to the Regional Growth Areas, where services are or can be made available to accommodate a variety of development patterns. In addition, nine of the 24 Pinelands municipalities with land in the Regional Growth Areas permit clustering in one of more of their RGA zones (Barnegat, Dover, Egg Harbor, Hamilton, Medford, Monroe, Pemberton, Waterford and Winslow Townships).

The Pinelands Development Credit program also increases possibilities for off-site clustering in the growth areas by allowing an increase in density for individual projects. Since the purchase of PDC's can represent a substantial outlay, builders may choose to offset some of these expenditures through the economies associated with reduced site-improvement costs.

The Density Transfer Program provides another mechanism for off-site clustering. Although the primary thrust for the Density Transfer Program is to minimize the necessity for waivers for

undersized lots, it may also serve as a planning tool. In situations where certain lands have significant merit, municipalities may designate “sending” and “receiving” areas between which densities from lots within the Forest Area or Rural Development Area may be transferred. This essentially allows smaller lot sizes on-site, with open space being provided on a noncontiguous tract.

A similar noncontiguous approach is specifically permitted under 1995 amendments to the New Jersey Municipal Land Use Law (C.364 PL 1995). It offers municipalities with land outside the Pinelands Area this option, but offers nothing new in the Forest or Rural Development Areas. In other management areas, it may create conflicts with other CMP programs, such as the PDC program.

The Pinelands conformance process provides two more opportunities to encourage the clustering concept. The first is through the municipality’s delineation of zones and corresponding lot sizes within a given management area. The CMP sets overall densities for each management area in each municipality based on the amount of vacant, privately owned upland. Through the conformance process, towns could create one or more zones within each management area, and distribute the units accordingly. Some municipalities opted to specify one overall lot size or density for each management area, while others created multiple zones, generally setting their smaller lot size zones in areas near villages, services, etc., and assigning large wetland areas to the larger lot zones.

A final way that towns promote clustering on-site is through the traditional method of writing cluster provisions into their ordinances. As mentioned above, nine of the twenty-four growth area towns allow for clustering in those areas. For towns with land in the Forest Area or Rural Development Areas, the numbers are 17 of 35 and 18 of 27, respectively. For most towns which permit clustering, this is an optional use in one or more zones. In two instances, i.e., Galloway Township and one zone in Berkeley Township, clustering is mandatory in specified areas under certain circumstances. (The intent of the former is to protect the heron rookery, where clustering is mandatory if the area has sewer service available. The latter case, i.e., Berkeley Township, is a result of a settlement, where the Forest Area units may only be built on adjacent growth area land.)

Clustering in the Forest and Rural Development Areas

Thirty-seven of the 53 Pinelands Area municipalities contain lands designated as Forest Area, Rural Development Area, or both. The minimum lot sizes for the areas are quite variable, and are a function of how the towns delineated their zones and distributed their units during the “conformance” process. Minimum lot sizes in Forest Area zones range from 3.2 to 70 acres, and those within the Rural Development Area zones range from 1.0 to 10.0 acres.

While all towns have the opportunity to incorporate cluster provisions in their ordinances, 13 of the towns with Forest or Rural Development Areas do not allow clustering anywhere on these lands. Less than half of the municipalities with Forest Area permit clustering in those zones (17 of 35 municipalities, or 48.5%). Two-thirds of the towns with Rural Development Areas provide for clustering in these areas (18 of 27 municipalities, or 66.6%) Only nine of the eighteen towns which

have both Forest and Rural Development Area allow clustering in both these management areas. Six of these eighteen towns allow clustering only in their Rural Development Area and three towns allow it only in their Forest Area. (See Table 2)

TABLE 2 Municipal Clustering Provisions			
Municipality	Clustering Permitted in Forest Area	Clustering Permitted in Rural Development Area	Comments
Barnegat Township	Yes	Not applicable	
Bass River Township	Yes	No	
Berkeley Township	Yes	No	FAR-30 is mandatory sending zone to RGA under specific conditions
Berlin Township	Not applicable	No	
Buena Vista Township	Yes	Yes	minimum of 25 lots
Corbin City	No	Not applicable	c. 70 acres total in Pinelands Area
Dennis Township	Yes	Yes	
Eagleswood Township	No	Not applicable	
Egg Harbor City	No	Not applicable	
Estell Manor City	Yes	Not applicable	
Evesham Township	Yes	Yes	
Folsom Borough	No	No	
Franklin Township	Not applicable	Yes	
Galloway Township	No	Yes	mandatory in R5C
Hamilton Township	No	No	
Hammonton Town	No	Not applicable	
Jackson Township	No	Yes	new ordinance may mandate clustering in Forest Area
Lacey Township	No	No	
Little Egg Harbor Township	Yes	Not applicable	1.0 acre minimum in Forest Area
Manchester Township	No	Not applicable	
Maurice River Township	Yes	Yes	
Medford Township	No	Yes	
Monroe Township	No	Yes	

Mullica Township	No	No	PURD ordinance includes clustering provisions
Ocean Township	Yes	Yes	
Pemberton Township	Yes	Yes	
Plumsted Township	No	No	
Shamong Township	No	Yes	
Southampton Township	Yes	Yes	
Stafford Township	No	Not applicable	
Tabernacle Township	No	Yes	
Upper Township	Yes	No	
Vineland City	No	Yes	clustering is overlay zone
Waterford Township	Yes	Yes	
Weymouth Township	Yes	Not applicable	
Winslow Township	Yes	Yes	
Woodbine Borough	Yes	Yes	
37 Municipalities	17/35 YES (48.5%)	18/27 YES (66.6%)	

The specific zones where clustering is permitted and the corresponding lot sizes vary from town to town. Table 3 shows the minimum lot sizes for conventional and cluster developments.

Table 3 Minimum Lot Sizes, Conventional vs Cluster Development				
Municipality	Management Area/Zone	Conventional	Cluster	Notes
Barnegat Township	FA/PF	1 du/17A	3.2 A	
Bass River Township	FA/F	1 du/15A	3.2 A	
Berkeley Township	FA/FAR-5	1 du/5A	1.0 A	
	FA/FAR - 30C	1 du/30 A	1.0 A	
	FA/FAR-30	1du/30 A		all development must be in RGA
Buena Vista Township	FA/FA1	30A	3.2 A	>25 lots
	FA/FA2	30A	3.2 A	>25 lots
	FA/FA3	20A	3.2 A	>25 lots
Dennis Township	FA/PF8	8A	3.2 A	

Municipality	Management Area/Zone	Conventional	Cluster	Notes
	FA/PF 25	25A	3.2 A	
	RDA/PR	5.0A	3.2 A	
Estell Manor City	FA/R-25	25A	10.0 A	
	FA/R-10	10A	5.0 A	
Evesham Township	FA/FA	20A	6.0 A	
	FA/FW	12A	4.0 A	
	RDA/RD-2	4A	1.0 A	>25A tract
	RDA/RD-3	3.2A	1.0 A	
Franklin Township	RDA/PR-R	3.4A	2.0 A	
Galloway Township	RDA/R5C	5.0A	12,000 sq. ft.	mandatory cluster >10A
Jackson Township	RDA/RD-9	9.0A	1.0 A	
Little Egg Harbor	FA/FAC	3.2A	1.0 A	
Maurice River Township	FA/PR	5.0A	1.0 A	>100A tract
	RDA/PRDA-R	5.0 A	1.0 A	>100A tract
Medford Township	RDA/R5-2	6.0A	3.2 A	>25A
	RDA/RGD-2	3.2A	1.0 A	>25A
Monroe Township	RDA/RD-A	8.0A	1.0 A	
	RDR/RD-RR	3.2A	1.0 A	>20 du's
	RDA/RD-RS	5.0A	1.0 A	>20 du's
	RDA/RD-I	5.0A	1.0 A	>20 du's
	RDA/RD-C	3.2A	1.0 A	>20 du's
Ocean Township	FA/FO	20.0A	3.2 A	>10 lots
	RDA/RU	5.0A	3.2 A	>10 lots
Pemberton Township	FA/R-17	17A	3.2 A	>50A tract
	RDA/R-6	6.0A	1.0 A	>50A tract
Shamong Township	RDA/RD1	1 du/3.9A	1.0 A	requires >1.0A upland/lot
	RDA/RD2	1 du/3.2A	1.0 A	requires >1.0A upland/lot
	RDA/RD3	1 du/3.6A	1.0 A	requires >1.0A upland/lot
	RDA/RD4	1du/6.7A	1.0 A	requires >1.0A upland/lot
Southampton Township	FA/FA	1 du/5A	3.2 A	
	FA/FB	1 du/15A	10 A	

Municipality	Management Area/Zone	Conventional	Cluster	Notes
	RDA/RD	1 du/5A	3.2 A	
Tabernacle Township	RDA/RD-1	3.7A/SFD	3.2 A	
	RDA/RD-2	3.7A/SFD	3.2 A	
Upper Township	FA/F-25	25A/SFD	3.2 A	
Vineland City	RDA/RCA	1 du/5A	1.0 A	clusters are conditional use, must have 25 A
	RDA/P-R	3.2A	1.0A	same as RDA/RCA
Waterford Township	FA/RC	1 du/37.6A	3.2 A	
	RDA/RR	1 du/5.7A	3.2 A	
	RDA/RPF	5.7A/SFD	3.2 A	
Weymouth Township	FA/PFA-10	10A/SFD	3.2 A	
	FA/PFA-20	20A/SFD	3.2 A	
	FA/PFA-25	25A/SFD	3.2 A	
Winslow Township	FA/PRC	1 du/27A	3.2 A	
	RDA/Ancora	3.2A/SFD	2.0 A	
	RDA/PR-1	1 du/3.2A	2.0 A	
	RDA/PR-5	1 du/3.2A	2.0 A	
Woodbine Borough	FA/FA/R	20A/SFD	3.2 A	>30A tract
	RDA/AR	5.0A/SFD	1.0 A	>30A tract

Table 4 shows the minimum lot sizes in towns/zones where clustering is not permitted in the Forest or Rural Development Areas. It should be noted that the CMP allows clustering on 1.0 acre lots in the Rural Development Area, but generally sets the minimum at 3.2 acres for the Forest Area. In contrast, individual homes may be built on 1.0 acre in both management areas through the Pinelands Density Transfer program.

Table 4 Minimum Lot Sizes in Residential Zones with No Clustering Provisions		
Municipality	Management Area/Zone	Lot Size
Bass River Township	RDA/RD	3.2 A
Berkeley Township	RDA/RDA	3.2A

Municipality	Management Area/Zone	Lot Size
Berlin Township	RDA/R-1	1 du/3.8A
Corbin City	FA/PFA	15.0A
Eagleswood Township	FA/FA	17.0A
Egg Harbor City	FA/R20F	20.0A
Folsom Borough	FA/F-20	20.0A
	FA/F-30	30.0A
	FA/FC	3.2A
Galloway Township	FA/FA5	5.0A
	FA/FA20	20.0A
	FA/FA-WET	45.0A
Hamilton Township	FA/FA-10	10.0A
	FA/FA-25	25.0A
	FA/FA-70	70.0A
	RDA/RD-1	1.0A
	RDA/RD-2.5	2.5A
	RDA/RD-4	4.0A
	RDA/RD-5	5.0A
	RDA/RD/RGD	5.0A
Hammonton Town	FA/FA	1 du/34A
Jackson Township	FA/FA-1	70.0A
	FA/FA-3	3.2A
	RDA/RD	3.8A
	RDA/RD-1	1.0A
Lacey Township	FA/FA	25.0A
	RDA/RD	11.0A
Little Egg Harbor Township	FA/FA	35.0A
	FA/PFA-5	20.0A
Medford Township	FA/FD	39.0A
Monroe Township	FA/FD-10	10.0A
	FA/FD-40	40.0A

Municipality	Management Area/Zone	Lot Size
Mullica Township	RDA/RD	3.6A
Pemberton Township	FA/R-100	17.0A
Plumsted Township	FA/FA	18.0A
	RDA/RD-1	3.5A
	RDA/RD-2	3.5A
Shamong Township	FA/FOREST	18.6A
Southampton Township	FA/FC	40.0A
Stafford Township	FA/FA	17.0A
Tabernacle Township	FA/FA	40.0A
Upper Township	FA/F3	3.2A
	RDA/RD	3.75A
	RDA/NC	3.2A
Vineland City	FA/P-F	20.0A
Weymouth Township	FA/PFA-MH	5,000 sq.ft.

There does not seem to be any pattern as to why municipalities permit clustering in some areas but not in others. In an effort to understand the rationale for such decisions, the Pinelands staff recently sent a questionnaire to the 37 towns with lands in the Forest and/or Rural Development Areas. Questions asked of the municipal officials included why they chose to allow or not allow clustering, if they provided for clustering outside their Pinelands Area, what advantages or disadvantages they saw in clustering, and their experiences with development applications and developments involving clustering. Appendix A contains the list of questions sent to the towns. There are three versions of the questions: 1) towns which allow clustering in the Forest and/or Rural Development Area; 2) towns which do not allow clustering in the Forest and/or Rural Development Area; and 3) special cases, e.g., Corbin City, which has less than 100 acres in the Pinelands Area, all within the Forest Area. (In the Corbin City case, staff wrote the town an individualized letter rather than sending a questionnaire.)

Over the years, the Pinelands Commission has reviewed various applications which have involved clustering. Most of these applications, however, have been for properties in the Regional Growth Areas, or they involved waivers from the density standards, such as Leisuretown in Southampton Township or Barton Run and Kings Grant in Evesham. Less than twenty applications in the Rural or Forest Areas have been cluster developments.

One excellent example of clustering in the growth area is the Village Pointe development in Medford Township. This development includes 62 houses on 49+ acres right near the historic village area of Medford. The houses are clustered around village greens and open space, have minimal front yards,

most have front porches, and there is a real sense of community when one rides through. Most of the garages are detached and behind the houses. This configuration allowed the builder to preserve 54% of the tract as open space.

Three examples of clusters are the Green Acres development in Barnegat Township, Ocean County, Tranquility Ridge in Southampton Township, Burlington County, and Raven Estates in Winslow Township, Camden County. In the Barnegat development, houses are built on lot sizes ranging from approximately 3.5 to 5.5 acres (traditional zoning in Barnegat's Forest Area calls for 17 acres), with approximately 85 acres deed restricted as open space. In Tranquility Ridge, individual lots range from three to eight acres, (the three Forest Area zones generally require 5, 15 and 40 acres) with over 400 acres set aside as open space. Eight of the ten units in the Raven Estates development are predominantly on two acre lots, (as opposed to the Rural Development Area conventional requirement of 3.4 acres), with two house sites on larger lots and six+ acres remaining as open space. The Pond and Spitz group, which is building the houses, does in fact refer to Raven Estates as a conservation subdivision.

One factor which may account for fewer cluster developments being in the Forest or Rural Development Areas is the smaller size of the projects relative to the growth areas. Applications in these lower density areas tend to involve fewer units than in the Regional Growth Areas. As an example, of the >5,300 residential applications initiated with the Commission for the Forest or Rural Development Area, less than 100 contained five or more units. The five unit cutoff was selected because it is a rough proxy minimum number practical for cluster developments. If using a 10 lot or 25 lot cutoff, the application numbers would be approximately 60 and 30, respectively.

Several towns which permit clustering in their Forest or Rural Development Area zones specify minimum tract size or number of lots. The result is that clustering has not been an option for the development applications filed in these towns. As an example, Buena Vista Township requires a minimum of 25 lots for clustering, but the projects proposed to date have all included less than fifteen units. Ocean Township requires a minimum of 10 lots for clustering, and all the applications have been below five lots. The same is true in Monroe Township which sets a 20 unit minimum for clustering. Maurice River Township requires a 100 acre tract size for clusters in two zones, and again the number of units have not been sufficient to provide this. Pemberton Township mandates a 50 acre tract minimum, and all the residential applications in Pemberton's Forest or Rural Areas have been for individual single family units.

Mullica Township, which does not permit clustering per se, nevertheless allows developers to cluster as part of a Planned Residential Development (PRD), which is permitted in the Forest and Rural Development Areas and in the four Villages (Elwood, Nesco, Sweetwater, and Weekstown). The PRD option requires a minimum tract size of 50 acres as well as 40% open space. To date there have been only three applications with acreage exceeding the 50 acre threshold, and these have been in the Forest Area for less than five units.

Another factor which works against clustering is the per unit lot size. The Pinelands plan allows lots

to be clustered on 1.0 acre and 3.2 acre lots in the Rural Development and Forest Areas, respectively. Under certain circumstances, “if exceptional environmental or land use circumstances exist,” the plan also provides that towns may permit one acre lot clusters in the Forest Area. Berkeley and Little Egg Harbor Townships are two examples where one acre lot clusters are allowed. Some towns, however, require more than the minimum lot size for clustered lots. As an example, Estell Manor allows a builder to go down to only five or ten acre lots in a cluster, depending on the zone. Evesham Township requires six and four acre lots in its two Forest Area zones, and Southampton Township allows builders to trim off only five acres in its fifteen acre zone.

Clustering was limited in the original CMP because of concerns about negative impact. When the Density Transfer Program (off-site clustering) was created, it was recognized that a lot size smaller than 3.2 acres was acceptable **if** the environmental impacts of the receiving areas were both mitigated (by location in already subdivided areas, near settlements, near roads, and away from environmentally sensitive features) and could be balanced by the benefits of the planned sending areas. Seemingly on-site clustering in many cases could be equally well planned. The result is that under the Density Transfer Program, an individual may build on a one acre lot provided he deed restricts a designated number of acres in another part of that town’s Forest Area. Municipalities may also designate specific sending and/or receiving areas for these transfers, if these choices are environmentally compatible. At the suggestion of the Commission, nine towns have created specific density transfer programs in their Forest and/or Rural Development Areas-- Estell Manor City, and Buena Vista, Little Egg Harbor, Manchester, Mullica, Ocean, Stafford, Upper and Waterford Townships.

Possible Approaches to Promote Clustering

There are several initiatives the Commission can take to promote clustering in the Forest and Rural Development Areas. While some techniques may require amendments to the Comprehensive Management Plan, others are administrative or educational in nature. These are discussed below.

The most basic initiative is that of **promoting the clustering concept** to both municipal officials and applicants. Regarding local officials, the Commission can provide model ordinances and information concerning the benefits of clustering. Staff has developed a model cluster ordinance which can be used for this purpose. (See Appendix B.) In addition, staff has already contacted municipal officials to learn their views on clustering. With these responses in hand, we have a better feel for the specific issues in the various towns, and have some guidance on how to proceed to work with them. Project Review staff can also work with the applicant as well as the local reviewing authorities to suggest alternative site designs for the proposed projects, as they now do when threatened and endangered species or historic resources are present. Possible venues for this promotional work include subject-specific workshops both at the Commission offices and in the towns, as well as inclusion as a topic in the annual course for municipal officials.

As part of this promotion, it may be possible to obtain **funds for municipalities** to offset their planning and ordinance revision costs. The California Coastal Commission reimburses towns for their

planning and administration expenses to the extent funds are forthcoming from the State. Perhaps this is a program which would fall under the Smart Growth program administered in New Jersey. Alternatively, the Commission could assist the towns in applying for grants, such as to ANJEC, for these activities.

One change which both the Commission and the towns can consider is a **streamlined review process** for applications involving clusters. If cluster developments are in fact a desirable development pattern which the Commission wishes to promote, it follows that it should allocate the resources to ensure that these developments are realized. At a minimum, towns should be encouraged to treat cluster applications as “by right” developments, rather than classifying them as special exceptions or conditional uses. This in itself is a streamlining technique.

The Pinelands plan requires all municipalities with land in the Forest or Rural Development Areas to have a **Density Transfer Program (DTP)**. This program is essentially noncontiguous clustering, in that it allows an individual to build on a smaller than minimum size lot by transferring the growth potential from another parcel. The DTP can readily be expanded to serve as a planning tool rather than just a way to eliminate the necessity for a hardship waiver. The beauty of using the DTP approach as a clustering tool is that applicants may cluster on 1.0 acre lots in the Forest Area in a planned, coordinated approach. Absent an amendment to the CMP or an exception on a town by town basis as part of a certification decision, clustering in the Forest Area currently requires 3.2 acres. Therefore the density transfer program provides an immediately available mechanism to put clustering provisions into effect.

The Commission may also wish to consider revising the CMP to **permit 1.0 acre lots in the Forest Area** where clustering is employed. This is the type of approach that may be used in both the Toms River corridor (Jackson and Manchester Townships) and in the Oyster Creek area of Ocean and Lacey Townships, all of which contain lands where Pinelands management areas are being adjusted. The Toms River corridor report recommends mandatory clustering in at least five zones located in Jackson and Manchester Townships. Mandatory clustering may also be the recommendation for the redesignated areas of Ocean and Lacey Townships.

Another possible way to encourage clustering is to allow towns to award **density bonuses** as an incentive for clustering. Factors such as municipal desire for less development and environmental considerations may make this an unlikely option. If the CMP’s overall density requirements are to remain as is, this may necessitate increasing the lot sizes for traditional development as a means of balancing out the units. One way of handling this is to estimate the potential for cluster developments by looking at parcel sizes, ownership patterns, etc. This approach would hopefully minimize the scale of the changes in lot size, so as not to penalize the individual lot owner.

The Commission may wish to promote the concept of **mandatory clustering** in specified areas. As mentioned above, portions of Berkeley and Galloway Townships currently are designated as mandatory cluster areas. Other towns in New Jersey, specifically Readington Township (Hunterdon County) and Washington Township (Morris County) use this technique extensively and successfully.

The Commission could work with Pinelands municipalities to identify areas of sensitivity which they want to protect, or could simply state that in zones where the lot size is above a certain threshold, e.g., 10 acres, clustering is mandatory. At this time, however, and as evidenced by the responses to the clustering questionnaires, there is little interest in mandatory clustering. Clearly the Commission would want to suggest this technique sparingly and only when a specific situation calls for it, e.g., in the Toms River corridor.

Another technique is to treat clusters as “**by right**” developments, and to make conventional development applications special exceptions or conditional uses. Applicants who wish to subdivide into standard size lots would have to show why a more compact pattern is not feasible for that particular site due to its location, size, shape or natural features, and that the development would be designed to minimize visual impact from existing roads. Other arguments which an applicant might make for a conventional development include: 1) there is no suitable site on which to cluster; 2) clustering is not necessary to protect the environment; 3) clustering would reduce the yield, and; 4) the developer proposes fewer than five lots, a threshold below which management of the open space would be difficult for the parties involved. As mentioned in earlier sections of this report, this approach is used in Montgomery County, PA as well as in Michigan under the PEARL program.

Several of the approaches mentioned in this report fall within the realm of the CMP’s Subchapter 5 (Minimum Standards for Land Uses and Intensities). These approaches, as mentioned above, involve: revising the CMP to permit smaller lot sizes in cluster subdivisions, i.e., 1.0A lots in the Forest Area; awarding bonus densities for clustering; encouraging municipalities to lower their threshold for cluster subdivisions; and mandating clustering in certain areas.

The Commission might also consider mandating an open space component for every development regardless of whether or not the application included clustering. This would encourage the applicant to consider the possibility of clustering, so that he could meet the open space requirement on-site. The alternative would be an in-lieu donation, either land or financial. Along the same lines, an incentive would be to offer PDC’s for preserved land in conservation subdivisions.

There are also actions the Commission can take relative to the specific management programs (Subchapter 6 of the CMP) to provide incentives for clustering or, conversely, disincentives for conventional lot layouts. These are discussed below according to their respective programs.

Wetlands– Since there is more design flexibility with a cluster approach, it is likely that greater protection may be afforded to any wetlands that are on-site. The presence of wetlands is in fact one of the major reasons for even the minimal amount of clustering seen to date. With clustering, the applicant can avoid development in and near the wetland while still maximizing the possible number of units. The Commission might consider offering as an incentive, wetland buffer averaging for applications which employ conservation subdivision design. As a disincentive to conventional site design, the Commission could impose a strict 300’ buffer.

Vegetation–The possibility of habitat for rare or endangered plants can dominate the application

review process for a project. The survey process can be both costly and time-consuming for the applicant as well as the Commission staff. Assuming general knowledge about the location of these species, the Commission could make a determination that a cluster development would be less disruptive and detrimental to the species. As such, the requirement for a survey might be eliminated or limited to the development footprint. The converse is that, in the case of a conventional layout, the applicant would have to conduct a full survey. Alternatively, the Commission could mandate a conservation subdivision design whenever threatened and endangered species are present or suspected.

Fish and Wildlife– A similar approach to that discussed above (Vegetation) could be used with regard to threatened and endangered animal species. Where threatened and endangered species habitat is known or suspected to exist, the Commission could waive some or all of the survey requirements, if the applicant chose to cluster. The Commission could require a full survey for conventional site designs.

Water Quality–There are two major components of the water quality program. The first deals with the treatment of wastewater, e.g., through individual or communal systems. The second component relates to storm water management. There are various actions the Commission can take relative to these programs which can serve as incentives or disincentives to clustering.

Water Quality--Sewage Treatment

One reason for the 3.2 acre requirement in the Pinelands is that this lot size can accommodate a standard septic system without contravening the 2ppm nitrate-nitrogen guideline. While alternative systems may be used to make smaller lot sizes possible, the systems tend to be more costly and complicated (both in terms of permit requirements and operation) than standard on-site systems. In addition there is resistance to their use both on the part of municipalities as well as applicants. (This “disadvantage” to clustering has been mentioned in several municipal questionnaires received to date.)

In a cluster development houses may be sited on 1.0 acre lots with standard septic systems as long as the overall lot size for the development includes at least 3.2 acres per house. The Commission could promote this policy so there is no misunderstanding that traditional septic systems are permissible with conservation subdivision designs. One advantage of cluster designs which should not be discounted is that the developer can choose the best soils for the onsite systems. Therefore one can assume that those systems that are installed will have the best conditions for attenuating wastes.

Another approach is to change the CMP to permit various community systems, such as having the house and tank located in one area, with pipes extending out to a leach field at a distance or in the open space area. The individual lot owner would have both ownership and responsibility for maintenance of the system. A more communal approach would have the solids tank located within the individual property line and the gray water going to one communal leach field, perhaps in the open space area. Maintenance of the field could fall under the purview of the homeowners association or another specified entity.

Water Quality--Stormwater Management

Storm water management is one expense which would be reduced through more creative site design. Presumably there would be less overall compaction of soils with a larger percentage of the tract in an undisturbed state. Instead of man-made structures, water could be channeled in natural ways to open space areas. Since clustering generally involves shorter roadways, curbs and therefore less impervious surfaces, storm water management requirements would be lessened accordingly. The CMP thresholds could be amended to recognize the lesser impact from stormwater in low density, clustered development.

Fire Management—Actions which the Commission can take relative to the fire management program are mainly educational in nature. There is some rationale that it is safer for houses to be clustered and protected by a fire break than being isolated. There is a downside, however, as mentioned earlier in the discussion of the New York Central Pine Barrens. In that area, planners are seeing the dangers of placing any development, even well-designed clusters, in the midst of fire hazard areas.

Cultural Resources--The Commission can approach the cultural resources survey requirement in a manner similar to that discussed above for threatened and endangered species (See “Vegetation” and “Fish and Wildlife”). If cultural resources are in fact present on-site, a cluster approach should lessen any development-related disturbance. In all other instances, the Commission could consider waiving the survey requirement for applications involving clustering or, alternatively, requiring full surveys for conventional development proposals.

Use of the CMP in Concert with the MLUL

Several of the suggestions mentioned in this report refer to provisions contained in the CMP or the Municipal Land Use Law (MLUL). There are in fact strong similarities in the type of authority vested by both in local governments. As an example, the MLUL now authorizes both non-contiguous clustering (NCC) and Transfer of Development Rights (TDR), whereas the CMP authorizes on-site clustering, Density Transfer Programs (DTP) and Pinelands Development Credits (PDC's). This overlap raises at least two questions, specifically: 1) Under what conditions is each the better alternative?; and 2) Under what conditions can the TDR and non-contiguous clustering provisions of the MLUL be used in the Pinelands? The discussion below suggests an approach to decide which program is more suitable to a given situation in terms of its use in the various management areas.

In the **Rural Development Area** and **Forest Area (RDA/FA)**, a determining factor would be the relative sensitivity of the land. Areas containing sensitive lands could have mandatory on-site clustering to the extent there is sufficient land deemed environmentally suitable to accommodate the units. Sites which have extensive areas of sensitivity could be designated sending areas for the DTP program, and/or areas for mandatory off-site clustering. Areas which appear too sensitive for on-site development might also receive PDC's which could be used in designated receiving areas. The NCC provisions of the MLUL would not seem to apply to such lands, save for these lands contributing to noncontiguous clusters at another location. The MLUL's TDR provisions could apply to sensitive

lands in the FA/RDA, again to the extent that these lands would be sending areas.

In less or non-sensitive RDA/FA areas, the site could be designated a DTP receiving area or be slated for either optional or mandatory on-site clustering. The allocation of PDC's to these areas would be unnecessary given their greater on-site development potential. However, landowners could use the NCC provisions of the MLUL to cluster units transferred from off-site areas. This approach might be combined with the Pinelands DTP. Use of TDR authorized through the MLUL could also occur in such circumstances.

In **Villages, Towns, and Regional Growth Areas**, sensitive areas would again be the setting for mandatory on-site clustering to the extent the area could support it. Alternatively, the land could be used to generate density for off-site, i.e., noncontiguous, clustering (NCC). The density could also be transferred to specified DTP receiving areas, or the density could be shifted to other parts of the municipality or outside the Pinelands via a TDR program. (The former would require an amendment to the CMP's DTP program, as it currently pertains only to the Forest and Rural Development Areas.) Regarding both non-contiguous clustering or transfers outside the Pinelands or from the Regional Growth Areas, the Commission would want to determine that the actions would not affect the viability of the PDC program. Therefore, in situations where PDC's could be used, the types of transfers discussed here would be possible only after PDC's were transferred into or off of the site. It goes without saying that TDR actions between Pinelands management areas should ensure that density only moves from less dense management areas. The presence of extensive tracts of sensitive lands may also argue for rezoning that area to a more protective designation.

For non-sensitive areas, the approaches might include optional on-site clustering, noncontiguous clustering, increases in density through the PDC program, or receiving areas for the DTP program. In the case of the MLUL's noncontiguous clusters, this approach should occur only after PDC use. The same is true for the TDR program.

While the above discussion is wide ranging, a "simple" package of CMP amendments could be crafted. What follows is an "illustrative package." Each provision has positive and negative aspects but, overall, each item in the package seems to have more pluses than minuses. Items noted with an "X" will require amendments to the CMP. For other items, see the asterisk (*) at the bottom of the chart.

Table 5 Illustrative CMP Package		
Suggested Policy	Forest Area	Rural Development Area
Consider offering bonus density for cluster development	X	sensitive areas
Make clustering a matter of right; categorize non-clustering/conventional developments as "conditional uses"	X	X
Permit clustering on 1 acre lot sizes	X	currently permitted
Permit clustering of any size, i.e., no minimum tract size or number of units	X	X

Do not authorize reductions of 300' wetland buffer unless clustering is utilized	X	X
Permit community wastewater treatment systems for clusters	X	X
Eliminate full parcel t/e survey for clusters—focus on development area	See below (*)	See below (*)
Eliminate full parcel cultural resource survey if cluster-focus on development area	See below (*)	See below (*)

* This approach is already permitted in part both by the CMP and in practice. It would be useful, however, to clarify this approach as a means to encourage clustering.

There may also be an opportunity to apply the principles of clustering to non-residential developments. As an example current regulations do not allow individuals proposing commercial uses in the Forest or Rural Development Areas to essentially get septic dilution credit for adjacent commonly owned lands. Expanding the possibilities for clustering techniques can create more opportunities for land owners in these areas.

PLEASE NOTE: THE QUESTIONNAIRES SENT TO THE MUNICIPALITIES CONTAINED SPACES FOR ANSWERS. TO SAVE ROOM IN THIS DOCUMENT, THE SPACES HAVE BEEN COMPACTED. ORIGINAL VERSIONS OF THE QUESTIONNAIRE ARE AVAILABLE AT THE COMMISSION FOR THOSE WHO WISH TO SEE THEM.

APPENDIX A.1

QUESTIONNAIRE FOR MUNICIPALITIES WHICH PERMIT CLUSTERING IN FOREST AREA AND/OR RURAL DEVELOPMENT AREA

Name of Municipality: _____

Lands in: Forest Area ____ Rural Development Area ____

Clustering Allowed in: Forest Area ____ Rural Development Area ____

Clustering Allowed in (Zones/Management Areas):

Minimum Tract Size? Yes ____ (please specify) _____
No ____

Minimum Number of Lots or Units? Yes ____ (please specify) _____
No ____

Open Space Requirements, e.g., % age of site? _____

Provisions for Open Space: dedicated to town ____; homeowners association ____; other ____
(specify) _____

Requirement that open space connect to open space in adjacent areas/developments? Yes ____
No ____

If you have lands in both the Forest and Rural Development Area, but allow clustering in only one management area, why did you make this distinction? Continue answer on an additional sheet of paper if you wish.

If you have more than one residential zone in a management area, but do not permit clustering in all these zones, why did you make this distinction? Continue answer on an additional sheet of paper if you wish.

What were the factors that determined where clustering would be permitted?
Overall lot size ____ Ownership patterns ____ Road access ____ Other (please specify below)

Do you permit clustering in other parts of the Pinelands Area? Yes ____
No ____ (If “yes,” please specify where, and briefly describe provisions, e.g., minimum tract size, Number of units, any incentives?)

Do you permit clustering in zones outside the Pinelands Area? Yes ____
No ____ (If “yes,” please specify where, and briefly describe provisions—see above)

What advantages do you see in permitting cluster developments for your town? Check all that apply and list additional items if appropriate.

- | | |
|--|--|
| <input type="checkbox"/> Protect sensitive areas | <input type="checkbox"/> Protect other important resources, e.g., scenic, historic |
| <input type="checkbox"/> Provide open space | <input type="checkbox"/> Reduce sprawl |
| <input type="checkbox"/> Save on infrastructure | <input type="checkbox"/> Save on municipal services, e.g., trash, snow removal, school buses |
| <input type="checkbox"/> Other (please list) | |

What disadvantages do you see in permitting cluster developments in your town? Check all that apply and list additional items if appropriate.

- | | |
|---|--|
| <input type="checkbox"/> Increased density | <input type="checkbox"/> Maintenance of open space areas |
| <input type="checkbox"/> Difficult site plan review | <input type="checkbox"/> Public perception |
| <input type="checkbox"/> Other (please list) | <input type="checkbox"/> Use of alternative wastewater systems |

Would you support mandatory clustering in certain areas? Yes ___ No ___
If "yes", where and under what circumstances and conditions?

What changes to the Pinelands regulations do you think would be necessary to encourage cluster development?

Have you considered using the Pinelands Density Transfer Program as a tool to encourage clustering? Yes ___ No ___ Please explain why or why not.

What role do you think the Pinelands Commission should play in encouraging clustering?

Would you be interested in attending/participating in a workshop on clustering, if the Pinelands Commission offers one? Yes ___ No ___

ADDITIONAL COMMENTS/SUGGESTIONS

Name(s) of Person/Position Filling Out Questionnaire (optional) _____

Date: _____

APPENDIX A.2

QUESTIONNAIRE FOR MUNICIPALITIES WHICH DO NOT PERMIT CLUSTERING IN THEIR FOREST AREA AND/OR RURAL DEVELOPMENT AREA

Name of Municipality _____

Lands in: Forest Area _____ Rural Development Area _____

Have you considered allowing cluster developments in the Forest Area or Rural Development Area zones? Yes, Forest Area _____ Yes, Rural Development Area _____ No _____

If “yes,” what is the status of these discussions?

If “no,” can you explain your rationale for not considering clustering?

Do you permit clustering in other parts of the Pinelands Area? Yes ___ No ___

If “yes,” please specify where, and briefly describe provisions, e.g., zone, conventional vs cluster minimum lot size/density, minimum tract or lot size to use clustering option, provisions for maintenance of open space.

Do you permit clustering in zones outside the Pinelands Area? Yes ___ No ___

If “yes, specify what zones, and briefly describe provisions—see above.

What advantages do you see in permitting cluster developments for your town? Check all that apply and list additional items if appropriate.

- | | |
|--|--|
| <input type="checkbox"/> Protect sensitive areas | <input type="checkbox"/> Protect other important resources, e.g., scenic, historic |
| <input type="checkbox"/> Provide open space | <input type="checkbox"/> Reduce sprawl |
| <input type="checkbox"/> Save on infrastructure | <input type="checkbox"/> Save on municipal services, e.g., trash, snow removal, school buses |
| <input type="checkbox"/> Other (please list) | |

What disadvantages do you see in permitting cluster developments in your town? Check all that apply and list additional items if appropriate.

- | | |
|---|--|
| <input type="checkbox"/> Increased density | <input type="checkbox"/> Maintenance of open space areas |
| <input type="checkbox"/> Difficult site plan review | <input type="checkbox"/> Public perception |
| <input type="checkbox"/> Other (please list) | |

Would you support mandatory clustering in certain areas? Yes ___ No ___

If “yes”, where and under what circumstances and conditions?

What changes to the Pinelands regulations do you think would be necessary to encourage cluster development?

Have you considered using the Pinelands Density Transfer Program as a tool to encourage clustering?

Yes ___ No ___ Please explain why or why not.

What role do you think the Pinelands Commission should play in encouraging clustering?

Would you be interested in attending/participating in a workshop on clustering, if the Pinelands Commission offers one? Yes ___ No ___

ADDITIONAL COMMENTS/SUGGESTIONS

Name(s) of Person/Position Filling Out Questionnaire (optional)_____

Date:_____

APPENDIX B

MODEL CONSERVATION SUBDIVISION (“CLUSTERING”) ORDINANCE

Note: Elements which are meant to be tailored at each municipality’s discretion are indicated in parentheses “()” and in bold.

I. Purpose.

A. The purpose of this article is to permit the development of single-family residential patterns known as conservation subdivisions, also referred to as cluster subdivisions, which, through

design innovation, will provide for an alternate means of residential development in (**Zones _____**). Use of this Article shall result in no more units permitted on the site than would be permitted under conventional zoning. The objectives for conservation subdivision design are to:

1. Allow for greater flexibility and creativity in the design of residential subdivisions, provided that the overall density of the development is no greater than that which is normally allowed in the zone;
2. Encourage the permanent preservation of open space, agricultural lands, forest lands, and other natural resources, historic and environmental features, and encourage a less sprawling form of development that consumes less open land;
3. Facilitate the construction of streets, utilities, and public services in a more economical and efficient manner;
4. Ensure that residential developments respect the natural features of the land, including, wetlands, watercourses, forests, agricultural land, steep slopes, plants, wildlife, historic sites, scenic areas, and rural character; and
5. Provide wildlife corridors and open space areas connecting to adjacent open space areas.

II. Definitions

COMMON OPEN SPACE: Undeveloped land within a conservation subdivision that has been designated, dedicated, reserved or restricted in perpetuity from further development and is set aside for the use and enjoyment by residents of the subdivision or, if dedicated to a public agency, for public use as specified by that agency. Uses shall be limited to low intensity recreation as defined in N.J.A.C. 7:50-2.11. Common open space shall not be part of individual residential lots, and shall be substantially free of structures

COMMON FACILITIES: Includes recreational facilities, stormwater management facilities, common parking areas and driveways, private streets and other common or community facilities within a conservation subdivision.

CONSERVATION EASEMENT: The grant of a property right or interest from the property owner to another person, agency, unit of government, or organization stipulating that the described land shall remain in its natural, scenic, open or wooded state, and precluding any future or additional development.

CONSERVATION SUBDIVISION: A development that concentrates residential lots and uses on specific portions of a development site by permitting lots smaller than the otherwise required minimum lot size for the zoning district in order to reserve the remaining land as common open space where use of such open space is restricted by easement or some similar legal mechanism.

PRIMARY CONSERVATION AREA: Consists of unbuildable areas such as wetlands, water bodies, floodplains and steep slopes.

SECONDARY CONSERVATION AREA: Consists of lands whose features make them desirable for preservation, including but not limited to mature woodlands, upland buffers around wetlands and water bodies, prime farmland, natural meadows, critical wildlife habitat, and sites of historic, cultural, or archaeological significance.

YIELD PLAN: A plan prepared in accordance with underlying zoning and subdivision regulations which documents and quantifies the permitted number of units for a given parcel.

III. Approval of Conservation Subdivision Housing Plans

The Planning Board shall allow conservation subdivision development on parcels of **(10)** acres and larger. As part of the development plan for such a conservation subdivision, individual lot sizes may be reduced in return for the preservation of open space. The developer shall submit a written application to the Planning Board for a conservation subdivision. The application shall include the following:

- A. A “yield plan” showing the layout as a standard subdivision;
- B. A “conservation subdivision plan”, utilizing the number of units generated in the “yield plan” in III.A. above and indicating open space and significant natural features.
- C. All other information required to be shown on maps as specified in the appropriate sections of the subdivision/land use ordinance, and including at least the following:
 1. The name of the owner;
 2. The number of lots in the proposed subdivision or land development;
 3. The zoning district and requirements;
 4. Existing structures in the portion to be subdivided or developed;
 5. Existing structures within 200 feet of the development area;
 6. Existing wooded area in the portion to be developed.
 7. The name and address of all adjoining land owners;
 8. The portion of the tract to be subdivided or developed;
 9. Stream (and direction of flow) through tract and within 200 feet of tract;
 10. Existing utility easements, floodplain easements, conservation easements and rights-of-way;
 11. A key map at a scale of one inch equals 2,000 feet, clearly showing the location of the proposed subdivision or land development within the township and in relation to major streets and political boundaries;
 12. Existing and proposed streets and other proposed improvements;
 13. Soil type, limitation, and classification;
 14. Topography and existing and proposed drainage patterns;
 15. Area(s) to be set aside for stormwater management; and

16. All other items as required by the Pinelands Commission in accordance with NAC 7:50-4.1 et seq.

D. A statement as to the provisions for responsibility of the open space.

IV. Standards for Conservation Subdivision Development

A. Conservation subdivisions shall meet all requirements for a subdivision and all other applicable municipal ordinances, except lot size and frontage.

B. Each structure shall be an element of an overall plan for site development. Only developments having a total site plan for structures will be considered. The applicant shall illustrate the placement of structures and the treatment of spaces, paths, roads and parking and in so doing shall take into consideration all requirements of this Ordinance.

C. No lot shall be smaller than **(one (1.0) acre)**. No lot shall be larger than **(two(2.0) acres)**.

D. All lots within a conservation subdivision shall meet the front, rear and side requirements shown in Table 1. (Dimensional and Density Requirements for Conservation Subdivisions) **(NOTE: There is no table provided here as this is a municipal decision based on the lot size specified by zone. The requirements for front, rear and side setbacks and distance between buildings could be reduced proportionate to the reduction in lot size from the standard subdivision.)**

E. Each structure shall be integrated into the existing landscape on the parcel so as to minimize its visual impact through use of vegetative screening and landscaping using compatible trees and shrubs.

F. All portions of the parcel not used for building lots shall be placed in protected common open space in accordance with Section VI .of this Article, but not less than **(50%)** of the total parcel area shall be designated common open space.
structure.

G. Design standards for the development site shall include:

1. The area of the parcel slated for residential development and associated disturbance shall be as small as possible so as to maximize the open space benefits.

2. The area selected for construction shall be that portion of the tract where development will cause the least environmental impacts, including but not limited to the following:

- a. the farthest possible distance from wetlands and wetlands buffers, known habitat for threatened and endangered species, adjacent open space, and other environmental assets categorized as Secondary Conservation Areas; and
- b. in proximity to other development, roads, infrastructure, and other disturbed areas

V. Design Standards for Common Open Space

On all parcels developed under the conservation subdivision option, at least **(50%)** of the total parcel area shall be set aside as protected common open space. Protected common open space shall meet the following design standards:

A. The location of the common open space shall be consistent with the objectives of the municipal master plan and, if one has been prepared, the municipal open space plan.

B. All open space areas shall be part of a larger contiguous and integrated open space system within the parcel being developed. At least **(75%)** of the total common space land areas shall be contiguous. In no case shall there be more than **(three)** disjunct open space parcels within the tract.

C. Where possible, all dwelling units shall have access to common open space and preservation areas without the obstruction of intervening lots, structures, fences or other impediments to pedestrians. Access to open space may be provided by pedestrian easements rather than direct access.

D. The common open space area shall maximize common boundaries with existing open space on adjacent lands. It shall also maximize common boundaries with future open space on adjacent lands as shown in the municipal master plan, county open space plan or the master plan of an adjacent municipality.

E. Common open space may be used for low intensive recreational uses as these are defined in N.J.A.C. 7:50-2.11, for the use of the residents of the subdivision. In cases where the preserved open space has been dedicated to the municipality or some other entity, that party may, at its discretion, permit access to other residents of the town for low intensity recreational uses.

F. Natural features shall generally be maintained in their natural condition, but may be modified to restore their overall condition and natural processes as recommended by natural resource professional and in compliance with an approved Open Space Management Plan as described in Section VI.C. Permitted modifications may include the following activities conducted in accordance with the standards authorized by the Pinelands Comprehensive Management Plan at N.J.A.C. 7:50:

1. Woodland management;
2. Reforestation;
3. Wetlands management;
4. Streambank stabilization and protection;
5. Buffer area landscaping.

VI. Ownership and Maintenance of Common Open Space and Facilities

To ensure adequate planning for ownership, operation and maintenance of common open space, the following regulations shall apply:

- A. Ownership. Ownership methods shall conform to one of the following:

1. Homeowners Association. Common open space and facilities shall be held in common ownership as undivided proportionate interests by the members of a homeowners association.

2. Fee Simple Dedication to a Public Agency. The municipality or any other public agency acceptable to the municipality may, but shall not be required to, accept any portion of the common open space and facilities.

3. Dedication of Conservation Easement to a Public Agency. The municipality or any other public agency acceptable to the municipality may, but shall not be required to, accept any portion of the common open space facilities.

4. Fee Simple Dedication to a Nonprofit Conservation Organization. With the approval of the municipality, an applicant may dedicate any portion of the common open space and facilities to a nonprofit conservation organization.

5. Ownership Retained by the Original Landowner. Ownership of common open space and facilities may be retained by the original landowner provided that the municipality and residents of the development shall hold conservation easements on the land protecting it from further development.

6. Other methods acceptable to the Planning Board upon recommendation by the municipal attorney.

B. Maintenance and Operation of Common Facilities

1. A plan and narrative for the use, maintenance and insurance of all common open space and facilities, including provisions for funding, shall be provided to and approved by the Planning Board prior to preliminary plat approval. Such plan shall:

- a. Define ownership
- b. Establish necessary regular and periodic operation and maintenance responsibilities
- c. Estimate staffing needs, insurance requirements, and other associated costs and define the means for funding the same on an ongoing basis
- d. Include an Open Space Management Plan specifically focused on the long-term management of the open space. A draft plan shall be submitted with a preliminary plat, and a final plan shall be submitted with the final plat. The Open Space Management Plan shall comply with the requirements of Subsection VI.C.

e. At the discretion of the Planning Board, the applicant may be required to place in escrow, sufficient funds for the maintenance and operation of common facilities for **(one year)**.

2. In the event that the association established to own and maintain common open space and facilities, or any successor organization thereto, fails to properly maintain all or a portion of the aforesaid common open space and facilities, the municipality may serve written notice upon such

association setting forth the nature of corrections required and the time within which the corrections shall be made. Upon failure to comply within the specified time frame the association, or any successor organization, shall be considered in violation of this ordinance, in which case the municipality shall have the right to enter the premises and take corrective action. The costs of corrective action by the municipality shall be assessed against the properties that have the right of enjoyment of the common open space and facilities.

C. Open Space Management Plan. The Open Space Management Plan shall include a narrative describing:

1. Existing conditions, including all natural, cultural, historic and scenic elements in the landscape; and
2. Objectives for each common open space area, including:
 - a. The proposed end state for the area and the measures proposed for achieving the end state
 - b. Proposed restoration measures, including:
 - i. Measures for correcting increasingly destructive conditions, such as erosion
 - ii. Measures for restoring historic features
 - iii. A maintenance and operations plan identifying activities needed to maintain the stability of the resources, including mowing schedules, weed control measures, planting schedules and clearing and cleanup measures and schedules.

VII. All Ordinances and parts of Ordinances inconsistent herewith are hereby repealed.

VIII. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by a Court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

IX. This Ordinance shall take effect upon final passage, adoption and publication in the manner prescribed by law.

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