



Transfer of Development Rights

2008

Prepared by State of New Jersey Highlands Water Protection and Planning Council in Support of the Highlands Regional Master Plan

**Technical
Report**

HIGHLANDS REGIONAL MASTER PLAN

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EXECUTIVE SUMMARY

Transfer of development rights (TDR) is an important tool authorized by the Highlands Act to achieve the Regional Master Plan's overarching goal of protecting and enhancing the significant values of Highlands resources. This technical report begins with a detailed discussion of the legal requirements and information that shaped development of the Highlands TDR Program. It then highlights the elements of the TDR Program that have been incorporated into the Regional Master Plan. Specifically, the program (1) establishes a procedure that awards TDR credits called Highlands Development Credits or HDCs to designated Sending Zone landowners; (2) allows HDCs to be allocated to a lot based upon its lost development potential adjusted for the real estate market variability across the Highlands Region; (3) allows HDCs to be sold on the private market to a developer who wants to construct within a designated TDR Receiving Zone at a higher density than that permitted by the underlying zoning; (4) establishes a Highlands Development Credit Bank that will serve as a buyer of last resort of HDCs, will serve as a seller of HDCs, will record and track all HDC activity, and will review annually the minimum HDC price established by the Highlands Council; and (5) allows municipalities that have designated Receiving Zones to be eligible for an enhanced planning grant and other incentives, including the ability to assess impact fees.

INTRODUCTION

Undeveloped lands are a finite resource, which serve a number of important uses. In the Highlands Region, these lands provide drinking water for Highlands residents and nearly half the State's population. Protecting and enhancing these undeveloped lands and the resources on and within them is the primary objective of the Highlands Water Protection and Planning Act (Highlands Act). As a means of achieving this objective, the Highlands Act empowers the Highlands Council to develop and implement a transfer of development rights (TDR) program for the Highlands Region.

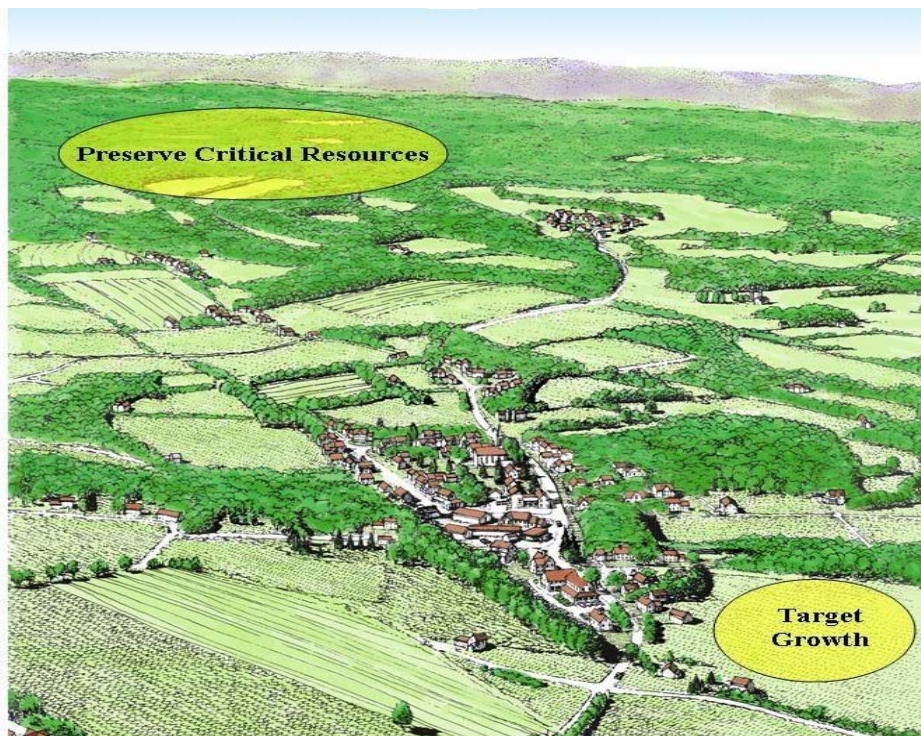
At its essence, TDR is a straightforward concept: protect certain lands with important ecological and agricultural resources by removing their development potential and allow that development potential to be transferred to areas that are suitable for increased growth. In exchange for removing development potential on the land, a landowner receives compensation in the form of development rights which may later be sold to a developer who will build in the areas that are suitable for increased growth.

Although the concept of TDR is relatively simple, development and implementation of a TDR program is difficult. Hard choices must be made regarding which lands are to be protected, which lands can accommodate more growth, what the value of a development right is, and what those rights can be used for. Once the program is designed, it must be constantly monitored to ensure that a balance is maintained between the severance of development rights and their use in appropriate areas.

TRANSFER OF DEVELOPMENT RIGHTS – WHAT IS IT?

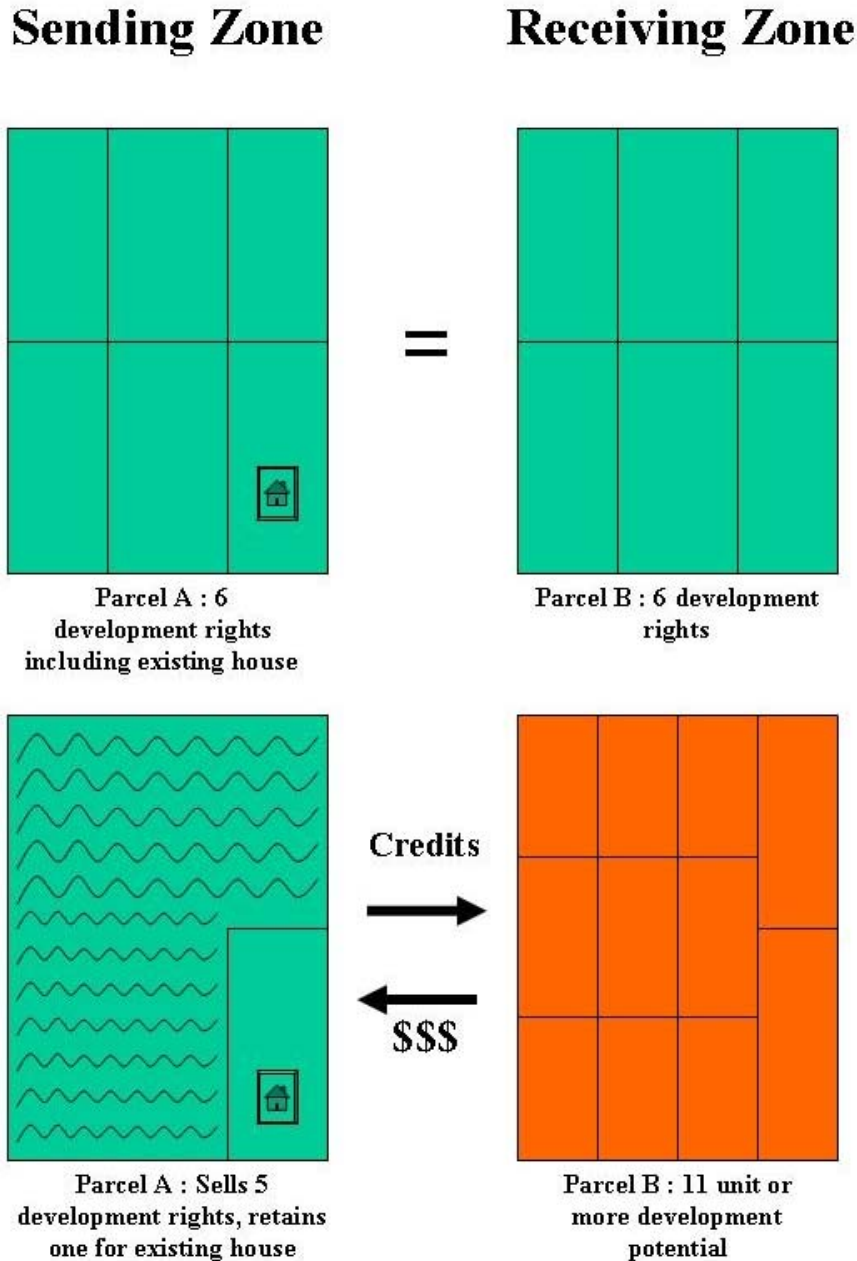
TDR has been described as a land use tool that permits a community to utilize market forces to encourage the transfer of development potential from areas that the community wants to preserve, called Sending Zones, to areas that are more appropriate to accommodate increased growth, called Receiving Zones (see Figure 1 – *Example Sending Zone & Receiving Zone*). (Pruetz, 2003)

Figure 1 – Example Sending Zone & Receiving Zone



Landowners in the Sending Zones receive compensation for restricting development on their property. As a market-based system, payment for this lost development potential comes from purchasers who buy credits representing the lost development potential in the Sending Zones. The credits then entitle the purchaser to build in a Receiving Zone at a density greater than that permitted in the underlying zoning (see Figure 2 – below).

Figure 2 – Concept of TDR



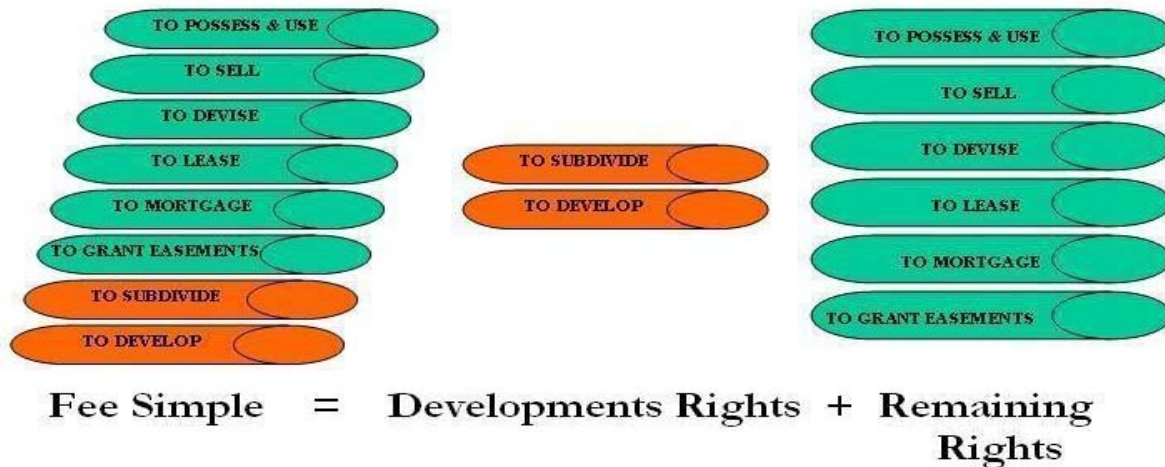
TDR has become an increasingly popular land use tool to preserve lands with sensitive resources, whether those resources are environmental, agricultural, or historical. In New Jersey, TDR programs have been established to preserve large contiguous parcels of farmland to maintain agricultural viability, such as the programs in Chesterfield and Lumberton Townships in Burlington County, while in the New Jersey Pinelands TDR is used to preserve tracts of ecologically important lands to maintain ecosystem health and high water quality. TDR is also utilized to preserve historic buildings such as those programs

in New York City and San Francisco.

TDR seeks to use market forces to pay for the preservation of properties with unique resources where government funding is limited to acquire the property outright. There is little doubt that governments have competing demands for their limited financial resources. School construction or improvement, road and sewer extensions, police and fire services, and other municipal services all require significant municipal budget allocations. Preserving lands with specific ecological, agricultural or historical importance is just one of many costs that must be borne by government. TDR aids governments in achieving the preservation of these important lands by compensating landowners for the development restrictions imposed on those properties through sale of development rights for use in designated receiving areas.

TDR recognizes – as a legal matter – that the development potential of a parcel of land may be separated from the other rights of landownership, such as the rights to possession and exclude others (see Figure 3 – *Property Rights*).¹ TDR also recognizes that this development potential is transferable from one specific parcel to another. (Schnidman, 1977) Once a parcel’s development potential is severed, the parcel is encumbered with either a deed restriction or conservation easement generally limiting its future use to its current use. Underlying ownership of the encumbered parcel remains with the existing landowner until he or she decides to sell the parcel. As for the TDR credit, once it has been redeemed (i.e. it has been used to increase development density or intensity in a Receiving Zone) it can never be used again.

Figure 3 – Property Rights



In addition to understanding what TDR is, it is equally important to understand what TDR is not. First and foremost, TDR is not the “cure-all to the inequities of contemporary land development regulations.” (Siemon, 1997) It simply represents another tool, in addition to current State preservation programs administered by the State Agriculture Development Committee (SADC) and the Green Acres Program at the Department of Environmental Protection (NJDEP), to provide affected landowners with compensation in return for the transfer of their development rights. “The reality was and is that no

¹ Although landowners have a right to use their property, this right is not unrestricted. For example, the right to develop property is not absolute. In New Jersey, the law does entitle a landowner to reasonable use of his or her land, but it does not require that the land be put to the most profitable use. See *Fischer v. Township of Bedminster*, 11 N.J. 194, 206 (1952); see also *Gardner v. New Jersey Pinelands Commission*, 125 N.J. 193 (1991) (“For there exists no constitutional right to the most profitable use of property.”) The New Jersey courts have long recognized that municipalities have the power to control the use of property under the police power, but they possess that power only insofar as it is delegated to them by the Legislature. See *Riggs v. Township of Long Branch*, 109 N.J. 601, 610 (1988).

program is a panacea, and while TDR can be a viable and legal response to the harsh impacts of restrictive [land use] regulation, it is not, more than any other program, a perfect solution.” (Simon, 1977)

Second, TDR is not, nor is it ever meant to be synonymous with “just compensation” as that term is understood in the context of the Fifth Amendment of the U.S. Constitution or Article I, paragraph 20 of the State constitution. Simply because a regulation, such as the Highlands Rules, has an effect on the value of property, does not mean that a taking has occurred. “Mere diminution in the value of property, however serious, is insufficient to demonstrate a taking.” (Lackland and Lackland v. Readington Township, 2005 WL 3074714 (Sup. Ct. L. Div)). To prevail on a takings claim, a landowner must show more than a substantial decrease in market value when the regulation is designed to achieve a legitimate government objective. For example, in Bernardsville Quarry v. Borough of Bernardsville, 129 N.J. 221 (1992), even a 90% reduction in value did not constitute a taking. The law does entitle a landowner to reasonable use of his or her land, but it does not require that the land be put to the most profitable use. (Fischer v. Township of Bedminster, 11 N.J. 194 (1952)).

BASIC ELEMENTS OF A TDR PROGRAM

There are a number of essential elements to any TDR program. The first is the identification of Sending and Receiving Zones. Sending Zones represent the areas which a municipality or regional entity desires to protect. They are the areas from which development potential is transferred or sent out. Receiving Zones represent those areas that will accommodate the transferred development potential. These zones should have the infrastructure capacity, ecological integrity and real estate market to support increased development and its attendant growth impacts.

Generally, both Sending Zones and Receiving Zones are identified at the outset of a TDR program and are incorporated into the overall zoning scheme as either specific zoning districts or overlay zones. Sending Zone identification tends to be the simplest step in establishing a TDR program because there is usually consensus regarding the need to protect specific resources. Identification of Receiving Zones tends to be more difficult. In addition to the issue of whether a potential Receiving Zone has the ecological integrity and infrastructure capacity to accept increased development, there is often the issue of the receiving municipality’s interest in accepting that density.

Another basic component of any TDR program is a determination of what development rights are going to be severed from Sending Zone parcels and available for sale and use in Receiving Zones. The process of defining what these rights are and what they entitle a purchaser to do with them is known as allocation. Transferable development rights are often expressed in the form of credits which serve as a proxy for the development potential that is restricted on Sending Zone parcels. How TDR credits are allocated varies among TDR program. For the most part, however, there are three means of allocating credits: (1) based upon the number of lost units or square footage; (2) based upon the gross acreage of given land characteristics (e.g. wetlands or uplands); or (3) based upon the value of the lost development potential.

How TDR credits are valued is another important aspect of a TDR program. The cost of a TDR credit is inextricably linked to how TDR credits are allocated, what those credits allow a purchaser to do in a Receiving Zone, and the number of opportunities for use of the credits. For example, where credits are allocated on a unit basis (e.g. 1 single-family dwelling equals 1 TDR credit), the price of those credits will be tied to the value attributable to use of those credits in a Receiving Zone. In such a system, the market will determine what a credit purchaser is willing to pay for use of the credit to build one additional unit in a Receiving Zone. As noted by a number of commentators, an active and vital market for use of TDR credits is necessary to ensure adequate value for such credits. (Simon, 1989)

A TDR program must also have a process for recording, transferring, and tracking credits from a parcel

in a Sending Zone to their use in a Receiving Zone. This requires that an administrative and legal framework be established to carry out these activities. Generally, a TDR program will utilize a form of TDR certificate which indicates the number of credits allocated to a given parcel in a Sending Zone. This certificate is transferred to the purchaser of the credits and then retired when the credits are used in a Receiving Zone project.

Frequently, a TDR program will use a model conservation restriction or easement. This legal document sets forth the land uses that are prohibited after development potential is severed from a Sending Zone parcel, and will also state which uses remain. A Sending Zone landowner will tailor the model easement to the particulars of his or her property and then file the easement with the proper recording agency. Under most TDR programs, the filing and recording of the conservation restriction is required before TDR credits will be issued to a parcel.

A number of TDR programs also utilize a TDR credit bank to support program administration. This bank will serve as the clearinghouse for information regarding the program and will administer the recording, transferring and tracking of TDR credits. In addition to serving these administrative functions, a TDR credit bank may also assist sellers and purchasers of TDR credits by providing or serving as a buyer or seller of last resort of TDR credits, or guaranteeing loans utilizing the TDR credits as collateral. Commentators have suggested that the existence of a TDR credit bank establishes credibility for a TDR program, particularly where the bank is able to purchase and sell credits. In such a case, landowners and developers see that there is a market for the credits, and that the credits have value. (Machemer, Kaplowitz, Edens, 1999) Where a bank does not actively buy and sell TDR credits, the bank often facilitates private transactions by bringing buyers and sellers together.

Lastly, TDR programs may either be voluntary or mandatory. Under voluntary programs, a community identifies Sending Zones by adopting overlay zones, but the underlying zoning remains in place. A landowner within the overlay Sending Zone may either build at the density prescribed in the underlying zoning or agree to voluntarily restrict his or her property upon the sale of the property's development rights for use in a Receiving Zone. In a mandatory TDR program, the Sending Zone landowner has no discretion as to whether or not to abide by the new development restrictions that have been enacted. (Machemer, Kaplowitz, Edens, 1999)

HISTORY OF TDR

The general concept of TDR was first introduced in 1961 in an article by Gerald Lloyd published by the Urban Land Institute. (Fulton, Mazurek, Pruetz, Williamson, 2004) Mr. Lloyd proposed extending the concept of clustering, which permits developers to concentrate development on one portion of a single parcel to preserve unique features (i.e. transferring density around a single site), to allow developers to transfer development between parcels. This would permit the transfer of development to parcels that were better able to accommodate development. (Fulton, Mazurek, Pruetz, Williamson, 2004)

New York City developed the first TDR program in the country to permit the severance and sale of development rights from one parcel to another not under the same ownership for the purpose of preserving historic landmarks. (Stevenson, 1998) Instituted in 1968 through an amendment to the New York Zoning Resolution, owners of designated historic landmarks could transfer the development potential of those sites to lots across the street or intersection. (Giordano, 1998) (Previously, transfers of development potential could only be made to adjoining lots under the same ownership.) This amendment provided landmark owners with additional opportunities to sell their development potential, and benefited them by increasing opportunities for the realization of economic gain. Although this program was the subject of a U.S. Supreme Court decision in 1978, the Court never ruled on the validity of the transfer mechanism or TDR in general.

Subsequent to New York City's TDR program, TDR programs were established in Southampton

Township, New York in 1972; Buckingham Township, Pennsylvania in 1975; and Eden, New York also in 1975. Calvert County, Maryland developed one of the first TDR programs to specifically protect farmland in 1978. (Machemer, Kaplowitz, Edens, 1999)

In New Jersey, the first efforts at introducing state-wide TDR in the State Legislature occurred in the mid-1970s. (Beetle, 2003) At the municipal level, TDR programs were attempted in Hillsborough and Chesterfield Townships, in Burlington County in 1975. (Machemer, Kaplowitz, Edens, 1999) These initial efforts generally proved unsuccessful, but laid the foundation for adoption of the TDR program in the New Jersey Pinelands in 1981. Adoption of the Pinelands Development Credit program was followed by the establishment of the Burlington County TDR pilot project in 1989, and programs in Chesterfield and Lumberton Townships. Then in March 2004, the State Legislature enacted the State Transfer of Development Rights Act, N.J.S.A. 40:55D-137 et seq. Each of these programs is discussed more fully below.

LEGALITY OF TDR

The U.S. Supreme Court first examined the use of TDR in 1978, in Penn Central Transportation Company v. New York City, 438 U.S. 104 (1978). In that case, Penn Central Transportation Company owned the historic Grand Central Terminal and several surrounding properties in New York City. It sought to construct a 55-story office tower above Grand Central Terminal, but the company was prohibited from doing so under the City's Landmarks Preservation Law. (Miller 1999) However, Penn Central was entitled to TDR credits as a proxy for the prohibited development, which it could utilize to develop the air space above adjacent properties Penn Central owned. Penn Central argued that the development restrictions imposed by the Landmarks Preservation Law amounted to an unconstitutional regulatory taking in violation of the Fifth Amendment. The Supreme Court found that the development restrictions imposed by the Landmarks Preservation Law did not result in a taking. Important in its decision was the fact that the air rights above the Terminal could be transferred to other parcels. Specifically the Court stated:

Although appellants and others have argued that New York City's transferable development-rights program is far from ideal, the New York Courts here supportably found that, at least in the case of the Terminal, the rights afforded are valuable. While these rights may well have not constituted "just compensation" if a "taking" had occurred, the rights nevertheless undoubtedly mitigate whatever financial burdens the law has imposed on appellants and, for that reason, are to be taken into account in considering the impact of regulation. (Penn Central Transportation Co. v. New York City, 438 U.S. 104, 137 (1978))

It must be noted that the Supreme Court did not specifically address the legality of TDR. It merely supported TDR implicitly by recognizing that the transferable development rights should be considered in determining the economic impact of the Landmarks Preservation Law.

The Supreme Court reexamined the use of TDR in Suitum v. Tahoe Regional Planning Agency, 520 U.S. 725 (1997). Under the land use regulations promulgated by the Tahoe Regional Planning Agency, Bernadine Suitum was prohibited from developing her property because it lies within a "Stream Environment Zone." However, the property was given a transferable development right, which could be sold for use on other properties within the Tahoe region, to limit the economic impact imposed by the agency's regulations. Mrs. Suitum sued the agency arguing that the prohibition on development amounted to a regulatory taking. As in Penn Central, the Supreme Court did not rule on the validity of TDR, but held that Mrs. Suitum did not have to attempt to sell her TDR for her to have her day in court.

Like the Supreme Court in Penn Central and Suitum, the New Jersey Supreme Court has not specifically ruled on the legality of TDR. However, the court has implicitly recognized TDR as a legitimate land use tool in the context of a comprehensive land use management system. In Gardner v. Pinelands Commission, 125 N.J. 193 (1991), Hobart Gardner, a farmer who owned 217 acres in the Pinelands, sought to overturn the Pinelands Comprehensive Management Plan (“CMP”) that had been adopted by the New Jersey Pinelands Commission (“Commission”). Gardner claimed that the land use restrictions imposed on his property, including the requirement that his property remain in agricultural production with limited development options, resulted in an unlawful taking requiring compensation from the State. After the State refused payment, Gardner filed an action for inverse condemnation against the Commission. The New Jersey Supreme Court found that the CMP did not constitute a taking of Mr. Gardner’s property. It noted that he continued to have several viable, economically-beneficial uses of his land under the revised CMP, including continuing its use as farmland. Similar to the U.S. Supreme Court’s decision in Penn Central, the availability of TDR also served as an important factor in determining whether the economic impacts imposed by the CMP went too far and constituted a regulatory taking.²

From the above cited case law, it is clear that the use of TDR has been recognized as a legitimate tool to offset the economic effects of development restrictions imposed to secure important public benefits, such as the preservation of sensitive resources.

TDR PROGRAM DEVELOPMENT

Development of the Highlands TDR program has been framed by the TDR provision of the Highlands Act, the applicable requirements of the State TDR Act, the history of TDR’s use in New Jersey, the legal precedents addressing relevant aspects of any potential TDR program, and, of course, public input. Within this frame of reference, the Highlands Council has undertaken a number of activities to gather and analyze information for development of the Highlands TDR Program. These activities include:

- ◆ Reviewing all relevant statutory provisions and outlining statutory requirements;
- ◆ Reviewing existing TDR programs both within and without New Jersey for identification of mechanisms to accomplish TDR program purposes and goals;
- ◆ Utilizing stakeholder groups and Technical Advisory Committee (“TAC”) meetings to explore TDR program alternatives and opportunities; and
- ◆ Holding TDR Committee meetings open to the public to discuss proposed program elements.

The information derived from these activities is described below in detail.

HIGHLANDS ACT TDR PROVISION

With the adoption of the Highlands Water Protection and Planning Act, P.L. 2004, c.120 (N.J.S.A. 13:20-1 et seq.) (“Highlands Act”) the State Legislature authorized the Highlands Council to establish a Highlands Region TDR program. This program is to be regional in scope and is to be premised on the resource assessment and smart growth component of the Regional Master Plan. (N.J.S.A. 13:20-13.a)

In addition to developing the Highlands TDR Program consistent with the State TDR Act, the Highlands Act also requires the Highlands Council to:

- ◆ Identify Sending Zones and voluntary Receiving Zones; (N.J.S.A. 13:20-13.b and c)
- ◆ Working with municipalities, identify centers designated by State Planning Commission as

² The court stated “Penn Central could offset its loss by transferring valuable property rights to other properties, even if such transfers did not fully compensate it. Plaintiff possesses the similar right to offsetting benefits; it may receive Pinelands Development Credits in return for recording the deed restrictions.”

voluntary Receiving Zones; (N.J.S.A. 13:20-13.d)

- ◆ Develop advisory or model TDR ordinances; (N.J.S.A. 13:20-13.f)
- ◆ Conduct a real estate analysis of the Highlands Region; (N.J.S.A. 13:20-13.g)
- ◆ Set the initial value of a development right; (N.J.S.A. 13:20-13.h(1)) and
- ◆ Give priority consideration to any lands that comprise a major Highlands development that would have qualified for the third exemption under the Highlands Act but for the lack of a necessary State permit. (N.J.S.A. 13:20-13.h(2))

An essential aspect of the Highlands Act TDR provision is the incentives provided for municipalities that serve as voluntary Receiving Zones. The purpose of these incentives is to induce municipalities in the Planning Area, or municipalities outside the Highlands Region but within the seven Highlands counties, to voluntarily designate Receiving Zones in their communities. Municipalities become eligible for the incentives where they designate Receiving Zones which provide for a minimum residential density of five dwelling units per acre. The municipality must also be deemed in compliance with the Regional Master Plan if its lies within the Highlands Region, or have its petition for initial municipal master plan endorsement approved by the State Planning Commission. Where these requirements are met, municipalities are eligible to receive the following incentives:

- ◆ The ability to charge up to \$15,000 per unit impact fee for development projects within the voluntary receiving area;
- ◆ Up to \$250,000 in an enhanced planning grant to offset the planning and other related costs of designating and accommodating voluntary Receiving Zones;
- ◆ A grant to reimburse the reasonable costs of amending municipal development regulations to accommodate voluntary Receiving Zones; and
- ◆ The ability to control the design of voluntary Receiving Zones. (N.J.S.A. 13:20-13.k and l)

Municipalities in the Planning Area that choose to conform to the Regional Master Plan are eligible for two additional incentives. First, they are entitled to legal representation by the State in challenges to municipal decisions regarding the voluntary receiving area. It is important to note, however, that such representation may only be provided where the municipal decisions are consistent with the Regional Master Plan and involve a development application that provides for the disturbance of two acres or more of land or a cumulative increase in impervious surface by one acre or more. Second, they are to be accorded priority status for any State capital or infrastructure programs. Municipalities outside of the Highlands Region but within the seven Highlands counties are not eligible for these two incentives, but may be eligible for incentives available under the State Development and Redevelopment Plan endorsement process administered by the Office of Smart Growth.

STATE TRANSFER OF DEVELOPMENT RIGHTS ACT

Enacted in March 2004, the State Transfer of Development Rights Act, N.J.S.A. 40:55D-137 et seq. (State TDR Act) is the first state-wide comprehensive TDR enabling legislation.³ It authorizes

³ In 1995, the State Legislature amended the Municipal Land Use Law to permit clustering and planned unit development to non-contiguous parcels. By doing so, a municipality could transfer the development potential of a non-contiguous parcel, which the municipality sought to preserve, to property that had the infrastructure to support more intense development. The transfer of the development potential to the appropriate site permits that site's owner to develop at a density greater than that permitted by the underlying zoning, provided the development ensures that some amount of the site is encumbered as open space.

Unlike traditional TDR, a municipality does not identify Sending and Receiving Zones. Instead, the municipality and landowners are given the flexibility to determine how the transfer occurs and what the development value is of the non-

municipalities to establish intra-municipal TDR programs by ordinance as well as enter into inter-municipal agreements with other municipalities to establish a joint program. Municipalities establishing a joint TDR program need not be in the same county.

Prior to adopting a TDR ordinance, the State TDR Act mandates that a municipality must undertake a number of planning activities. First and foremost, the municipality must adopt a development transfer plan element of its municipal master plan. This master plan element must include:

- ◆ an estimate of the anticipated population and economic growth in the municipality for the succeeding 10 years;
- ◆ the identification and description of all prospective Sending and Receiving Zones;
- ◆ an analysis of how the anticipated population growth is to be accommodated within the municipality in general, and the Receiving Zone or zones in particular;
- ◆ an estimate of existing and proposed infrastructure of the proposed Receiving Zone;
- ◆ a presentation of the procedure and method for issuing the instruments necessary to convey the development potential from the Sending Zone to the Receiving Zone; and
- ◆ explicit planning objectives and design standards to govern the review of applications for development in the Receiving Zone in order to facilitate their review by the approving authority. (N.J.S.A. 40:55D-141)

Along with the development transfer element, a municipality must also adopt a capital improvement program for any identified receiving areas as well as a utility service plan element of its master plan. These last two planning requirements are meant to ensure that a Receiving Zone has or will shortly have the infrastructure and utilities necessary to service the increased development to be located within the zone.

Integral to adopting the development transfer ordinance, a municipality must conduct a real estate market analysis. The purpose of this study is to examine the relationship between the development rights anticipated to be generated in the Sending Zones and the capacity of designated Receiving Zones to accommodate the necessary development. In essence, the Act seeks to ensure that there are sufficient opportunities in the Receiving Zones to absorb the number of development rights to be transferred from the Sending Zones. The Act delegates authority for adopting the rules governing a real estate market analysis to the Office of Smart Growth. OSG adopted these rules in December 2005, which set forth specific requirements for who may conduct the real estate market analysis, what that analysis entails, and what information must be incorporated into the real estate market analysis report. (N.J.A.C. 5:86-1.1 et seq.)

In addition to conducting the above planning activities, a municipality must also receive approval of its initial petition for endorsement of its master plan by the State Planning Commission. This approval must occur prior to the municipality adopting its development transfer ordinance, and must include the development transfer plan element. If a municipality has already received initial plan endorsement, then

contiguous parcels. For example, in Hainesport, the owner of a 131-acre farm transferred the density of his property, which was zoned for 65 homes, to a site zoned for 75 homes elsewhere in the municipality. The farmer placed a conservation restriction on his property preserving the property for agricultural use only. He then gave half of the deed-restricted farm to the developer. The developer of the second property was permitted to build the 140 homes and was also given a bonus of 26 additional homes for a total of 166 homes. The developer and the farmer agreed to share the proceeds from the sale of the home lots as payment for the development potential of the deed-restricted farm.

Often called “baby TDR,” the use of clustering or planned unit development with non-contiguous parcels has been used throughout New Jersey, but legislators continued to push for the adoption of state-wide transfer of development rights enabling legislation.

it must receive approval of the development transfer plan element as an amendment to its plan endorsement.

Another important requirement under the State TDR Act is the need to conduct periodic reviews of the municipal TDR program. The Act mandates that the local planning board review the municipal TDR ordinance and real estate market analysis at the end of the 3 years after ordinance adoption. This review must include an analysis of development potential transactions in both private and public market, an update of current conditions in comparison to the development transfer plan element of the local master plan and capital improvement program, and an assessment of the performance goals of the development transfer program. At year 5, the planning board must undertake a similar review. If after the 5-year review period at least 25% of the development potential has not been transferred, the local TDR ordinance is presumed no longer reasonable as well as any zoning changes adopted as part of the development transfer program. This assumption may be overcome if, within 90 days after the end of the 5-year period one of the following is met: (i) municipality immediately takes action to acquire the difference between the development potential already transferred and the 25% of the development potential created in the Sending Zone; (ii) a majority of the landowners in the Sending Zone who own land from which the development potential has not yet been transferred agree that the local TDR ordinance should remain in effect; (iii) the municipality can demonstrate that low levels of development potential transfer activity are due to low levels of development demand in general; or (iv) the municipality can demonstrate that less than 25% of the remaining development potential in the Sending Zone has been available for sale at market value during the 5-year period.

The State TDR Act authorizes municipalities and counties to establish development transfer banks. (N.J.S.A. 40:55D-158.a) These banks may purchase, sell or exchange development potential, but may do so only in ways that do not substantially impair the private sale or transfer of development potential. To determine the value of development potential to be acquired or sold for its own development potential transactions, the bank may establish a municipal average of the value of the development potential of all property in a Sending Zone of a municipality within its jurisdiction, which value shall generally reflect market value prior to the effective date of the local TDR ordinance.

To assist municipalities in determining what areas of their communities may serve as sending or Receiving Zones, the Act specifies certain criteria or characteristics that must be satisfied. (N.J.S.A. 40:55D-144 and 145) Sending zones may be comprised of lands that are agricultural or ecological in nature such as woodlands or wetlands, lands that present unique and distinctive aesthetic, architectural, or historical points of interest in the municipality; or other improved or unimproved areas that should remain at low densities for reasons of inadequate transportation, sewerage or other infrastructure. Potential Receiving Zones must be appropriate and suitable for development and are required to be sufficient to accommodate all of the development potential of the Sending Zone. The Act also requires that a Receiving Zone have a reasonable likelihood that a balance is maintained between the Sending Zone land values and the value of the transferable development potential. In addition, in assessing the likelihood that a potential Receiving Zone is appropriate, a municipality must determine that development potential of Receiving Zone is realistically achievable considering: (i) availability of existing infrastructure; (ii) all provisions of the zoning ordinance; and (iii) local land market conditions as of the date of the adoption of the development transfer ordinance. Another important aspect of the Receiving Zone is that the infrastructure necessary to support the development of the Receiving Zone either exist or be scheduled to be provided so that no development requiring the purchase of transferable development potential shall be unreasonably delayed because the necessary infrastructure will not be available due to any action or inaction by the municipality.

Lastly, the State TDR Act requires that the municipality submit its proposed ordinance and relevant master plan elements to the county planning board and, if agricultural land is involved, county agriculture development board review the proposed development transfer ordinance. (N.J.S.A. 40:55D-149) The county planning board must make a determination within 60 days of receiving the ordinance either

recommending or not recommending the ordinance. If the county planning board does not recommend enactment, it must set forth its reasons and work with the municipality to address them. If the municipality and the county cannot resolve the planning board's objections, the municipality must petition the Office of Smart Growth to render a final determination. The Office of Smart Growth may approve, approve with conditions, or disapprove the proposed development transfer ordinance. If approved with conditions, the municipality must incorporate those conditions into the final enacted ordinance. If disapproved, the municipality may not enact the proposed ordinance. It may appeal the Office of Smart Growth's decision, however, to the Appellate Division of Superior Court.

PAST EXPERIENCE WITH TDR IN NEW JERSEY

Prior to adoption of the State TDR Act and more recently the TDR provision of the Highlands Act, a regional entity and several municipalities established TDR programs. Like the requirements of the Highlands Act TDR provision and the State TDR Act, the State's past experience with TDR programs have also influenced and shaped the design of the Highlands TDR Program. Summaries of each of the programs are provided below. A more detailed discussion of each program is included in Appendix A.

Pinelands Development Credit Program

The Pinelands Development Credit (PDC) Program was the first established TDR program in New Jersey. Instituted in 1981, this program has preserved nearly 55,000 acres since its inception. (Pinelands Development Credit Bank, 2008) The PDC Program is a component of the Pinelands Comprehensive Management Plan (CMP) and is administered jointly by the Pinelands Commission and the Pinelands Development Credit Bank. The CMP separates the Pinelands Region in southern New Jersey into eight separate districts and establishes environmental regulations and development standards governing those districts. The regulations and standards are then implemented by the region's municipalities by amending their respective local master plans and land use regulations to conform to the requirements of the CMP.

The PDC program seeks to offset the development restrictions imposed within the Preservation Area District, Agricultural Production Areas and Special Agricultural Production Areas. These management areas serve as Sending Zones for the PDC Program. To determine the number of PDCs for a given property in one of the identified Sending Zones, a landowner requests a Letter of Interpretation (LOI) from the Pinelands Commission. Through the LOI process, the Pinelands Commission applies allocation formulas based upon a parcel's location and its land characteristics.

Under the PDC Program, Regional Growth Areas established by the CMP serve as Receiving Zones. Within these areas, purchasers of PDCs may use the development rights to build at densities above the base density. Municipalities in these areas must allow for the use of PDCs.

Before a landowner may sell his or her PDCs, the PDCs must be certified by the Pinelands Development Credit Bank. To obtain certification, the landowner submits an application, the deed, and several other documents, including a signed deed restriction appropriate for the location of the property. Once this information is submitted to the bank and there are no issues, the deed restriction is recorded with the county clerk and a Pinelands PDC Certificate is issued to the landowner.

The value of PDCs is established on the open market through the purchase and sale of PDCs between private parties. The most recent sales information indicates that the price of a PDC is currently ranging between \$72,000 and \$130,000 per PDC or \$18,000 to \$32,500 per residential development right. (Sales Activity through May 21, 2008, NJ Pinelands Development Credit Bank)

Burlington County

In 1989, the State Legislature adopted the Burlington County Transfer of Development Rights Demonstration Act, N.J.S.A. 40:55D-114 *et seq.* The purpose of the act was to permit Burlington County to serve as a pilot project for the state in the creation and implementation of TDR. The Legislature chose Burlington County because of its strong agricultural base. Under the Act, a municipality in Burlington County is authorized to establish a TDR program through the adoption of a local ordinance. To date, only two municipalities have established voluntary intra-municipal TDR programs under the Act: Chesterfield and Lumberton Townships.

Chesterfield Township

Chesterfield Township implemented its municipal TDR program in 1997 after nearly ten years of study and program development. Chesterfield's sending area is the roughly 10,000 rural and primarily agricultural acres that are located outside of the settled and developed areas of the Township. The receiving area within the Township, known as Old York Village, comprises 560 acres in the northwest corner of Chesterfield. The Township selected this receiving area because of its proximity to existing water treatment facilities in Bordentown and its location adjacent to several transportation corridors, including Interstate 295. The receiving area is planned to accommodate 1,200 residential housing units, and includes a variety of attached and detached single family housing types as well as a new elementary school, which is adjacent to centralized active recreation areas. The site plan for Old York Village also incorporates a network of neighborhood parks and a mixed-use village center hosting retail, office and convenience uses intended to serve local market needs. The village design is patterned on historic villages in Chesterfield.

The TDR credit allocation formula employed by Chesterfield is based upon a parcel's soil suitability to accommodate septic systems. The best soils, those with only "slight" limitations to accommodate septic systems, were awarded one credit for every 2 acres. Soils that were "moderate" in regard to septic system suitability were awarded one credit for every 10 acres. Soils that were "severe" in regard to septic system limitations were awarded one credit for every 50 acres. Chesterfield utilized this approach because it reflected the number of units that could realistically be constructed on a sending area parcel under existing zoning. The TDR program also offers an appeal procedure to landowners who feel that they have been under-allocated credits due to inaccurate mapping or acreage determination.

Under the Chesterfield Master Plan, a single TDR credit can be used to construct one single family home and fractions of credits may be used to construct smaller units such as smaller homes, town houses and apartment units. Credits may also be used towards development of commercial and institutional uses; one credit entitles its holder to development of 2,000 square feet of commercial or retail space.

Following the allocation of credits to a parcel, there is a three step process toward "extinguishing" TDR credits. First, landowners apply to "enroll" their credits into the Chesterfield TDR program. At the time credits are enrolled, the land from which the credits originate is "deed restricted" against future development. While it is possible to enroll some but not all of a parcel's credits, the entire parcel is deed restricted with the enrollment of the first credit. Second, once credits are enrolled in the TDR program they can be "assigned" to a developer who is then free to use the credits in the receiving area in accordance with the Municipal Master Plan. Third, Credits are "extinguished" when the credit is exercised in a developed project. The Chesterfield Township municipal clerk handles the recording of deed restrictions on parcels that enroll in the TDR program. The municipal clerk also records the retirement or extinction of credits when employed in a particular lot and block in the receiving area. The Burlington County TDR Bank works cooperatively with the Township to help track credit transactions and recordings.

TDR credit values are currently determined through an auction process. At the most recent auction held in July 2004, 50 credits sold at \$50,000 per credit.

Lumberton Township

Lumberton Township was the first municipality to utilize the authority of the Burlington County Transfer of Development Rights Demonstration Act to develop and implement a voluntary municipal TDR program, in two phases. Adopted in 1995, the first Lumberton TDR program seeks to preserve farmland in the western portion of the Township. Based upon the success of this program, in 2000 the Township adopted a second TDR program to preserve farmland in the municipality's eastern portion. As of March 2006, TDR had permanently preserved over 850 acres of farmland within the Township.

The sending areas for the first TDR program in the western portion of the township were designated in the October 1994 municipal master plan and comprised 1,513 acres. With the adoption the second TDR program in 2000, an additional 1,355 acres in the eastern portion of the Township were designated as sending areas.

Like Chesterfield's program, TDR credits are allocated to a sending area parcel based the parcel's suitability for septic systems. Relying on soil septic system suitability, the Township devised a formula which allocates development credits at a rate of 0.5 credits per acre with soils that have slight septic system limitations down to one credit per 50 acres where soils have severe limitations on septic system suitability. Lumberton Township's TDR ordinance provides a process for a landowner to appeal the credit allocation of a parcel where the landowner believes more credit should have been allocated.

For a sending area landowner to participate in the TDR program, the landowner must enroll his or her property. Enrollment requires the landowner to submit an application, proof of title, a TDR easement and the necessary review fees. After verification by the municipality, the owner records the TDR easement which establishes the TDR credits.

The process of selling TDR credits is termed "assignment" under Lumberton's TDR program. To assign credits to another, the owner submits an application for assignment to the Township, including information regarding the potential purchaser and information concerning the recorded TDR easement. Once approved by the municipality, the assignment must be recorded within 90 days or the assignment is deemed null and void.

Initial credit values were established by the Township at \$10,000 per credit. Credit values are now determined on the open market.

Receiving areas within Lumberton are identified in the municipal master plan. Under the TDR program adopted in 1995, receiving sites are located in the Township's five Rural Agricultural/TDR Receiving Area zones. Within these receiving areas the density of a receiving site can increase from a minimum of 0.7 units per acre to a maximum of 4 units per acre. Under the TDR provision adopted in 2000, the designated receiving area consists of 185 acres zoned for an age restricted community with mixed uses, including residential, neighborhood retail, office space, public or quasi-public facilities and open space. Within this receiving area, each age-restricted unit requires 0.7 TDR credits, and to achieve the maximum residential density of three units per acre, the receiving site developer must acquire 287 credits from the sending area.

To utilize TDR credits within a receiving area, the developer of the receiving site must "extinguish" the TDR credits. The developer must first obtain final approval for the project, conditioned on the use of credits. The developer must then submit a deed of credit transfer with the application for TDR credit use and demonstrate ownership of the credits. After verification of credit ownership, a deed of credit transfer is signed and must be recorded before a building permit is issued.

Lumberton also established its own municipal TDR credit bank as part of its TDR program. The bank's purpose is to facilitate the marketing of development credits between landowners with credit allocations and landowners who can use the credits. The bank is also empowered to purchase and sell development credits, at a price initially established by the board of the bank, and subject to the fluctuations of the market.

Other New Jersey Programs

Prior to adoption of the Burlington County Transfer of Development Rights Demonstration Act in 1989, three communities in New Jersey experimented with the use of TDR. These municipalities are Bernards Township, Somerset County; Hillsborough Township, Somerset County; and West Windsor Township, Mercer County. Although these programs remain in place, they have not been used significantly throughout their existence. These programs are described in Appendix A.

TDR PROGRAMS OUTSIDE OF NEW JERSEY

Another important source of information in developing the Highlands TDR program is garnered by reviewing and critically examining elements of successful TDR programs as well as those that are ineffective. The purpose of this review is to determine the success of these programs in both preserving important resource lands and ensuring adequate TDR credit values. This review is also important in that it may identify elements of these programs that could be incorporated into the Highlands TDR program to ensure its success. Highlands Council staff, with the support of its consultants, reviewed the following programs: Long Island Pine Barrens, Suffolk County, New York; Tahoe Regional Planning Agency; Montgomery County, Maryland; Calvert County, Maryland; Charles County, Maryland; Collier County, Florida; and Boulder County, Colorado. Each of these programs is discussed in more detail in Appendix B.

Having reviewed the above programs and others, as well as numerous commentaries regarding TDR programs, there are a number of factors that contribute to successful TDR programs like those in the New Jersey Pinelands and Montgomery County, Maryland. The factors may vary in significance due to facts surrounding a program's establishment and its underlying purpose and goals. However, each factor highlighted below is important to developing a viable and ultimately successful program:

- ◆ The TDR program should have clear objectives (Tripp, Dudek, 1989);
- ◆ The program should address problems of regional significance (Juergensmeyer, Nicholas, Leebrick, 1998);
- ◆ Sending areas should be clearly defined and designated, and relate to the objectives of the program;
- ◆ The original allocation of TDR credits to sending area properties should be simple and equitable;
- ◆ The program should clearly describe the permissible property uses remaining after development potential has been severed;
- ◆ The program should be the only means to exceed base density in designated receiving areas (Pruetz, 2003);
- ◆ The program should clearly articulate the development allowed in the receiving areas, both with and without TDRs;
- ◆ Receiving areas should be located where growth indicators are strong (Personal Communication with Larry Liggett);
- ◆ TDR credit values should be less than the marginal value of increased density in the receiving areas, otherwise no demand for credits will be generated;
- ◆ The agency administering the program should reduce the complexity, confusion and costs associated with the acquisition, transfer and use of TDRs (Juergensmeyer, Nicholas, Leebrick, 1998);
- ◆ The infrastructure needs to accommodate increased growth in designated receiving areas should

be considered and prioritized;

- ◆ The administrating agency should market the program but not create unrealistic expectations (Personal Communication with Larry Liggett); and
- ◆ The administrating agency should monitor the program carefully and be willing to adjust program parameters to address changing market conditions.

The Highlands Council considered each above factors as it developed the Highlands TDR Program in support of the Regional Master Plan.

PUBLIC INPUT

In addition to examining the statutory requirements of the Highlands Act and the State TDR Act, as well as reviewing TDR program both within and without New Jersey, it has been essential that the Highlands Council receive public input on the development of the TDR program. To this end, the Highlands Council has held numerous meetings and conducted six initial stakeholder group meetings to identify the TDR program's purposes and goals and discuss aspect of the program. To date, the Highlands Council has met with the following agencies, organizations, municipalities and individuals to receive program input:

- ◆ State TDR Bank
- ◆ State Agriculture Development Committee
- ◆ Office of Smart Growth
- ◆ NJ Meadowlands Commission
- ◆ NJ Pinelands Commission
- ◆ Pinelands Development Credit Bank
- ◆ Central Pine Barrens Commission (Long Island, NY)
- ◆ Green Acres Program of NJDEP
- ◆ NJ Farm Bureau
- ◆ NJ Builders Association
- ◆ Community Builders Association
- ◆ Environmental Defense Fund
- ◆ Regional Plan Association
- ◆ Sussex County Farmland Preservation Program
- ◆ Morris County Park Commission
- ◆ Morris County Planning Board
- ◆ Morris County Preservation Trust
- ◆ Association of NJ Environmental Commissions
- ◆ Upper Raritan Watershed Association
- ◆ Conservation Resources, Inc.
- ◆ Land Use Law Center, Pace University School of Law
- ◆ Clarke Caton Hintz
- ◆ City of Clifton
- ◆ Town of Clinton
- ◆ Lopatcong Township
- ◆ Town of Morristown
- ◆ Borough of North Haledon
- ◆ Town of Newton
- ◆ Borough of Oradell
- ◆ Borough of Somerville
- ◆ Township of Teaneck
- ◆ Borough of Washington
- ◆ Individual Landowners

From January through mid-April 2006, Council staff conducted six stakeholder meetings with the development community, environmental community, agricultural community, relevant State agencies and individual landowners. During these meetings, Council staff provided an overview of the TDR provision of the Highlands Act and issues related to establishing and implementing a TDR program. In addition, during each meeting, Anthony M. Graziano of Integra Realty Resources gave a presentation on issues that affect market value of property. Based upon these meetings, the following recommendations were highlighted by a number of the stakeholder groups:

Highlands Transferable Development Rights Technical Report

- The Highlands TDR Program must be simple and understandable to encourage participation of buyers and sellers;
- The market for sale of TDR credits must be transparent and efficient;
- Landowners in the Sending Zones must know what rights are being severed from their property and what limitations will be placed on their property;
- The process of certifying and transferring TDR credits must be simple and not cost prohibitive;
- Purchasers of TDR credits in the voluntary Receiving Zones must understand what the TDR credits entitle them to do;
- The Highlands TDR Program should consider awarding bonus TDR credits to properties with unique ecological or agricultural characteristics to achieve the preservation goals of the Highlands Act; and
- No matter what TDR credit valuation methodology is employed, landowners should have some method to dispute and resolve differences of opinion and seek clarification on assessment of TDR credit values.

Highlands Council staff also sought input on program purposes, goals and mechanisms from the TDR Technical Advisory Committee (“TAC”). The TDR TAC is comprised of professionals and others with expertise in land use, property valuation, acquisition strategies, finance, and real estate markets. The purpose of the TDR TAC is to advise the Highlands Council on development of the TDR program keeping in mind that any recommendations by the TAC are advisory only. Highlands Council staff held meetings with the TAC on July 20, 2005, and again on March 27 and 28, 2006. Based upon these meetings, the TDR TAC has made the following recommendations to the Council:

- Keep allocation of TDR credits simple, regional and uniform;
- Use an active Highlands TDR credit bank to serve as an “exchange” to account for regional valuation differences in both sending and Receiving Zones;
- The TDR program should also allocate TDR credits to undevelopable resource lands because these lands have a unique value not reflected in traditional valuations of development rights;
- The Highlands Council needs to establish other means for credit demand, including settlement of natural resource damages (NRD) claims, municipal variance approval and allowing private land trusts to buy credits for retirement;
- The Highlands Council needs to make a long-term commitment to balance supply and demand of credits to maintain their value over time; and
- The Highlands Council must ensure appropriately designated and designed Receiving Zones that do not exceed the carrying capacity (both ecological and infrastructure-related) of the land.

Lastly, the Highlands Council has held five meetings of its TDR Committee over the last year and a half. The committee has discussed elements of the program including various allocation methods and development of the zoning and location factors (discussed below), along with more general TDR topics including the need for expanding the areas to which Highlands TDR credits could be used. During these meetings, the public has been provided with opportunity to comment on any TDR matter pending before the committee.

CONSIDERATIONS FOR AN EFFECTIVE HIGHLANDS TDR PROGRAM

In addition to legal requirements and public input, development of the Highlands TDR Program has also been shaped by circumstances unique to the Highlands Region. One of the first considerations is the scale of the program. Although not the largest TDR program in terms of number of acres in which development potential can be transferred, the Highlands TDR Program will certainly involve the most

number of municipalities. Within the region itself, there are 88 municipalities, but an additional 130 municipalities outside of the region may also serve as voluntary Receiving Zones. Consequently, a total of 218 municipalities may be involved in the program. By contrast, the New Jersey Pinelands Development Credit Program has 53 participating municipalities.

Given the geographic scope of the Highlands Region, another significant consideration is the widely varying real estate market values that exist across the seven counties. For example, vacant property in Warren County as of 2004 had an average equalized value of \$15,452 per acre. In Bergen County, the comparable value was more than five times greater, averaging \$84,964 per acre. Significant real estate market variability also exists among municipalities within a given county.

It has been important to consider these varied real estate values in developing the TDR program. One reason for doing so is to prevent Sending Zone property with the lowest development potential value from being the first property that has its development potential acquired. This situation may occur because a developer constructing a project would seek to acquire TDR credits with the least value for use in municipalities with the highest land costs. In such a circumstance, a developer may be more willing to build with TDR credits in Bergen County because the developer can purchase credits from a Warren County property in the Preservation Area. Having the ability to reflect differences in real estate market values based upon the area from which credits originate is important to establish an equitable market-based system that provides all Sending Zone landowners with equal opportunity to participate in a TDR program. If credit values are adjusted to reflect differences in market value across the seven counties, then the incentive for a developer to build at a TDR density lies solely in the economics of a given project within a Receiving Zone. In addition, over time, if credits values are not adjusted for differences in real estate market value, unequalized credits values may slow down demand for credits as only the most expensive credits remain available for purchase.

Another significant consideration is the fact that the designation of Receiving Zones in the Highlands TDR Program is strictly voluntary. The ability to develop with TDR credits in Receiving Zones establishes the demand for those credits. Consequently, it is necessary to establish adequate Receiving Zones.

The Highlands Council does not have the authority to mandate specific Receiving Zones which municipalities must accommodate. This lack of authority differs greatly from that granted to the New Jersey Pinelands Commission. In the Pinelands Region, the Pinelands Commission has the authority to specifically designate where growth is to occur. These regional growth areas are coterminous with where Pinelands Development Credits may be used to secure increased density. Once designated, municipalities in which the regional growth areas are situated must amend their local master plans and development regulations to accommodate the use of Pinelands Development Credits in these areas. For the Highlands Region, however, the strategy must be to work cooperatively with municipalities to locate and designate suitable Receiving Zones.

HIGHLANDS TDR PROGRAM

Each of the considerations described above influenced development of the Highlands TDR Program and its structure. With them in mind, the following discussion highlights the program elements comprising the Highlands TDR Program as expressed in the Regional Master Plan.

PROGRAM GOALS

Section 13.a of the Highlands Act establishes that the intent of the Highlands TDR Program is to further the goals of the Regional Master Plan. To achieve this aim, the Highlands Council established program goals that will serve as guiding principles for the formation and implementation of the Highlands TDR Program. These goals are shaped by the legal requirements of the Highlands Act and State TDR Act, as well as the history of TDR and of course, the input received from stakeholders. Based upon this

information, the Highlands Council established the following program goals:

- ◆ Protection of lands that have limited or no capacity to support human development without compromising the ecological integrity of the Highlands Region, through mechanisms including a region-wide transfer of development rights program;
- ◆ Provision for compensation to landowners in the Preservation Area whose properties have limited or no capacity to support additional development and who are disproportionately burdened by the provisions of the Highlands Act through a region-wide transfer of development rights program;
- ◆ Creation of a Highlands Development Credit Bank;
- ◆ Establishment of sufficient Highlands Receiving Zones to create a positive market for Highlands Development Credits; and
- ◆ Maximization of the transfer and use of Highlands Development Credits.

IDENTIFICATION OF SENDING ZONES

The Highlands Council is charged with identifying appropriate areas in the Preservation Area as Sending Zones. (N.J.S.A. 13:20-13.b). To satisfy this mandate, the Highlands Council approved narrative criteria in February 2006, to determine which areas of the Preservation Area may be appropriate as Sending Zones. The narrative criteria are based in part upon those established in the State TDR Act. (N.J.S.A. 40:55D-144 and 145). For the Preservation Area, the criteria state that any property may serve as a Sending Zone provided that (1) it could have been developed as of August 9, 2004, based upon municipal zoning and land use regulations then in effect, and State and federal environmental laws and regulations then in effect, and (2) development is now precluded or severely constrained by the restrictions imposed pursuant to the Highlands Act.

After further consideration of the above Sending Zone criteria, the Highlands Council believes that a parcel must satisfy certain thresholds before it is eligible to receive an allocation of credits. This is necessary because the supply of credits must be controlled at the program's outset. Demand for Highlands Development Credits will be based upon the number of designated Receiving Zones in which those credits may be used. Demand will build over time, but at the outset of the program demand will likely be limited because of the voluntary nature of the Receiving Zones. In addition, because initial funding of the Highlands Development Credit Bank will also be limited, the ability of the bank to purchase credits will be restricted. Both of these facts necessitate a means of controlling the supply of credits available for sale at any given time. In light of this situation, the Regional Master Plan mandates that parcels of land in the Protection Zone and the Conservation Zone only in the Preservation Area, which were zoned for residential use on August 9, 2004 and which satisfy one (1) of the following criteria, are eligible to apply for an allocation of HDCs:

- ◆ the parcel of land has an area of at least five (5) acres; or the area of the parcel of land is at least three (3) times the minimum lot size in effect on August 9, 2004;
- ◆ the owner voluntarily chooses not to develop a residentially-zoned, undeveloped parcel of land pursuant to one or more of the exemptions under section 28 of the Act; or
- ◆ the owner demonstrates unique and extenuating financial circumstances such as imminent bankruptcy, extraordinary medical expenses, or loss of job and inability to secure new job within 6 months, which may only be ameliorated through an expedient sale of Highlands Development Credits.

The parcels of land in the Protection Zone and the Conservation Zone only in the Preservation Area, which was zoned for non-residential uses on August 9, 2004, will also be eligible to apply for an allocation of HDCs. Lastly, the Regional Master Plan recognizes that parcels of land located in the Protection and Conservation Zones of the Planning Area may also be eligible to apply for an allocation

of HDCs. However, the ability to apply will not be triggered unless the municipality in which such parcels of land are located chose to voluntarily conform to the Regional Master Plan.

IDENTIFICATION OF RECEIVING ZONES

A crucial component to establishing the Highlands TDR Program is the identification of areas that may serve as voluntary Receiving Zones. It is within these areas that the HDCs allocated to landowners in the Sending Zones may be used to increase the density or intensity of uses permitted by underlying zoning. In turn, the ability to use the HDCs in Receiving Zones for more development than would otherwise be permitted creates demand for the credits and ultimately establishes their value.

The Highlands Act mandates that the Highlands Council identify appropriate areas in the Planning Area to serve as voluntary Receiving Zones. (N.J.S.A. 13:20-13.c). The Highlands Council adopted criteria in February 2006 to explain what areas it would want to see serve as voluntary Receiving Zones. These criteria include:

- ◆ Land with access to multi-modal transportation utilizing the existing transportation network;
- ◆ Land that is proximate to existing areas of concentrated development patterns and existing population centers; or
- ◆ Land that is underutilized or previously developed.

In addition, the criteria specify that a voluntary Receiving Zone must demonstrate access to available water supply and wastewater infrastructure with the capacity to support increased development, and the proposed zoning must be economically viable and be shown to be able to accommodate an increase in density above that allowed in municipal zoning in place at the time of adoption of a voluntary TDR ordinance.

The Highlands Council has conducted a preliminary, GIS-based analysis of Planning Area lands that may have potential for serving as HDC Receiving Zones.⁴ This analysis focuses on lands that are not within the Environmentally Constrained Sub-zones, not preserved, and not developed with residential housing (as of 2002), and which have or may have the water and wastewater infrastructure necessary to accommodate more development. This analysis will require refinement as the Highlands Council works with Highlands municipalities during the Plan Conformance process, including gaining a better understanding of the potential densities for these identified lands.

As noted above, this analysis does include lands that are not currently served by infrastructure. Simply because such lands have limited or no infrastructure currently does not mean that necessary capacity or new infrastructure may not be provided sometime in the future where the provision of that infrastructure is consistent with the goals, policies and objectives of the Regional Master Plan. As Section 11.a(6)(e) of the Highlands Act notes, the Highlands Council shall identify potential voluntary Receiving Zones “... through the appropriate expansion of infrastructure or the modified uses of existing infrastructure.” (N.J.S.A. 13:20-11.a(6)(e)) Therefore the Act does not preclude the identification of a Receiving Zone in an area that does not currently have sufficient infrastructure or capacity but may be appropriate to support more intense residential or non-residential development in the future.

Importantly, this analysis is a tool to help foster discussion about those areas within the Planning Area

⁴ Pursuant to the Highlands Act, potential Receiving Zones identified by the Highlands Council for use in the regional TDR program are strictly voluntary. Any areas identified by the Council’s analysis need not be accepted by the municipalities in which they are identified. Despite the voluntary nature of the Receiving Zones, the Highlands Council is still charged with identifying areas within the Highlands Region that are or may be appropriate to serve as Receiving Zones and recommending an appropriate density for those identified areas. (N.J.S.A. 13:20-8 and 13:20-13.c) The Highlands Act establishes a goal of identifying at least four percent of the Planning Area for potential TDR receiving areas, unless environmental constraints limit such areas to below that goal. Accordingly, the goal of the Highlands Act through the implementation of the Regional Master Plan is to identify 17,776 acres of the Planning Area’s 444,398 acres.

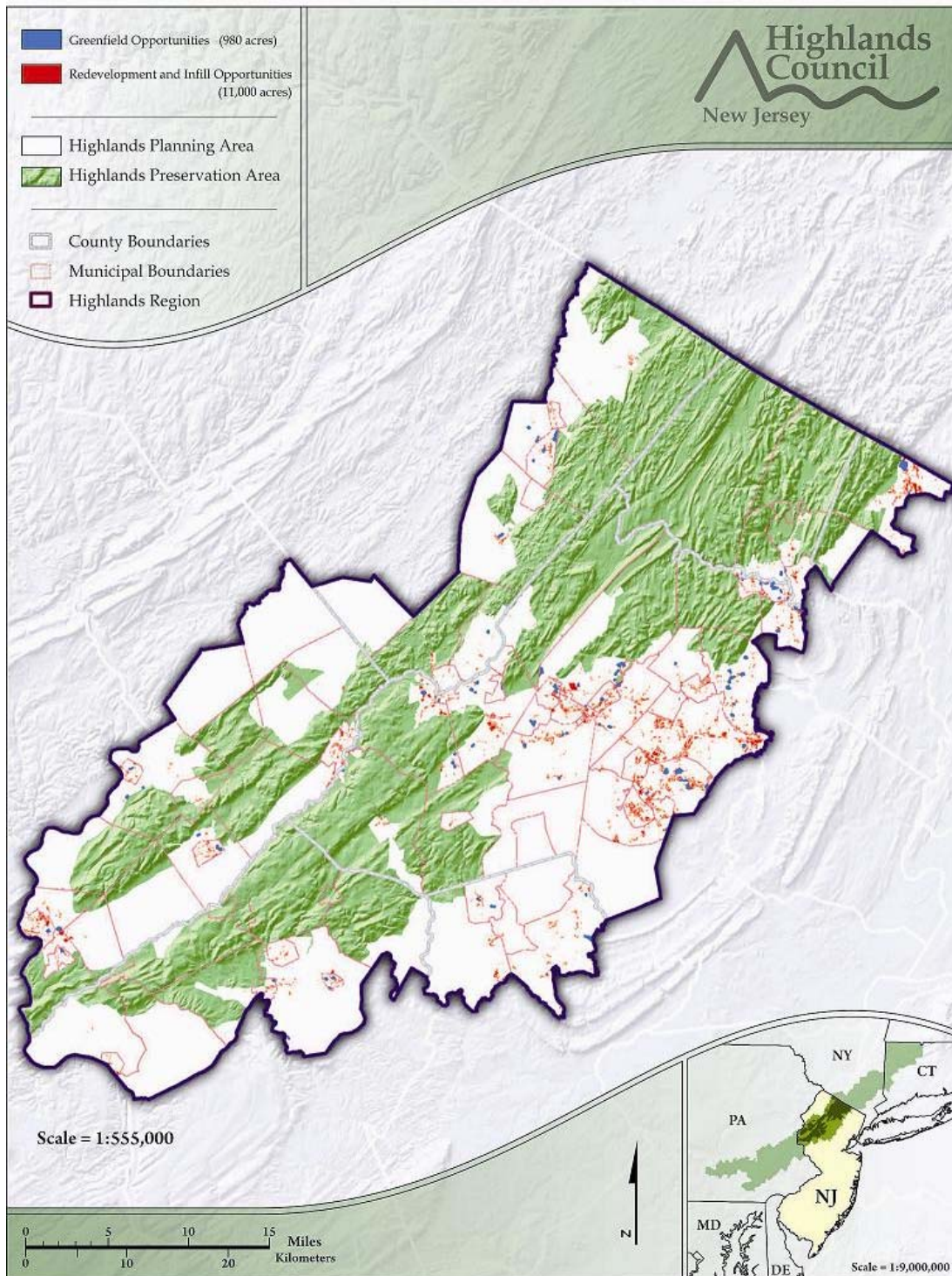
that are most appropriate to serve as voluntary Receiving Zones. Further specific local analysis of these areas will be required, including an assessment of site specific environmental constraints, infrastructure capacity, and real estate market viability, before any designation may be considered. Only after this assessment is complete and the municipality and Highlands Council concur in the assessment's results, will designation be considered by the Highlands Council.

Based upon the analysis parameters outlined above, the Highlands Council has identified approximately 12,000 acres within the Existing Community Zone of the Planning Area using criteria that relate to the existence of water and wastewater infrastructure (see figure 4 - *Potential Areas for Voluntary HDC Receiving Zones in Existing Community Zone*). The criteria used in analyzing these areas and the acreage associated with these criteria are highlighted below.

- ◆ Greenfield Opportunities – undeveloped lands at least 2 acres in size located in approved sewer service areas that are not Existing Areas Served and therefore correspond to lands that municipalities likely intended for future development served by wastewater utilities. This analysis reveals approximately 980 acres that satisfy these criteria. The Highlands Council further evaluated these lands using the Highlands Regional Build-Out Model and existing municipal zoning. The purpose of this additional study was to determine which lands within these 980 acres could support development at a minimum of 5 dwelling units per acre if residentially zoned or 0.84 FAR if non-residentially zoned. The study identifies 280 acres that have sufficient remaining wastewater capacity and water availability at the HUC 14 subwatershed level to support this amount of development intensity.
- ◆ Redevelopment and Infill Opportunities – developed and undeveloped lands at least 0.125 acres in size that are currently served with public wastewater infrastructure (Existing Areas Served) with remaining capacity. These lands total approximately 11,000 acres. Lands in this category represent potential Receiving Zones that are premised on infill and redevelopment.

It is critical to understand that other lands within the Highlands Region may also be appropriate to serve as voluntary Receiving Zones but would not be identified in this regional GIS-based analysis. For example, this analysis does not examine the potential of lands within the Conservation Zone to serve as Receiving Zones, which is allowed by the policies adopted by the Highlands Council, provided that the designation of such lands is consistent with the RMP and the development will not conflict with the maintenance of viable agriculture. Additionally, this assessment does not identify any specific potential Highlands Redevelopment Areas which may also serve as voluntary Receiving Zones per the policies of the Regional Master Plan. Lastly, this analysis only examines land areas that are at least 2 or 0.125 acres in size, based on the analysis involved. There may be areas smaller than this threshold that may be appropriately considered for Receiving Zone designation. The Highlands Council will work with conforming municipalities during Plan Conformance to identify additional lands to meet the goal of the Highlands Act.

Figure 4 - Potential Areas for Voluntary HDC Receiving Zones in Existing Community Zone



HIGHER AND LOWER INTENSITY RECEIVING ZONES

The Highlands Council recognizes that the density a municipality may want to establish in a Receiving Zone will vary with community character. Some municipalities may not want to designate a Receiving Zone at densities of five units to the acre or greater because such densities would be inconsistent with existing development patterns. However, as long as the municipality identifies an area of its community that provides for bonus TDR density where HDCs will be required to construct at the higher density then that area may serve as a Receiving Zone upon Highlands Council designation consistent with the requirements of the Regional Master Plan.

Under the Highlands TDR Program, the Highlands Council may designate parcels of land as either a Higher Intensity Receiving Zone or Lower Intensity Receiving Zone in response to a petition from the municipality in which the Receiving Zone is to be located. A Higher Intensity Receiving Zone is one where development may require the use of appropriate public water and wastewater infrastructure with capacity to accommodate additional or new growth and which may be proximate to existing developed lands and multi-modal transportation infrastructure. An area that serves as a Higher Intensity Receiving Zones will have a minimum net residential density of 5 dwelling units per acre or its residential unit equivalent for non-residential development. A Lower Intensity Receiving Zone is one that has residential densities below 5 dwelling units per acre but which provides some amount of bonus residential density or increase in non-residential intensity which is consistent with existing community character. In many cases, a Lower Intensity Receiving Zone will be located in an area where the community character is more suburban or rural.

It is important to keep in mind that the incentives provided under Section 13 of the Highlands Act for establishing a Receiving Zone are not triggered unless a municipality establishes a voluntary Receiving Zone with a minimum residential density of five dwelling units per acre or its non-residential equivalent. That said, for those municipalities that choose to designate a Lower Intensity Receiving Zone the Highlands Council has separate authority under Section 18.b of the Highlands Act to provide financial and technical assistance to implement participation in the Highlands TDR Program.

POTENTIAL RECEIVING ZONE DENSITIES

Although the Highlands Council has identified lands within the Existing Community Zone of the Planning Area which could support 5 dwelling units per acre or a non-residential FAR of 0.84, specifying particular densities for potential Receiving Zones within the Highlands Region cannot and should not be undertaken from a regional analysis. Specific densities for Receiving Zones will be left to the discretion of the municipalities that seek to establish such zones.

Where a municipality desires to establish a Higher Intensity Receiving Zone, it should be guided in setting the zone's density by two factors. First, for a Receiving Zone municipality to receive the benefits and incentives provided to such municipalities under the Highlands Act, the residential portion of the Receiving Zone must have a net minimum density of 5 dwelling units per acre or its residential unit equivalent for non-residential development. Second, densities of 5 dwelling units or more to the acre are not uncommon in the Highlands Region. An evaluation of existing municipal zoning as of November 2005 indicates 16,017 acres are zoned at 5 dwelling units to the acre or greater, representing 2.48% of the residentially-zoned area of the Region and a significant percentage of total housing units in the Region.

RECEIVING ZONE DESIGNATION

As discussed above, the Highlands Council is not authorized to require conforming municipalities to accept its recommendations concerning the location of voluntary Receiving Zones. Whether these identified areas and others outside of the Highlands Region but within the seven counties serve as Receiving Zones is left to the determination of municipalities themselves.

Under the standards adopted in the Regional Master Plan, the following areas are eligible to be considered for Receiving Zone designation by a municipality:

- ◆ parcels of land located within the Existing Community Zone and any lands within a Highlands Redevelopment Area may be designated as Receiving Zones by a Highlands municipality upon approval by the Highlands Council, provided that such receiving zones are consistent with the Regional Master Plan;
- ◆ parcels of land located in the Conservation Zone may also be designated as Receiving Zones upon approval of the Highlands Council, provided that such receiving zones are consistent with the Regional Master Plan and the development does not conflict with the maintenance of viable agriculture;
- ◆ parcels of land, which are located within Highlands Counties but not within the boundaries of the Highlands Region, may be designated as a Receiving Zone for the use of HDCs upon approval of the Highlands Council, provided that the municipality has received plan endorsement in accordance with State Planning Commission guidelines; and
- ◆ a municipality within the Planning Area, which does not petition the Highlands Council for a determination of Plan Conformance, may establish a Receiving Zone for the use of HDCs upon approval of the Highlands Council, provided that the municipality has received plan endorsement in accordance with State Planning Commission guidelines.

The Regional Master Plan then sets forth a process for municipalities that wish to seek Receiving Zone designation for any lands that fall within the above categories. The process begins with a municipality conducting a feasibility assessment of the proposed area to accommodate the increase in residential density or non-residential use intensity contemplated by the municipality. The requirements for the feasibility assessment are discussed in the section regarding the Voluntary Receiving Zone Feasibility Grant Program below.

Once the feasibility assessment is complete, the municipality must prepare a Petition for Receiving Zone Designation and include with that petition a resolution stating its desire to designate the proposed Receiving Zone. The petition must set forth the basis for the proposed Receiving Zone's inclusion in the Highlands TDR Program. The Highlands Council will then consider the municipality's Petition for Receiving Zone Designation and may approve the Petition for Receiving Zone Designation, provided that designating the proposed Receiving Zone is consistent with the provisions of the Highlands TDR Program and the Regional Master Plan. Upon Highlands Council approval of the Petition for Receiving Zone Designation, the municipality must then prepare a Transfer of Development Rights Ordinance to be reviewed and approved by the Highlands Council.

Voluntary Receiving Zone Feasibility Grant Program

To encourage municipalities to explore the possibility of establishing voluntary Receiving Zones, the Highlands Council launched the TDR Receiving Zone Feasibility Grant Program in the spring of 2007. This grant program is designed to assist municipalities in assessing the potential for locating a Receiving Zone within their communities. Eligible municipalities, which need not be within the Highlands Region but must be in one of the seven Highlands counties (Bergen, Hunterdon, Morris, Passaic, Somerset, Sussex and Warren), will receive both financial support and technical assistance from the Council. Participation in the grant program requires a commitment by a municipality to fully evaluate the feasibility and desirability of designating a Receiving Zone, but does not obligate a municipality to establish such a zone. To date, three municipalities have been awarded grants under the program while several others are currently preparing applications.

This grant program is incremental to allow municipalities to first conduct an initial examination of proposed Receiving Zones and hold discussions with the Highlands Council before studying the impacts of any Receiving Zone development scenarios. Specifically, in Phase 1 of the grant program,

municipalities will be required to understand and document the character of each proposed Receiving Zone, including its zoning, environmental conditions, infrastructure needs, and maximum development potential given the local and regional real estate market. Municipalities are also required to devise at least two conceptual development scenarios for the proposed Receiving Zone. Once municipalities have completed this work, the Highlands Council will assess and consider the information provided. Individual grant amounts for the first phase of work are capped at \$25,000, but may be increased with authorization by the Council upon a demonstration of a particularized need.

Municipal participation in Phase 2 of the program will be based upon the scope and merits of work conducted in Phase 1, and will be subject to subsequent review and authorization by the Council. Municipalities eligible to enter Phase 2 will conduct an impact analysis comparing base zoning development to at least two conceptual TDR Receiving Zone development scenarios. This impact analysis will look at the affect of the development scenarios on water supply needs, wastewater generation, number of school children, affordable housing obligations, and traffic generation, and fiscal consequences. The evaluation shall also include a discussion of how the development scenarios address local community character and support surrounding land use conditions and local planning initiatives. Importantly, information derived from this analysis will aid municipalities in determining whether they want to seek Receiving Zone designation by the Highlands Council and proceed with planning for a Receiving Zone. Grant amounts for the second phase of work will be based upon the scope of the work to be conducted under that phase.

Municipal Benefits

As specified by the Highlands Act, Receiving Zones under the Highlands TDR Program are voluntary. To encourage municipalities to designate voluntary Receiving Zones, the Highlands Act provides a number of benefits to municipalities in the Planning Area that conform to the Regional Master Plan and establish a Receiving Zone which provides for a minimum density of five (5) dwelling units per acre for the residential portion of the Receiving Zone. Planning Area municipalities that meet these criteria may:

- ◆ charge up to \$15,000 per unit impact fee for all new development within the voluntary Receiving Zone;
- ◆ receive up to \$250,000 in an enhanced planning grant to offset the planning and other related costs of designating and accommodating voluntary Receiving Zones;
- ◆ receive a grant to reimburse the reasonable costs of amending municipal development regulations to accommodate voluntary Receiving Zones;
- ◆ receive legal representation by the State in actions challenging municipal decisions regarding TDR, provided that certain pre-requisites are met; and
- ◆ receive priority status in for any State capital or infrastructure programs.

For municipalities outside of the Region but within the seven Highlands counties, they are entitled to the same benefits above except for legal representation and priority status. Importantly, municipalities outside the Region must receive plan endorsement from the State Planning Commission to participate in the Highlands TDR Program.

For Preservation Area municipalities or Planning Area municipalities that choose not to conform to the Regional Master Plan, the Highlands Council has separate authority to provide financial and technical assistance to implement participation in the Highlands TDR Program. Additionally, such authority may be used to provide financial and technical assistance to those municipalities that choose not to satisfy the five (5) dwelling unit per acre threshold and instead seek to designate a Receiving Zone with a lower residential density.

Process

The process is initiated by a municipality submitting to the Highlands Council a resolution from the governing body indicating the municipality's interest in assessing the feasibility of establishing a voluntary Receiving Zone. Along with the resolution, the municipality must complete and submit the grant application. As part of the application, the municipality must attach a scope of work, cost proposal, and schedule addressing the requirements of the grant program. Additionally, the municipality must identify any outside consultants and sub-consultants that will be assisting the municipality with work under the grant and include a detailed scope and cost proposal submitted by the consultants in support of grant activities.

Upon receipt of the grant application, the Highlands Council staff will review the application and make a recommendation to the Highlands Council for approval and award of the grant. Upon grant award, the municipality is entitled to receive half of the grant amount. The remainder of the grant will be provided on a reimbursement basis upon submission of the final Phase 1 report and acceptance by the Highlands Council. If the results of Phase 1 indicate that a proposed Receiving Zone may be feasible and the municipality desires to proceed, then the Highlands Council may award a grant to complete an impact analysis and development scenario evaluation required during Phase 2.

Grant Activities

There are a number of discrete tasks to be conducted by a municipality under the grant. First, the municipality must identify and evaluate potential Receiving Zones based upon municipal vision as articulated in the municipality's master plan, and if within the Highlands Region, the Highlands Regional Master Plan. The municipality must explain why particular sites were selected and the criteria used in making the selection.

Second, the municipality must provide a description of the physical characteristics and zoning of the potential Receiving Zone. This information includes identifying environmental constraints within one (1) mile of the potential zone such as streams corridors/buffers, wetlands, 100-year floodplains, threatened and endangered species habitat, steep slopes, forest and woodlands, existing open space, and important soils/recharge areas. The municipality must also describe the extent of development currently built within the potential zone along with that permitted by the municipality's development regulations. Additionally, the municipality must identify the water supply and wastewater utilities provided to the zone, discuss whether those utilities have capacity to service additional development and described whether there is public transportation access to the zone.

Third, the municipality must conduct a real estate market analysis of the potential Receiving Zone. This includes discussing the unit values of various residential and non-residential development, underlying land values, and the local real estate market's ability to absorb additional development within the potential Receiving Zone.

Fourth, the municipality must devise at least two conceptual development scenarios for the potential Receiving Zone based upon the results of the real estate market analysis. This requires describing the type and number of additional units (including commercial and mixed use if appropriate) above base density that is acceptable to the municipality; discussing how parking, ingress, egress, infrastructure needs and emergency services will be addressed; and providing an estimate of the potential project value of the two development scenarios. It is also critical that the municipality state whether existing utilities have the capacity to service the additional development by providing either an "Intent to Serve" letter from the local utility authority or an engineering report indicating that there is sufficient capacity to meet increased utility demand.

Fifth, and finally, the municipality must prepare a draft Phase 1 report to the Highlands Council comprehensively discussing each of the items above.

In order to fulfill the resource protections contemplated by the Highlands Act, the Legislature realized that there must be various mechanisms to preserve environmentally sensitive lands in the Highlands Region. TDR is to serve as one of those tools. Successful implementation of the Highlands TDR program will ensure that additional growth is properly planned and help support ongoing regional land preservation needs.

HIGHLANDS DEVELOPMENT CREDITS ALLOCATION METHOD

A key component of any TDR program is the allocation of transferable development rights to properties in the designated Sending Zones. Allocation consists of defining what these rights are and how many rights should be given to a particular lot.

Allocation to Residentially-Zoned Parcels

How TDR credits are allocated to residentially zoned property varies among TDR programs. Some programs allocate on the basis of gross acres of a given land type. For example, one transferrable development right is allocated for every five acres of non-environmentally constrained land. Other programs look solely to the lost development potential of a Sending Zone parcel. Thus, if ten homes could have been developed on a Sending Zone parcel consistent with local development regulations prior to establishment of the TDR program, and after program implementation only one home could be built, then the property is allocated nine credits reflecting the nine homes that cannot be built.

In the context of establishing a Highlands TDR Program allocation method, the distinct and uneven real estate markets that exist within the Highlands Region present a challenge to uniformly allocating credits. From north to south and from east to west in the Highlands Region, land values and real estate development markets vary significantly. Whereas New Jersey based TDR programs in the Pinelands and in Chesterfield Township assigned credits uniformly, based primarily on the land based development potential of a given parcel, such an approach is problematic in the Highlands. The Highlands Region does not enjoy the relatively uniform land values that existed in the Pinelands Preservation Area in the 1980's or the generally similar values that can exist within a single municipality.

Within the vast Highlands Region, a development right in one county may vary significantly from the value of a development right in another. So, while assigning credits on a uniform basis, tied to the development potential of the land (soils, building constraints, underlying pre-Highlands zoning, etc.) is attractive for its simplicity, such an approach does not provide a means to reflect the influence of varied markets on the value of credits. This creates inequities and it also creates a real market imbalance. In a TDR market where the value of a credit to a developer is the same wherever it is used, credit buyers will tend to seek out Sending Zone credits in lower land-value markets.

In light of this challenge, the Highlands Council developed an allocation of Highlands Development Credits ("HDCs") for residentially zoned property using a hybrid approach. Specifically, HDCs will be allocated on the basis of lost development potential but adjusted for relative differences in land value occasioned by property location and the type of development that could have been constructed onsite prior to enactment of the Highlands Act. Consequently, the formula for allocating HDCs to residentially zoned eligible parcels is expressed as: (Net Yield) x (Zoning Factor) x (Location Factor) = HDC Allocation. Each element of this method is discussed below.

Net Yield

The starting point for allocating HDCs to eligible parcels begins with a determination of a parcel's lost development potential (Net Yield). Lost development potential is determined by first examining the land use and environmental regulations applicable to the subject parcel in light of the size of the parcel and what development may already exist there (pre-Highlands Act development yield). Then, the determination of lost development potential must also account for what development potential remains after applying the provisions of the Highlands Act, the Department of Environmental Protection's Preservation Area rules, and the standards of the Highlands Regional Master Plan.

An example illustrates this determination. Assume prior to passage of the Highlands Act, an undeveloped five-acre lot in the Preservation Area is residentially zoned at one single family house per acre. Assume further that, due to wetlands present on the lot, one acre cannot be developed. This results in four acres being available for development prior to enactment of the Highlands Act. After passage of the Highlands Act, only one single family house may be built on the lot under the exemption for construction of a single family house on a lawfully existing lot that was in existence on August 10, 2004. In this example, the lot would have lost 3 single family housing opportunities as a result of the Highlands Act (4 acres at 1 unit/acre minus 1 unit under exemption = 3 lost units).

Net Yield Bonus

The Highlands Council has also incorporated a bonus aspect into the allocation method where a landowner chooses not to exercise or retain an applicable Highlands Act exemption. In such an instance, parcels of land located in a High Value conservation priority area or agricultural priority area receive a 25% bonus to their net yield. Thus, if a parcel has a net yield of 10 lots, and is located in a High Value conservation priority area, the resulting net yield increases to 12.5 lots. For parcels of land located in a Moderate Value conservation priority area or agricultural priority area, a 15% bonus is applied to the net yield where the landowner chooses not to exercise an applicable exemption.

Zoning Factors and Location Factors

Next, to account for the Highlands Region's real estate market variability and differences in value of unit types, the Highlands Council developed two market adjustment factors for use in HDC allocations to residential properties: Zoning Factors and Location Factors. The Zoning Factors (ZF) serve as regional adjustment factors recognizing that the value of the land varies according to the type of residential development that could have been constructed on the property prior to the Highlands Act consistent with municipal zoning. The Location Factors (LF) recognize that the per-unit value of land varies by location within the Highlands Region.

The Highlands Council developed the Zoning Factors by first calculating the average equalized assessed lot value for seven of the residential composite zones for each municipality in the Highlands Region.⁵ These municipal values are reflected on the county worksheets listed in Appendix C titled "Regional Zoning Factors." Next, using these municipal values, the Council then determined the average lot value for each county. From this data, a regional lot value is calculated for a given residential composite zone. The regional lot values per residential composite zone are reflected on the first worksheet of Appendix C. To establish the regional Zoning Factors based upon the regional composite zone lot values, the Highlands Council identified the most prevalent residential zoning type in the Highlands Region, which is the Low Density Residential Composite Zone. The average density within this composite zone is 0.76 units per acre representing minimum lot sizes that range between 1 to 2 acres. The Highlands Council set the Zoning Factor for this composite zone at 1.00. It then determined the relative differences in regional lot value for each of the other six residential composite zones by dividing the regional lot value for a given composite zone by the regional lot value of the Low Density Residential Composite Zone, which is \$200,129.34. The resulting regional Zoning Factors are shown on the first worksheet of Appendix C.

The Highlands Council developed the Location Factors by first calculating the average equalized

⁵ For purposes of establishing the Zoning Factors, the Highlands Council used 2005 MOD-IV tax assessment data for Class 2 parcels (residentially developed parcels) received from the New Jersey Treasury Department, Division of Taxation. The data are derived from real property tax assessment information submitted by municipal tax assessors to the Division of Taxation. Information contained in the 2005 MOD-IV data is for the period January 10, 2004 through January 9, 2005.

assessed land value per acre for residentially developed parcels in the Highlands Region.⁶ To start this process, the Council separated the residential parcels into seven distinct density types based upon observed lot size ranges consistent with the residential composite zones developed for the Regional Master Plan. The lot size categories are as follows:

<u>Category</u>	<u>Lot Size Range</u>
Category A	> 10 Acres
Category B	> 5 to 10 Acres
Category C	> 2 to 5 Acres
Category D	1 to 2 Acres
Category E	0.5 to < 1 Acres
Category F	0.33 to < 0.5 Acres
Category G	0.125 to < 0.33 Acres

Using these categories, the Highlands Council then segmented the parcels by county, municipality, and ultimately equalized assessed land value per acre. From these data, representing over 200,00 records, the Council excluded the top 5% and bottom 5% of all parcel records for each category for purposes of ensuring data confidence by excluding potential outliers. Additionally, each municipality with less than 3 parcels records for a given category was excluded to ensure sufficient sample size.

Working from these data sets, the Average Equalized Assessed Land Value per Acre (Average ELV/Acre) per municipality was calculated for each of the seven residential categories. To divide each class into tiers, deviations of 50% of the Average ELV/Acre per municipality were then calculated. This was done by multiplying the lowest Average ELV/Acre by 1.5. This established the ranges for each tier. Once the ranges were determined, the municipalities were then assigned a tier number based upon where that municipality's Average ELV/Acre fell within the ranges established. Tier No. 1 is the tier with the lowest range of Average ELV/Acre. Once each municipality was assigned to the appropriate tier, the Weighted Average ELV/Acre for that tier was then calculated.

After establishing the Weighted Average ELV/Acre for each tier within a residential category, the Highlands Council calculated the Location Factor by dividing the Weighted Average ELV/Acre for each tier by the Weighted Average ELV/Acre for the lowest tier in that class. The data and calculations performed to derive the Location Factors are set forth in Appendix D titled "Location Factors."

To ensure that development of the tiering system and Location Factors are consistent with conditions reflected in the real estate market of the Highlands Region, the Highlands Council's TDR consultant, Integra Realty Resources ("Integra") undertook an analysis of the Council's work. The results of their study confirmed the reasonableness of the Council's approach and is discussed in their report titled "Consultant's Report – Phase III: Highlands Region TDR Valuation Analysis," which report is attached hereto at Appendix G.

Appendix E titled "Sample Residential Allocation Calculations" provides samples of how the above allocation formula is applied, including Example E which applies a 25% bonus to net yield.

Non-Residential Allocation Method

The Highlands TDR Program permits the allocation of HDCs to eligible, non-residentially zoned parcels located in the Protection and Conservation Zones. The basis for allowing such allocation is that non-residentially zoned parcels have fewer options than residentially zoned property for extracting equity out of these lands. Additionally, the Highlands Council has envisioned since program inception that HDCs could be used for residential and non-residential development in designated Receiving Zones.

⁶ For purposes of establishing the Location Factors, the Highlands Council also used 2005 MOD-IV tax assessment data for Class 2 parcels (residentially developed parcels) received from the New Jersey Treasury Department, Division of Taxation.

Very few TDR programs allocate transferrable development rights to non-residentially zoned property. The few examples found by the Highlands Council staff were not appropriate given the types of non-residential property that are to be included in the Highlands TDR Program. Moreover, in the programs where such allocation occurs, transfers may only occur between non-residentially zoned Sending and Receiving Zones.

Working in conjunction with Integra, the Council set out to develop a non-residential allocation method that incorporates the same elements developed for the residential allocation method, namely lost development potential adjusted for market conditions.⁷ In developing this method the Highlands Council considered several important circumstances. First, there are less than 3,500 discrete acres of undeveloped non-residentially zoned land in the Highlands Preservation Area. Second, consolidation of non-residential parcels further reduces the number of discrete landowners affected, and relative to the overall scale of the residential impacts, the non-residential formula is likely to be applied in far less instances, and is less likely to be immediately required for hardship. Third, the Highlands Council specifically acknowledges that non-residential properties not currently developed do not have an applicable Highlands Act exemption, and therefore, the allocation method must be broadly applicable, even though a specific non-residential property may not be considered “prime” in terms of location and physical characteristics.

In light of these considerations, the Highlands Council adopted an allocation method for non-residentially zoned property that considers lost development potential and unit values for different types of non-residential uses. This allocation method is expressed in the following formula: (Permitted Square Footage) ÷ (Non-Residential SF for Specified Use) x (30% Discount) = HDC Allocation. Each element of this method is discussed below.

Permitted Square Footage

Based upon the assistance of Integra, the Highlands Council recognizes that the functional variable typically used to value non-residential property is the potential building square footage that a specific property can yield. This is generally calculable within the context of local zoning requirements, adjusted for all ordinary physical constraints, and specifically with parking ratios and lot coverage requirements considered. Consequently, in determining a non-residentially zoned parcel’s development yield, the Highlands Council must consider parcel size, the applicable Floor Area Ratio (“FAR”), parking requirements and whether the parcel is subject to environmental constraints.

Non-Residential SF for Specified Use⁸

Similar to the Zoning Factors developed for the residential HDC allocation, the Highlands Council applied the use of a factor that recognizes different types of non-residential development have different underlying land values. Integra undertook a study of their existing non-residential land database, land records within CoStar and other subscription comps services, and considered the broad non-residential experience of the Integra professionals who specialize in non-residential valuation. Based upon this information, Integra recommended that the non-residential allocation method adopt an understanding of the land values on a dollar per square foot FAR (“\$/SF FAR”) basis generally in accordance with the following matrix:

⁷ For discussion of Integra’s work regarding the non-residential allocation method, please see Integra’s report titled “Consultant’s Report – Phase III: Highlands Region TDR Valuation Analysis” attached as Appendix G.

⁸ Unlike the residential uses that typically have a high degree of variation in the underlying land values because of the disparity in end unit housing prices (driven by schools, taxes, existing development patterns, etc.), non-residential uses are primarily affected by demand for non-residential space. Consequently, across the Highlands Region, non-residential unit values expressed on a dollar per FAR (buildable square foot) basis tend to bracket a relatively tight range. As such, location factors are not inherently required when one considers that general non-residential rent levels will be a function of demand, and that relative demand should be considered a constant given the limited number of non-residential landowner’s affected.

Highlands Transferable Development Rights Technical Report

<u>Use</u>	<u>\$/SF FAR Range</u>	<u>Average \$/SF</u>	<u>Ratio</u>
Industrial	\$10 - \$20 FAR	\$15/SF	1.0
Office	\$20 - \$40 FAR	\$30/SF	2.0
Retail	\$25 - \$60 FAR	\$42.50/SF	2.83

A “conversion factor” should then be applied based on the type of non-residential use. Industrial uses tend to support employees at a ratio of 1 per 1,500 SF. This becomes the basis for establishing the conversion factors to account for value/price variations in non-residential end use. Consequently, HDCs are allocated to the above uses at the following square foot intervals:

$$\text{Industrial Use} = (1,500/1 = 1,500) = 1,500 \text{ SF}$$

$$\text{Office Use} = (1,500/2 = 750) = 750 \text{ SF}$$

$$\text{Retail Use} = (1,500/2.83 = 530) = 530 \text{ SF}$$

Based upon the above, sample allocations of HDCs to an undeveloped lot zoned for non-residential use would be as follows:

$$10,000 \text{ SF industrial building} \div 1,500 \text{ SF} = 6.67 \text{ HDCs rounded to 7 HDCs}$$

$$10,000 \text{ SF office building} \div 750 \text{ SF} = 13.3 \text{ HDCs rounded to 13 HDCs}$$

$$10,000 \text{ SF retail building} \div 530 \text{ SF} = 18.87 \text{ HDCs rounded to 19 HDCs}$$

HDC ALLOCATION DETERMINATION PROCESS

The Highlands TDR Program includes a process that Sending Zone landowners will follow to receive an HDC allocation determination made for their property. This process determines the number of credits that a parcel of land is entitled to without requiring the sale of those credits. It is similar to the process followed by the New Jersey Pinelands Commission in its PDC program and other programs around the country. This process is outlined below.

The Highlands Council is preparing an HDC Allocation Determination application that will require the following information:

- ◆ landowner’s contact information;
- ◆ parcel location by address and block & lot;
- ◆ number of acres;
- ◆ information regarding existing development and uses on the parcel, including any commercial operations;
- ◆ if the parcel is undeveloped, information as to whether the landowner wishes to reserve an applicable Highlands Act exemption;
- ◆ information regarding any easements or deed restrictions applicable to the parcel;
- ◆ information regarding whether landowner was in process of securing development approval at the time Highlands Act passed, and what State and municipal approvals were secured as of March 29, 2004, and what approvals were pending as of that date;
- ◆ submission of a copy of the parcel’s deed;
- ◆ submission of a tax map depicting parcel’s location; and
- ◆ submission of any other information that landowner believes is pertinent to the Highlands

Council's consideration of the application.

As soon as practicable after the Highlands Council receives a complete application for an HDC Allocation Determination, the Highlands Council will review the application and issue a HDC Allocation Letter setting forth the number of HDCs allocated to the eligible parcel of land if appropriate. The HDC Allocation Letter will include a conservation restriction on the future use of the parcel of land to which HDCs are allocated. The conservation restriction does not have to be recorded until the landowner wishes to sell an HDC as discussed below.

If the landowner disputes the number of HDCs allocated to his or her parcel, the owner may seek reconsideration by the Highlands Council only with respect to the parcel's lot yield in the case of residential development or permitted square footage in the case of non-residential development. In either of those situations, to the extent that such information had not be previously submitted with the application, the landowner may submit a concept plan certified by a professional engineer consistent with the requirements of a municipality's land use development regulations and federal and State environmental laws and regulations in place as of August 9, 2004. The Highlands Council will then review the submitted information and make a final decision regarding the HDC allocation.

To assist landowners in gaining an understanding of how many HDCs their property may be entitled to receive, the Highlands Council is preparing a web-based application called the HDC Determination Tool. This tool will allow a landowner to enter information on his or her parcel for an estimate of the number of HDCs. The information provided on the HDC Determination Tool will not constitute a formal HDC Allocation Determination. Such a determination may only be received by submitting an HDC Allocation Determination application as outlined above.

HIGHLANDS DEVELOPMENT CREDIT BANK

The Highlands Act empowers but does not require the Highlands Council to establish a Highlands development transfer bank to facilitate the transfer of development potential in accordance with the Regional Master Plan. (N.J.S.A. 13:20-13.i). Development transfer banks serve a number of important functions. These include purchasing TDR credits from sending zone landowners, recording and tracking credit sales and credit retirements, establishing and reevaluating minimum credit values, and marketing the TDR program. The functions a development transfer bank performs are often dictated by the needs of the specific TDR program and its structure.

The purchase of TDR credits by a development transfer bank is critical to establishing a credible and functional program. This is particularly true in those programs where establishment of receiving zones is voluntary. A development transfer bank's ability to purchase credits at the outset of the program creates a stable program because it establishes a ready purchaser and assures sending zone landowners that their credits have value despite the fact that private market demand might not yet exist. In this way, the development transfer bank "fills any timing gap that might result from the lack of an immediate buyer." (Stevenson, 1998) The ability of a bank to purchase credits also provides assurance to developers that there will be credits available for purchase to be used in the receiving zones.

A development transfer bank also aids in establishing and stabilizing TDR credit prices. (Pruetz, 2003) During the initial phase of a TDR program, there may be a reluctance to participate in the program because few, if any credit transactions have occurred. By establishing a minimum credit price, a credit benchmark will be established from which private parties can negotiate. (Id.) Additionally, by purchasing credits, a development transfer bank has the ability to stabilize the credit market. When credits are scarce, the bank may sell some of its credits to ensure an adequate supply. Where there are too many credits are available for purchase, the bank may step in and purchase credits to reduce supply. (Id.)

A development transfer bank may also help facilitate development of a private market. By serving as an information clearinghouse, the development transfer bank can bring together sellers and purchasers of credits. The PDC Bank in the Pinelands serves this role. It maintains a registry of credits available for

sale, which a potential purchaser of PDCs may access.

Finally, a development transfer bank often administers the TDR program so that these activities do not have to be undertaken by municipal officials. As noted above, an important function of a development transfer bank is recording and tracking all credit transactions. These activities require significant time and administrative cost. With the bank serving in this role, the administrative burden is not borne by the individual municipality. Similarly, a development transfer bank can prepare marketing materials and conduct information sessions to promote the TDR program and gain greater community support. As with credit recording and tracking, where these functions are performed by a development transfer bank, they are not an administrative and financial burden on a municipality.

Recognizing the important roles that a development transfer bank plays in implementing and administering a TDR program, the Highlands Council adopted goals, policies and objectives in the Regional Master Plan to establish a TDR bank called the Highlands Development Credit Bank. Under the provisions of the Regional Master Plan, the Highlands Development Credit Bank will serve as (i) a regional clearinghouse for information with regard to the Highlands TDR Program; (ii) the administrator and official recording agency for the Highlands TDR Program; and (iii) a buyer and seller of Highlands Development Credits.

The Highlands Council established the Highlands Development Credit Bank by resolution on June 26, 2008. According to the Highlands Act, the bank must “operate in accordance with the provisions of general law authorizing the creation of development transfer banks by municipalities and counties.” The relevant general law applicable to such banks is the State Transfer of Development Rights Act (“State TDR Act”), which authorizes municipalities and counties to create development transfer banks (see N.J.S.A. 40:55D-158).

The State TDR Act calls for a development transfer bank established by a municipality or county to have a board of directors comprising five members appointed by the governing body. The individuals to serve on the board shall have expertise in banking, law, land use planning, natural resource protection, historic site preservation or agriculture (see N.J.S.A. 40:55D-158).

Although the State TDR Act prescribes the number of persons to serve on a bank board, the focus of the State TDR Act is on intra-municipal or intra-county programs, not on a large regional program like that being developed for the Highlands Region. Given the scale of the Highlands TDR Program, and the number of municipalities, counties, parcels, and stakeholder interests at stake, the Highlands Council chose to establish a bank board of directors with nine members. To place this decision into context with a regional program, the PDC Bank established in the Pinelands has a nine-member board of directors, which is required by the Pinelands Development Credit Bank Act, N.J.S.A. 13:18A-33. Similarly, the Garden State Preservation Trust has a nine member board. A board of this size will ensure that all stakeholder interests are represented at the Highlands Development Credit Bank. The makeup of the bank board of directors will be as follows:

- ◆ Chairperson, Highlands Council;
- ◆ Two other members of the Highlands Council;
- ◆ One representative of the State TDR Bank – either the Executive Director or a Bank Board Member of the State TDR Bank;
- ◆ One representative of the Garden State Preservation Trust;
- ◆ One member of the general public, who shall have expertise land development and redevelopment;
- ◆ One member of the general public, who shall have expertise in land conservation and stewardship;
- ◆ One member of the general public, who shall be a farmer actively engaged in agriculture in the

Highlands; and

- ◆ One member of the general public, who shall have expertise in banking, finance, or land economics.

Under the resolution adopted by the Highlands Council, the Chairperson of the Highlands Council will appoint persons to serve on the board in the various slots. Members will serve for a term of five years. The Highlands Council is given the authority to select who should serve as the chairperson of the board from the selected nine members.

Additionally, the adopted resolution states that any monies allocated or appropriated to the Highlands Development Credit Bank, whether from the State or another source, must be held in an account separate and apart from any Highlands Council monies and that those monies may only be used for the purposes of acquiring Highlands Development Credits or administering operations of the Bank.

Once the Highlands Council has selected the bank's board of directors, the board will then approve the by-laws and operating procedures by resolution consistent with the State TDR Act and the requirements of the Highlands Act and Regional Master Plan.

MINIMUM HDC PRICE

The Highlands Act TDR provision charges the Highlands Council with establishing the initial value of a development right. (N.J.S.A. 13:20-13.h) Establishing this price requires balancing two critical interests. First, the minimum HDC price must be sufficient so that a Sending Zone landowner realizes an economic return from the sale of credit. Second, the minimum HDC price cannot be so great that it reduces a developer's profit to such an extent that a proposed project is rendered uneconomical. Only by finding a balance between these two competing interests will an appropriate initial HDC price be established.

The dollar value of an HDC will depend on the profitability of the bonus density provisions for developers who construct in the voluntary Receiving Zones. (Nicholas 1982) A fundamental principle of the Highlands TDR Program is that, for each additional unit on a given lot, the increase in revenues will be greater than the increase in costs. While costs savings are attributable to lower per unit infrastructure costs (streets, sidewalks, sewers, utilities, etc.) and other economies of scale, the principal source of savings is reduced land costs. (Id.) Consequently, residential and commercial land values per unit are a significant factor that will influence the value of HDCs.

Also important to the value of HDCs is the recognition that there is great variability in per unit land costs depending upon the particular end use of a lot. (Nicholas 1995) Residential land costs per unit differ greatly when comparing single family home development with that for townhouses or apartments. Similarly, commercial land costs per unit differ significantly between office, retail and other commercial uses. All things being equal the higher the permitted density (in the case of residential housing) or intensity (in the case of commercial use) of a given lot, the lower the per unit land costs. (Id.)

Understanding these concepts, the Highlands Council conducted an analysis to estimate the land value increments associated with higher density/intensity development. The Council began its efforts by analyzing 2005 MOD-IV tax assessment data of residentially developed parcels (Class 2) throughout the Highlands Region. This data set represents tax assessment information for January 10, 2004 through January 9, 2005.

The Highlands Council first segregated those Class 2 parcels that, based upon municipal zoning as of November 2005, could not be further subdivided. Using this refined data set, the Council then separated out the parcels by their relevant composite zone density. The equalized assessed values of these parcels were then averaged for each municipality in the Region. The results of this work are detailed in Appendix C titled "Regional Zoning Factor."

Using the data set developed for the Regional Zoning Factor analysis (described above), the Council

then sought to predict the marginal value of a lot where density is increased from four units per acre to five units per acre. The basis for selecting this density interval is that the incentives for establishing a Receiving Zone under the Highlands Act are not triggered until the Receiving Zone has a minimum residential density of five units per acre for the residential portion of the Receiving Zone.

After plotting these data, four separate mathematical functions were used to predict the marginal value of the fifth unit per acre. The results of this work are represented in Appendix F titled “Marginal Lot Value Analysis.” The results of each function were evaluated based upon mean absolute error and a subjective determination of what functions visually yielded the “best fit.”

Using this information, the Highlands Council selected the lowest lot value in a municipality with the best fit. The reason for selecting the lowest lot value is to prevent HDC values from being too high at the outset of the program and undermining any potential demand for the HDCs. The selected lot values are reflected in the column labeled “Lowest Value w/ Best Fit” of Appendix F. The Highlands Council then reduced these values by 30% as these values reflect lots that are in an approved and improved condition. The reduced lot values were then averaged for the entire Highlands Region resulting in an average lot value of \$64,657.25.

Finally, the Highlands Council applied a deduction for a measure known as a “developer’s willingness to pay.” This measure was developed by Dr. James Nicholas, economics professor at the University of Florida, to reflect the fact that a developer’s willingness to purchase a TDR credit is the result of examining the economics between raw land costs, lot selling prices, and the cost/availability of infrastructure in the various receiving areas. When these three cost variables are significant developers have little money left over to purchase TDRs.

In assisting in the development of the Pinelands Development Credit program in the early 1980s, Dr. Nicholas applied a 50% reduction to the marginal values resulting from his analysis. A similar 50% reduction as been applied in other TDR programs including the Long Island Pine Barrens credit program.

In establishing the initial HDC target price, the Highlands Council applied a 75% reduction to the regional average lot value. This was done to reflect the fact that Receiving Zones under the Highlands Program are voluntary. In the case of those programs where a 50% reduction was applied, there are mandatory Receiving Zones. The resulting target HDC price is \$16,164.31, which the Council has rounded down to \$16,000 for simplicity.

Two further circumstances must be considered when determining the initial HDC price. First, in addition to the cost of an HDC, a developer may also be required to pay impact fees of up to \$15,000 per unit, provided that the municipality in which a Receiving Zone is located has met the Highlands Act’s minimum requirements for assessing impact fees and has adopted an impact fee ordinance. The cost of potential impact fees and HDC price relative to per unit approval and construction costs must be such that a developer still realizes a sufficient per unit profit.

Second, the Highlands Development Credit Bank, when established, will determine what amount it will pay per HDC to alleviate unique and extenuating financial circumstances. Importantly, the State TDR Act provisions under which the Highlands Development Credit Bank will operate do not place a limitation on the amount that the bank may pay to acquire HDCs. That said, the Highlands Development Credit Bank should be careful not to impair the operation of a private market by establishing a HDC price that is too high at the outset of the program. It is likely that the price paid by the Highlands Development Credit Bank after initial capitalization will establish a floor on HDC prices.

HIGHLANDS TDR PROGRAM IMPACT FEES

Assuming that a municipally-designated Receiving Zone satisfies the minimum residential density threshold, the Highlands Act authorizes a municipality to impose up to a \$15,000 per unit impact fee on new development within a Receiving Zone to offset the costs of capital improvements or facility

expansions necessitated by the new development. (N.J.S.A. 13:20-13.m)⁹ These fees may be charged against all new development within the Receiving Zone. The impact fees are paid by the developer constructing within the Receiving Zone and are paid directly to the municipality. The impact fee may not be assessed against any low or moderate income housing unit within an inclusionary development.

To impose the impacts fees, a municipality must adopt an impact fee ordinance. The ordinance must define the service unit and set forth the specific purposes for which the impact fee revenues may be expended. The ordinance must also delineate the service area for each capital improvement or facility expansion to be funded out of the impact fee; establish a fee schedule setting forth the amount of the fee charged for each service unit; and lay out a payment schedule. Importantly, the improvements and expansions for which an impact fee is to be imposed must bear a reasonable relationship to the needs created by the new development in the Receiving Zone. (N.J.S.A. 13:20-13.m(4))

RECORDING AND TRACKING HDC TRANSFERS

As noted above an essential function of the Highlands Development Credit Bank will be to record and track all HDC activity. These activities are governed by the requirements of the State TDR Act, which mandates that restrictions on the Sending Zone lot be noted and recorded, and that a record of the development potential severance and its transfer be provided to the State TDR Bank. (N.J.S.A 40:55D-147) To effectuate these requirements, the Highlands Council is preparing two documents, a model conservation restriction and model HDC certificate, which will be used as the templates for all HDC activities.

The State TDR Act requires that when development potential is being separated from a given Sending Zone lot, the encumbrance on the lot and the remaining uses that are permitted must be attached to and recorded with the lot's deed. (N.J.S.A. 40:55D-147) This instrument must also state that any development inconsistent with its conditions and restrictions is expressly prohibited and that all conditions and restrictions run with the land and are binding upon the landowner and any successor in interest. Furthermore, the instrument's restrictions are enforceable by the municipality and county in which the lot is located, as well as the State of New Jersey.

The conservation restriction will be signed and recorded at the time a Sending Zone landowner wishes to have the ability to sell or convey his or her development potential. After receiving a final HDC determination letter from the Highlands Council, a landowner may elect to record the requisite conservation restriction or simply hold onto the HDC determination letter. Where the landowner chooses not to record the requisite conservation restriction, the HDC determination letter will remain valid for two years. If no conservation restriction is recorded prior to the expiration of the HDC determination letter, the landowner must re-apply to the Highlands Council for an HDC determination. Once the necessary conservation restriction is properly recorded and filed with the Highlands Council and the Highlands Development Credit Bank, the Bank will issue the appropriate HDC certificates to the landowner, and the development potential represented by the HDCs is fully transferable.

Under the Highlands TDR Program, the conservation restriction will prevent the future development of the parcel of land. It will not impose other conditions on the landowner unless the landowner is retaining an applicable Highlands Act exemption. In that situation, the location of the exemption on the parcel will be set forth in the restriction itself and should be situated in such a manner as to minimize the impact on Highlands resources. Additionally, it is important to note that only one TDR-related conservation restriction will be recorded per parcel. Consequently, even if a landowner wishes to sell or convey only one HDC of several that he or she owns, a conservation restriction must be recorded at that time for the entire parcel before that first HDC may be sold.

In addition to providing all requisite development transfer information to the State TDR Bank, the

⁹ Under Section 13.m(4), if impact fees for TDR Receiving Zones are authorized Statewide, then the impact to be assessed by municipalities participating in the Highlands TDR Program is 200% of the statewide impact fee.

Highlands Development Credit Bank will be tasked with maintaining an HDC registry and tracking all HDC transfers. The registry and tracking system will be similar to that utilized by the Pinelands Development Credit Bank that was developed by Applied GIS, Inc. HDC information maintained by the bank through its tracking module will be placed online so that potential purchasers can review the HDCs available and their minimum price. To maintain the privacy of sellers, however, HDCs will be listed online by their certificate number only. A potential purchaser would have to contact the Highlands Development Credit Bank directly to receive the potential seller's information.

REVIEW AND ASSESSMENT OF THE HIGHLANDS TDR PROGRAM

The State TDR Act requires that any adopted municipal TDR program be reviewed and assessed to determine whether it is meeting the goals of the program.¹⁰ These reviews occur at the third and fifth anniversaries of the program's adoption.

Although not specified by the TDR provision of the Highlands Act, Highlands Council believes that a similar review of the Highlands TDR Program should be conducted. Unlike the reviews required by the State TDR Act, however, these reviews would occur at the fifth and seventh anniversaries of the program's adoption because of the program's scope and voluntary nature of the Receiving Zones.

At the fifth anniversary of the program's adoption, the Highlands Council would examine the development potential transactions in both the private and public market, compare current conditions with those at the outset of the program, and examine the units constructed with and without utilization of the Highlands TDR Program in the seven Highlands counties. This assessment would also examine the effectiveness of the HDC allocation process and the procedures for designating voluntary Receiving Zones. With this review, the Council would prepare a report examining the efficacy of the program to date and make recommendations for program changes if warranted.

At the seventh anniversary of the program's adoption, the Highlands Council would conduct another assessment. If an insufficient number of development potential transactions have occurred, the Highlands Council would presume the program is no longer reasonable and requires significant amendment. This presumption may be overcome by the Highlands Council by either:

1. immediately requiring the Highlands Development Credit Bank to acquire or provide for the private purchase of the difference between the HDCs already transferred (including consideration of fee simple and easement acquisition through State programs such as the Garden State Preservation Trust, county programs, municipal programs or non-governmental land trusts) and 15% of the total HDCs created in the Highlands Region Sending Zones; or
2. demonstrating that low levels of HDC transfer activity is due, not to the program's failure, but to low levels of development demand in general throughout the seven Highlands counties.

OTHER IMPORTANT ISSUES CONSIDERED IN FRAMING HIGHLANDS TDR PROGRAM

In addition to the essential program elements outlined above, there are several other important considerations that the Highlands Council examined. These issues are discussed below.

¹⁰ Section 155 of the State TDR Act requires that the development transfer ordinance and the real estate market analysis be reviewed by the planning board and municipal governing body three years after adoption. These bodies are to analyze the development potential transactions in both the private and public market, compare current conditions with those set forth in the development transfer plan element and capital improvement program, and examine the units constructed with and without utilization of the development transfer ordinance. (N.J.S.A. 40:55D-155) Section 156 of the State TDR Act requires a similar review five years after program adoption. If at least 25% of the development potential has not been transferred at the end of the five-year period the development transfer ordinance is presumed to no longer be reasonable, unless certain conditions are met. (N.J.S.A. 40:55D-156)

INITIAL HDC ACQUISITION

As discussed above, the designation of Receiving Zones is strictly voluntary under the requirements of the Highlands Act TDR provision. Due to this situation, the designation of specific Receiving Zones will continue to evolve over time with demand for HDCs increasing as more Receiving Zones become available.

Recognizing this situation, the Highlands TDR Program will need to be developed in phases. The first phase of the program will permit the Highlands Development Credit Bank and others to purchase HDCs from Sending Zone landowners despite the fact that there may not be designated voluntary Receiving Zones in which those credits may be utilized. After an initial period, the Highlands Development Credit Bank would transition to serve only as a buyer of last resort where, due to hardship circumstances faced by Sending Zone landowners, those landowners need to sell their HDCs but no willing purchasers are available. In the second phase of the TDR program, HDCs will be sold on the private market for use within the designated voluntary Receiving Zones. The transition between phases will be gradual, but the program mechanisms and processes established at the program's onset will be utilized in both phases.

There are a number of benefits to phasing in the TDR program. First, by permitting the Highlands Development Credit Bank to acquire credits at the outset before there are designated Receiving Zones, landowners who wish to sell their credits will have a mechanism for doing so. Second, by phasing the program, it will allow the Highlands Council and Highlands Development Credit Bank to develop regionally accurate land and real estate data during initial operations. These real estate market data, in turn, will aid the Highlands Council and Highlands Development Credit Bank in evaluating and adjusting the basis for TDR credit values (either regionally or sub-regionally). Third, it provides an appropriate timeframe to establish Receiving Zone uses in accordance with real market transactions, assisting in the transition to a more open, market-based TDR program.

Given the need for the Highlands Development Credit Bank to make HDC purchases during the first phase of the program, an adequate amount of initial acquisition capital for the bank is essential to its ability to instill confidence in the Highlands TDR Program. Based on initial projections, in light of data from the State Agriculture Development Committee, the Green Acres Program, and the current real estate market, it is estimated that the bank requires an initial capitalization of \$50 million. This will provide sufficient funds at the outset of the program to ensure that Sending Zone landowners will be able to participate in the TDR program even as Receiving Zone demand is being established.

There are several potential sources of funding for the Highlands Development Credit Bank. First, funds may be provided by the State for initial capitalization. Second, State TDR Bank is authorized under Section 46 of the Highlands Act (N.J.S.A. 4:1C-52) to provide funding if requested by the Highlands Development Credit Bank. Third, pursuant to Section 37.j of the Highlands Act (N.J.S.A. 13:20-35.j), the Highlands Council may direct any penalties collected by the Department of Environmental Protection for violations of the Highlands Act or Highlands rules to the Highlands Development Credit Bank.

BALANCING SENDING ZONE HDCs AND RECEIVING ZONE OPPORTUNITIES

The number of TDR credits created in a Sending Zone versus the number of opportunities to use those credits in Receiving Zones is known as the "transfer ratio." Transfer ratios vary among TDR programs. In many programs, the transfer ration is set at 1 to 1, i.e. one opportunity is established for each TDR credit generated. Under these programs, a balance is sought to be achieved between the supply of Sending Zone credits and the demand generated for those credits within Receiving Zones. Other TDR programs have established transfer ratios as high as 40 to 1, where there are 40 opportunities for every credit created. Certainly the more numerous the opportunities to use TDR credits, the greater the demand for those credits, assuming the price per credit enables development in Receiving Zones to be

economically viable.

The TDR provision of the Highlands Act is silent regarding the transfer ratio that should be utilized in the Highlands TDR Program. The State TDR Act, however, specifically requires that a balance be achieved between credits generated and opportunities available for their use. (N.J.S.A. 40:55D-145) The Highlands Council recognizes the need, at the very least, to create a balance between Sending Zone HDCs and Receiving Zone opportunities to ensure adequate demand for use of HDCs. However, due to the voluntary nature of the Receiving Zones, it is not possible to predict the number of opportunities that can be created.

In an attempt to address this transfer ratio uncertainty, the Highlands TDR Program includes provisions to establish demand for all of the HDCs to be generated in Sending Zones. First, any individual or entity (in addition to the owners of lots within a designated Receiving Zone) will be permitted to purchase HDCs. This policy would likely encourage land trusts, landowners who want to protect themselves from adjacent development, and even investors to purchase HDCs. By enlarging the number of potential purchasers, demand for HDCs should be theoretically greater. In doing so, the Highlands Council recognizes HDCs as a commodity to be sold or transferred to anyone so long as the landowner of the Sending Zone lot from which the HDCs are generated has recorded the appropriate conservation restriction prohibiting future development of that lot.

Second, as discussed above, with Plan Conformance or the adoption of a municipal TDR ordinance, municipalities will be required to establish that a certain number of HDCs be purchased and retired as a condition to granting any change in zoning or use variance. The number of HDCs required will vary based upon the activity for which approval is sought and will be established by a schedule to be developed and approved by the Highlands Council.

Another potential use of HDCs is to offset damages to natural resources occasioned by releases of hazardous or toxic material. The Department of Environmental Protection established an Office of Natural Resource Restoration which administers the State's Natural Resource Restoration program. The program was created in the early 1990s to restore natural resources damaged by multiple oil spills and discharges. (<http://www.nj.gov/dep/nrr> visited on July 14, 2006) Where the Natural Resource Restoration Program requires natural resource mitigation, the program could call for the responsible party to purchase HDCs as part of its restoration efforts. The purchase of HDCs would have to be tied specifically to natural resource damages occurring in the Highlands Resources.

Finally, the Highlands Council may seek legislative approval for the authority to require the purchase of HDCs by development beyond the Highlands counties. This would expand the demand for HDCs by creating a larger market for accepting density from the Highlands Region.

NEXT STEPS

With the essential elements of the Highlands TDR Program in place, the Highlands Council will undertake a number of activities to begin implementation of the program. First, it will work to finalize all application materials necessary for the HDC Allocation Determination process, including launching of the HDC Determination Tool and the preparation of a program handbook. Second, it will select and appoint members to the board of directors for the Highlands Development Credit Bank. Third, it will continue to seek initial capitalization of the Bank. Fourth and finally, it will continue to work with those municipalities that are currently undertaking a Receiving Zone feasibility analysis and seek to attract more municipalities for inclusion in the grant program.

SUPPORTING INFORMATION

Acknowledgments

Glossary

References

Appendix

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Brownfield Redevelopment	Land Preservation
Community Investment	Land Use Planning
Cultural and Historic Resources	Regional Development and Design
Ecosystem Management	Sustainable Agriculture
Eco-Tourism and Recreation	Sustainable Forestry
Education	Transfer of Development Rights
Geographic Information Systems	Transportation
Green Construction	Utility Capacity
Housing	Water Resource Management

Dwight Hiscano, who provided much of the wonderful and descriptive photography that accompanies the Highlands Regional Master Plan.

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GLOSSARY

Conservation Restriction – means an interest in land less than fee simple, stated in the form of a right, restriction, easement, covenant, or condition, in any deed, will, or other instrument, other than a lease, executed by or on behalf of the owner of the land, appropriate to retaining land or water areas predominantly in their natural, scenic, open, or wooded condition; appropriate for conservation of soil or wildlife; appropriate for outdoor recreation or park use; or appropriate as suitable habitat for flora or fauna. Under the Highlands TDR Program, a Sending Zone lot owner must record a conservation restriction for his or her property before the HDCs allocated to that property may be sold.

Dwelling Unit – means a single unit providing complete, independent living facilities for one or more people, including permanent provisions for living, sleeping, eating, cooking, and sanitation.

Existing Areas Served - means areas connected to either an existing public wastewater collection system or public water distribution system where such infrastructure is already constructed. It does not include areas of designated sewer service areas or water service franchise area where the collection, transmission or distribution systems do not currently exist.

Existing Community Zone - means those areas identified on the Land Use Capability Zone Map consisting of extensive and intensive existing development which may have capacity to support additional human development without adversely affecting the ecological value of the Highlands Region.

Floor Area Ratio (FAR) – means the sum of the area of all floors of buildings and structures having floors, compared to the unconstrained portion of the site.

Greenfield – means farmland and open or wooded areas where there has been no prior development activity.

HDC Certificate – means a document representing one HDC. Each HDC Certificate will list the lot by block and lot from which the HDC was separated, the lot owner's name, the date of award, and a specific identification number for that particular HDC.

Higher Intensity Receiving Zone – means a Receiving Zone in the Highlands TDR Program that will require appropriate public water and wastewater infrastructure with capacity to accommodate additional or new growth and which is proximate to existing developed lands and multi-modal transportation infrastructure. Areas that serve as a Higher Intensity Receiving Zone will have a minimum net residential density of 5 dwelling units per acre or its residential unit equivalent for non-residential development.

Highlands Development Credit – means an entitlement in the form of transferable interest allocated to land with limited capacity for development without adversely affecting ecological integrity which can be used to increase the density or intensity of development in a designated Receiving Zone.

Highlands Development Credit Bank – means a development transfer bank established by the Highlands Council to assist the Highlands Council in implementing the Highlands TDR Program.

Highlands Development Credit Certificate – means a document representing one Highlands Development Credit. Each Highlands Development Credit Certificate will list the parcel by block and lot from which the Highlands Development Credit was separated, the parcel owner's name, the date of award, and a specific identification number for that particular Highlands Development Credit.

Highlands Redevelopment Areas – means land areas designated as such by the Highlands Council that are brownfields, grayfields and/or other previously developed areas within the Highlands Region.

Impact Fee – means cash or in-kind payments required to be paid by a developer as a condition for approval of a major subdivision or major site plan for the developer's proportional share of the cost of providing new or expanded reasonable and necessary public improvements located outside the property limits of the subdivision or development but reasonably related to the subdivision or development based

upon the need for the improvement created by, and the benefits conferred upon, the subdivision or development.

Infill Development – means development of vacant or partially developed parcels which are surrounded by or in close proximity to areas that are substantially or fully developed.

Location Factor – means a factor to be applied in the Highlands TDR Program allocation process that recognizes that the per unit value of land varies by location within the Highlands Region.

Lower Intensity Receiving Zone – means a Receiving Zone in the Highlands TDR Program that has a residential density below 5 dwelling units per acre or its residential unit equivalent for non-residential development, but which provides some amount of bonus residential density or increase in non-residential intensity above base zoning which is consistent with existing community character. In many cases, a Lower Intensity Receiving Zone will be located in areas where the community character is more rural or suburban.

Net Yield – means, for purposes of allocating Highlands Development Credits to a Sending Zone parcel participating in the Highlands TDR Program, the residential units or residential unit equivalents that could have been developed on the parcel of land on August 9, 2004, taking into consideration all municipal development regulations and applicable State and federal laws and regulations.

Receiving Zone – means land designated by a local government and approved by the Highlands Council as suitable for TDR Density, provided Highland Development Credits are used for that development.

Redevelopment – means the process of removal and replacement, or adaptive reuse of an existing structure(s), transforming an underutilized area into an economically viable and productive part of the community.

Residential Unit Equivalent – means the development equivalent, in terms of either the mass of nitrate or the volume of wastewater generated, of the typical residential dwelling unit upon which the Highlands Council's nitrate dilution analysis was based.

Sending Zone – means an area or areas designated in a master plan and zoning ordinance, for purposes of participating in the Highlands TDR Program, within which development is restricted in light of the requirements of the Highlands Act.

TDR Density (bonus density) – means, in a Receiving Zone, either the amount by which development can exceed base zoning or the right to develop a use not permitted under the base zoning with the use of Highlands Development Credits.

Transfer of Development Rights (TDR) – means a land use tool that permits a community to utilize market forces to encourage the transfer of development potential from areas that the community wants to preserve, called Sending Zones, to areas that are more appropriate to accommodate increased growth, called Receiving Zones. In exchange for removing development potential from lands in a Sending Zone, a property owner receives compensation in the form of development rights that may be sold for use in increasing density or intensity of use in a Receiving Zone.

Zoning Factor – means a factor to be applied in the Highlands TDR Program allocation process that recognizes that the relative value of land varies according to the end use to which a parcel of land can be developed.

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APPENDIX

- A Past Experience with TDR in New Jersey
- B TDR Programs Outside of New Jersey
- C Zoning Factors
- D Location Factors
- E Sample Residential Allocation Calculations
- F Marginal Lot Value Analysis (Initial HDC Price)
- G Consultant's Report – Phase III: Highlands Region TDR Valuation Analysis

Appendix A

Past Experience with TDR in New Jersey

Prior to adoption of the State TDR Act, and more recently, the TDR provision of the Highlands Act, a regional entity and several municipalities had established TDR programs. Like the requirements of the Highlands Act TDR provision and the State TDR Act, the State's past experience with TDR programs will also influence and shape the design of the Highlands TDR program. Each of these programs is explored below.

New Jersey Pinelands Development Credit Program

The Pinelands Development Credit ("PDC") Program has been described as the "most ambitious, innovative and geographically extensive TDR program in the country." (Tripp, Dudek, 1989) Since its inception in 1981, the PDC Program has preserved 47,979.32 acres of the Pinelands region through the transfer of development rights. (Pinelands Development Credit Bank, June 8, 2006)

The PDC Program is a component of the Pinelands Comprehensive Management Plan ("CMP"). The CMP, adopted by the New Jersey Pinelands Commission in 1981, controls land use throughout the Pinelands to preserve the region's unique ecological and agricultural resources. (N.J.A.C. 7:50-1.1 et seq.) The Pinelands region itself is comprised of fifty-three municipalities in four counties and has a total land area of over 1 million acres. The CMP divides this region into eight separate districts and establishes environmental regulations and development standards governing those districts. The regulations and standards are then implemented by the region's municipalities by amending their respective local master plans and land use regulations to conform to the requirements of the CMP.

The Pinelands Commission established the PDC Program to offset the severe development restrictions imposed within the Preservation Area District, Agricultural Production Areas and Special Agricultural Production Areas. These management areas serve as Sending Zones for the PDC Program. PDCs are allocated to landowners in these districts based upon the land type and number of acres of a given parcel. For example, within the Preservation Area District, PDCs are allocated at one PDC per 39 acres of upland and two-tenths a PDC for 39 acres of wetlands. (N.J.A.C. 7:50-5.43(b)1.iii and iv) No PDCs are allocated to a parcel if it is 10 acres or less and is already developed for a commercial, industrial or other such use. For parcels less than 39 acres, the landowner receives fractional PDCs at the same ratio established for the management area in which the parcel is located. The number of PDCs is also reduced by one quarter PDC for each single family dwelling existing on a parcel. Each PDC allocated to a parcel equals four transferable development rights.

Under the PDC Program, Regional Growth Areas established by the CMP serve as Receiving Zones. Within these areas, purchasers of PDCs may use the development rights to build at densities above the base density. It is important to recognize that the State Legislature authorized the Pinelands Commission to designate specific Regional Growth Areas in the CMP. Once the Pinelands Commission identified and designated the Regional Growth Areas, municipalities where these areas are located had to amend their municipal master plans and local development regulations to accommodate them.

To determine the number of PDCs for a given property in one of the identified Sending Zones, a landowner requests a Letter of Interpretation ("LOI") from the Pinelands Commission. Through the LOI process, the Pinelands Commission applies the allocation formulas mentioned above based upon a parcel's location and its land characteristics. The Commission then subtracts or adds credits depending upon other circumstances such as the existence of a home. There is no charge for the LOI application. PDCs are issued in denominations of 0.25 credits (quarter credits). Once an LOI is obtained from the Pinelands Commission, it is valid for two years. If the LOI is two years old or older, the landowner must obtain an "Update" from the Pinelands Commission by making a written request.

Before a landowner may sell his or her PDCs, the PDCs must be certified by the Pinelands Development Credit Bank. The Legislature established the bank in 1985 to promote the marketability of PDCs as well

as record and track all PDC activity. As part of these activities, the bank certifies the number of PDCs allocated to a property through the LOI process. This is done to ensure that the landowner owns the property free of encumbrances. To obtain certification, the landowner submits an application, the deed, a 60-year title search, a 20-year upper and lower court search of liens and judgments, a copy of the tax map showing the property in question, a letter from any mortgage holder indicating that they understand the land will be encumbered with a deed restriction, and a signed deed restriction appropriate for the location of the property. Once this information is submitted to the bank and there are no issues, the deed restriction is recorded with the county clerk and a Pinelands PDC Certificate is issued to the landowner. No PDCs may be sold without the deed restriction being recorded. A landowner selling PDCs retains title to the land and is allowed to continue using it for any non-residential use authorized by the CMP. Any future purchaser of that property is bound by the terms of the deed restriction.

The value of PDCs is now established on the open market through the purchase and sale of PDCs between private parties. It should be noted that Pinelands Protection Act, which established the Pinelands Commission, originally set the value of a PDC at \$10,000. The most recent sales information indicates that the price of a PDC is currently ranging between \$60,000 and \$160,000 per PDC or \$15,000 to \$40,000 per development right. (Sales Activity through April 25, 2006, NJ Pinelands Development Credit Bank)

Although the Pinelands Development Credit Bank primarily serves to administer the PDC program, it may also buy and sell PDCs, although there are limitations on these actions. When PDCs are purchased by the Bank, they are purchased at 80% of market value so that the Bank does not affect the open market. The Bank may also sell PDCs held by it, but only does so through an auction. To date only two auctions have been held, the most recent occurring approximately ten years ago. (Personal communication with Larry Liggett, Pinelands Commission, December 7, 2005) Importantly, the Bank may guarantee loans using PDCs for collateral.

As noted above, to conform to the CMP, municipalities are required to allow for the use of PDCs in their land use regulations. To distribute the bonus housing units evenly and maintain consistent housing types in various neighborhoods, municipalities designate zoning districts in which residential development will be permitted at densities ranging from less than 0.5 dwelling units per acre to 12 or more dwelling units per acre with PDCs. Using PDCs, development can take place at the high end of the density ranges.

An important aspect of the conformance requirement for the PDC Program is that municipalities may not “give away” density through variances. Where a proposed development requires a variance from bulk or area standards, the developer must secure a certain number of PDCs before approval for that variance will be granted. Because of this mechanism, demand for PDCs is not undermined by municipalities allowing density to be exceeded without securing PDCs.

Burlington County

In 1989, the State Legislature adopted the Burlington County Transfer of Development Rights Demonstration Act, N.J.S.A. 40:55D-114 *et seq.* The purpose of the act was to permit Burlington County to serve as a pilot project for the State in the creation and implementation of TDR. The Legislature chose Burlington County because of its strong agricultural base.

Under the Act, a municipality in Burlington County is authorized to establish a TDR program through the adoption of a local ordinance. Before establishing the program, however, a number of requirements must be satisfied including preparation of detailed population, zoning, land use, and real estate market studies; development of an infrastructure plan for any Receiving Zones; and amendment of the municipal master plan and development regulations to accommodate growth in any identified Receiving Zones. There must also be an established TDR credit allocation process. The Act also permits a municipality to establish a TDR bank to aid in the marketability of TDR credits.

Once the TDR program is established, the Act requires that the municipality evaluate its effectiveness

after three years. If after six years specific transfer of development potential targets are not achieved, the ordinance establishing the program is to be repealed.

To date, only two municipalities have established voluntary intra-municipal TDR programs under the Act: Chesterfield and Lumberton Townships. Both of these programs are examined in detail below.

Chesterfield Township

Chesterfield Township has designed and is implementing a comprehensive municipal TDR program. Today, Chesterfield is overseeing the transfer of development rights from areas of the township planned for agriculture and open space, to a new, planned, traditional-neighborhood community called Old York Village. The goal of Chesterfield's municipal master plan is to cluster new development into a well designed and sewered community center, allowing surrounding lands to remain in agriculture and natural open space. By allowing landowners in planned preservation areas to sell their development rights to developers who can use them in the village center, new growth pays for the protection of farmland and open space.

Chesterfield's TDR program was the result of long-term planning, consensus building, community education, work with county and state officials and civic minded compromise. Most would say that the program did not come easy and that Chesterfield is extraordinary in that it sustained the will to find creative solutions over a decade or more of effort.

While Chesterfield looked at TDR as early as the mid-1970's, the vision for its current program evolved in the late 1980's. Beginning in June of 1989, Chesterfield began collaborating with Burlington County and State officials on a number of issues, including computerized mapping, on a method for the allocation and transfer of TDR credits, on the development of a suitable receiving area based upon existing traditional village models and "visual preference surveys" conducted with community members, on the development of a sewer service area and provision of services essential to development of a growth center, and on the design of an ordinance to orchestrate and direct the process. After sustained effort, collaboration, planning and public process, Chesterfield Township adopted its present TDR ordinance in 1997, almost ten years after TDR was proposed as an alternative approach to municipal acquisition of farmland easements.

Chesterfield, though only 10 miles from Trenton and the crossroads of I-295, Route 130 and the New Jersey Turnpike remains relatively sparsely settled: approximately 920 residential dwelling units in a 21 square mile area. The Township has preserved 4,575 acres through combined efforts of farmland easement purchase and assignment of credits under the TDR program. This represents a third of the Township's total land area. The Township's traditional development pattern consists of farms surrounding the historic village of Crosswicks and hamlets of Chesterfield and Sykesville. The TDR receiving area, Old York Village, is designed, in part, based on the historic village of Crosswicks.

Chesterfield's receiving area comprises 560 acres in the northwest corner of the township. This area is most adjacent to the employment center of Trenton and the major transportation corridors, I-295 and route 130. The receiving area was also selected because of its proximity to existing water treatment facilities in Bordentown. In an effort to implement the TDR plan and support the viability of the receiving area, Chesterfield provided sewer and water services to the receiving area tract. The receiving area is planned to accommodate 1,200 residential housing units. The Old York Village Plan includes a variety of attached and detached single family housing types as well as a new elementary school, which is adjacent to centralized active recreation areas. The site plan for the village incorporates a network of neighborhood parks and a mixed-use village center hosting retail, office and convenience uses intended to serve local market needs. The site plan also seeks to promote non-motorized transportation within the village. Preserved stream corridors and walking paths connect the respective neighborhoods and extend north to the existing neighborhood of Crosswicks Village.

All development within the new village will be in accordance with site planning and architectural design standards which have been incorporated within the Township's implementing zoning ordinances. "The

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site planning standards address the spatial relationships between buildings and the roadways, streetscape elements and open spaces which form their context. The architectural design standards will ensure that the residential and commercial buildings echo the architectural styles and details, building materials and colors which are characteristic of buildings within Chesterfield's historic villages." (Clarke Caton and Hintz, 2004)

Chesterfield's sending area is the roughly 10,000 rural and primarily agricultural acres that exist outside of the receiving area and existing settled and developed areas of Chesterfield. A total of 4,575 acres of the sending area have already been preserved, primarily through the purchase of farmland preservation easements since 1987 and more recently through the assignment or transfer of TDR's under the Chesterfield Township TDR ordinance. Through the purchase of farmland preservation easements (since the enactment of Chesterfield's TDR ordinance) Burlington County holds approximately 300 of Chesterfield's TDR credits. The policy of the county has been to bank credits indefinitely allowing the private market for credits to sustain developers demand for credits.

Over the years that Chesterfield explored TDR as a planning technique, there were density studies conducted, zoning changes enacted, development proposals reviewed, and large scale farmland preservation easements appraised and purchased, all of which activity had some level of influence on the method of credit allocation finally adopted in 1997. During much of the discussion, Chesterfield's zoning plan allowed for the development of one house on 3.3 acres of land. To some extent, the 3.3-acre zoning was based upon the suitability of local soils to treat residential effluent via traditional septic system designs.

A number of more complex credit allocation approaches were considered, but, the final approach taken was fairly simple. Using existing Soil Conservation Service soil maps, credits were awarded based upon the parcels' soil limitations for accommodating septic disposal. The best soils, those with only "slight" limitations were awarded one credit for every 2 acres. Soils that were "moderate" in regard to septic suitability were awarded one credit for every 10 acres. Soils that were "severe" in regard to septic limitations were awarded one credit for every 50 acres. This approach was viewed as reflecting the number of units that could realistically be constructed on a parcel in Chesterfield under existing zoning.

The transfer of credits under the TDR ordinance is voluntary. In order to encourage TDR transfers, the Township offers a 10% bonus in the number of credits awarded when transferred. The TDR program also offers an appeal procedure to landowners who feel that they have been under-allocated credits due to inaccurate mapping or acreage determination.

Prior to enactment of Chesterfield's TDR ordinance, the Township and Burlington County conducted and commissioned a number of studies and considered both simple and creative approaches toward estimating the value of a Chesterfield TDR credit. There was considerable pressure to render TDR credit values somehow comparable to the values achieved through the State's Farmland Preservation Program. The results of a study conducted by Dr. Jim Nicholas revealed a TDR credit value of \$26,000. Dr. Nicholas' study estimated TDR credit values over a range of densities using a multiple linear regression model that utilized data on building and land costs and recent residential sales in and around Chesterfield. The analysis found that the value of a TDR credit changed as density changed, increasing at first to reflect high construction savings, but then decreasing once reduced home values offset any gains in construction economies of scale.

Early credit transactions tended to support the results of Dr. Nicholas' estimate. However, the last auction of credits, held in July of 2004, found credits selling for \$50,000 each. At the 2004 auction, 50 credits were sold at that price.

Under the Chesterfield Master Plan, a single TDR credit can be used to construct one single family home and fractions of credits may be used to construct smaller units such as smaller homes, town houses and apartment units. Credits may also be used towards development of commercial and institutional uses; one credit entitles its holder to development of 2,000 square feet of commercial or retail space.

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Following the allocation of credits to a parcel, there is a three step process toward “extinguishing” TDR credits. First, landowners apply to “enroll” their credits into the Chesterfield TDR program. At the time credits are enrolled, the land from which the credits originate is “deed restricted” against future development. While it is possible to enroll some but not all of a parcel’s credits, the entire parcel is deed restricted with the enrollment of the first credit. Second, once credits are enrolled in the TDR program they can be “assigned” to a developer who is then free to use the credits in the receiving area in accordance with the Municipal Master Plan. Third, Credits are “extinguished” when the credit is exercised in a developed project. The Chesterfield Township municipal clerk handles the recording of deed restrictions on parcels that enroll in the TDR program. The municipal clerk also records the retirement or extinction of credits when employed in a particular lot and block in the receiving area. The Burlington County TDR Bank works cooperatively with the Township to help track credit transactions and recordings.

At this time there are no formal arrangements for monitoring of deed restrictions.

The County and Township report that credit transactions continue to occur on the private market. The last public auction of credits was in 2004 yielding a credit value of \$50,000 per credit. Fifty credits were sold. The County continues to bank roughly 300 Chesterfield TDR credits. More than 90 percent of the receiving area has been sold or is under contract to developers.

Lumberton Township

Lumberton Township was the first municipality to utilize the authority of the Burlington County Transfer of Development Rights Demonstration Act to develop and implement a voluntary municipal TDR program. Adopted in 1995, the first Lumberton TDR program seeks to preserve farmland in the western portion of the Township. Based upon the success of this program, in 2000, the Township adopted a second TDR program to preserve farmland in the municipality’s eastern portion. As of March 2006, TDR had permanently preserved over 850 acres of farmland within the Township.

The sending areas for the first TDR program in the western portion of the township were designated in the October 1994 municipal master plan and comprised 1,513 acres. The parcels must be at least 6 acres in size, they must have been assessed as farmland in 1994, and they must not be deed restricted from further subdivision or further development. With the adoption the second TDR program in 2000, an additional 1,355 acres in the eastern portion of the Township were designated as sending areas.

Like Chesterfield’s program, TDR credits are allocated to a sending area parcel based the parcel’s suitability for septic. This basis is used because it is seen as the most reliable measure of a parcel’s actual development potential. Relying on soil septic suitability, the Township devised a formula which allocates development credits at a rate of 0.5 credits per acre with soils that have slight septic limitations down to one credit per 50 acres where soils have severe limitations on septic suitability. The allocation plan relies on soils maps for Burlington County prepared by the USDA Soil Conservation Service (now known as the Natural Resources Conservation Service of NRCS). After applying the formula to a sending area parcel one credit is subtracted from the total allocation for each single family unit existing on the parcel at the time of ordinance adoption.

Lumberton Township’s TDR ordinance provides a process for a landowner to appeal the credit allocation of a parcel where the landowner believes more credit should have been allocated. Two methods are available to appeal the allocation decision. The landowner may either submit a soil survey prepared by a licensed soil scientist or submit a conceptual plan of development accompanied with representative soil borings. In either case, the parcel owner submits a notice of appeal, the required application and review fees to the Township’s planning board secretary. The planning board engineer then reviews the submission and advises the board of the findings. If the information submitted by the parcel’s owner demonstrates that the parcel has greater development potential than initially allocated, the planning board will grant the appeal and award the appropriate additional credits. Any appeal must occur prior to the recording of a TDR easement. Once an easement is recorded the opportunity for an

allocation appeal is lost.

For a sending area landowner to participate in the TDR program, the landowner must enroll his or her property. Enrollment requires the landowner to submit an application, proof of title, a TDR easement and the necessary review fees. After verification by the municipality, the owner records the TDR easement which establishes the TDR credits.

The process of selling TDR credits is termed “assignment” under Lumberton’s TDR program. To assign credits to another, the owner submits an application for assignment to the Township, including information regarding the potential purchaser and information concerning the recorded TDR easement. Once approved by the municipality, the assignment must be recorded within 90 days or the assignment is deemed null and void. Like enrollment, the process of assigning credits is done administratively. No public hearing is required. Initial credit values were established by the Township at \$10,000 per credit. Credit values are now determined on the open market.

Receiving areas within Lumberton are identified in the municipal master plan. Under the TDR program adopted in 1995, receiving sites are located in the Township’s five Rural Agricultural/TDR Receiving Area zones. Within these receiving areas the density of a receiving site can increase from a minimum of 0.7 units per acre to a maximum of 4 units per acre. Under the TDR provision adopted in 2000, the designated receiving area consists of 185 acres zoned for an age restricted community with mixed uses, including residential, neighborhood retail, office space, public or quasi-public facilities and open space. Within this receiving area, each age-restricted unit requires 0.7 TDR credits, and to achieve the maximum residential density of three units per acre, the receiving site developer must acquire 287 credits from the sending area.

To utilize TDR credits within a receiving area, the developer of the receiving site must “extinguish” the TDR credits. The developer must first obtain final approval for the project, conditional on the use of credits. The developer must then submit a deed of credit transfer with the application for TDR credit use and demonstrate ownership of the credits. After verification of credit ownership, a deed of credit transfer is signed and must be recorded before a building permit is issued.

An interesting provision of Lumberton’s TDR program is the ability to reassign credits or even dis-enroll them from the program. This provision is designed to provide relief from those situations of inherent unfairness, such as where a landowner in a Sending Zone who enrolls in the program is unable to sell credits because there of inadequate demand in the Receiving Zones. Landowners who have determined that they have an inability to utilize credits within the Receiving Zone may apply to the planning board for reassignment of the credits to the parcel from which they originated. The landowners may also dis-enroll the parcel from the program upon a showing of good cause. Where either reassignment or dis-enrollment is sought, a public hearing must be held.

Lumberton also established its own municipal TDR credit bank as part of its TDR program. The bank’s purpose is to facilitate the marketing of development credits between landowners with credit allocations and landowners who can use the credits. The bank is also empowered to purchase and sell development credits, at a price initially established by the Board of the bank, and subject to the fluctuations of the market. The Bank may only sell credits after a demand for credits has been demonstrated. This requirement is designed to eliminate the bank as a competitor of landowners in the bidding process and sale of credits. Lastly, the bank may provide guarantees on loans utilizing the TDR credits as collateral.

Another important provision of the TDR program is the comprehensive design guidelines that pertain to development constructed with TDR credits. These guidelines govern site standards, architectural aspects and open space requirements. The purpose of these guidelines is to ensure that receiving area development is compatible with the environment and architecture of the traditional communities in the Township.

Other NJ Programs

Prior to adoption of the Burlington County Transfer of Development Rights Demonstration Act in 1989, several communities in New Jersey experimented with the use of TDR. Although these programs remain in place, they have not been used significantly throughout their existence. Each program is described briefly below.

Bernards Township, Somerset County

Bernards Township adopted its transferable density provision in 1984 to encourage the provision of affordable housing and preservation of natural areas. In response to the State's Fair Housing Act regulations, the Township permitted Planned Residential Neighborhoods in its R-5 zone that provide a realistic opportunity to construct affordable housing. Within the R-5 zone there are both lowlands and uplands. In lowland areas, density is one unit per acre because of the need to preserve important natural resources. In the uplands sections, density is set at 5.5 units per acre. The ordinance allows the transfer of units from the lowlands areas to the upland areas. Transferable development credits are awarded at 1 credit per acre of lowland. Use of these credits allows density in the upland areas to be increased to 6.5 units per acre from 5.5 units per acre.

According to Pruetz, as of February 2001, there had been no use of the TDR provision. Additionally, all upland portions of the R-5 zone had been developed, thus eliminating any future use of the provision.

Hillsborough Township, Somerset County

In 1975, Hillsborough Township downzoned areas at the periphery of the municipality for purposes of preserving environmentally sensitive land and farmland. A landowner within one of these downzoned districts sued the township for approval of a plan to transfer development rights from the constrained parcel to another parcel in town owned by the same person. In response to this lawsuit, Hillsborough adopted a municipal TDR ordinance. Due to legal concerns the ordinance was amended in 1976 and again in 1981.

The TDR ordinance permits the transfer of dwelling unit credits from sensitive parcels to parcels in certain districts provided that the sending parcel is deeded to the township. The sending parcel must be at least 25 acres or larger, unless the parcel for which credit is sought is adjacent to an already dedicated 25 acres or more. In such case, the sending parcel may be as small as five acres. Sending parcels may be located in the township's residentially zoned districts. Receiving sites may be any parcel in the township's residentially zoned districts. As noted above, these same districts may also serve as sending sites. Density bonuses in the various receiving districts range from increases of 25% to 50%.

The determination of how many dwelling credits a sending parcel is entitled to is based upon the applicable baseline zoning. For every dwelling unit permitted in the district in which the sending parcel is located, the landowner receives one credit. The landowner is also awarded a ½ credit for those portions of a parcel that are identified as critical areas under the township's natural resource inventory. In no case, however, shall the number of credits awarded exceed the maximum density otherwise permitted in the district in which the sending parcel is located. The planning board determines the number of dwelling credits generated by a sending parcel.

Unlike most TDR programs where the sending parcel is deed restricted and the landowner retains ownership of the underlying fee, the Hillsborough TDR ordinance requires the dedication of the sending parcel to the township. The dedication occurs when the receiving site development is approved.

An applicant who wishes to develop utilizing transferable dwelling credits must apply to the planning board. As part of the application for development of the receiving tract, the applicant submits information on all parcels for which credit is being sought. The applicant submits a plat showing the lands proposed to be dedicated to the township (sending parcel) and a plat showing the area to which the dwelling credits are to be transferred (receiving tract) and the manner in which those credits will be used.

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Once this information is submitted to the planning board, the application is referred to the Township Committee for a finding that the lands to be dedicated are or are not acceptable to the township. If a favorable finding is made, the development application then follows the normal land development approval process in the township.

There is no banking of dwelling credits permitted by the township. If dwelling credits generated by the sending parcel or parcels are not all used for the proposed project on the receiving tract, an extra dwelling credits are forfeited.

The TDR ordinance has been used periodically since its adoption in 1975. It was first used in 1978, when a developer with land in one of the residential districts purchased a 70-acre farm in one of the preservation districts. Through purchase of the farm, the developer received 30 dwelling unit credits which were then applied to the developer's project. The township approved the development on the receiving tract with 30 more dwelling units above base density.

West Windsor Township, Mercer County

West Windsor adopted its TDR ordinance in 1991 to specifically preserve a private golf course that the owner wanted to convert into a 100-unit residential subdivision. The TDR ordinance allowed the golf course owner to sever the development potential from the parcel in exchange for deed restricting the parcel to recreational or open space uses in perpetuity. However, the Township did not have a receiving site sufficient to accommodate the 100 units. To address this issue, the Township ordinance allows residential units to be converted into an equivalent amount of office floor area for use within designated commercial zones. The TDR ordinance has only been used for this specific project and has not otherwise been utilized.

Appendix B

TDR Programs Outside of New Jersey

Another important source of information in developing the Highlands TDR program is garnered by reviewing and critically examining elements of successful TDR programs as well as those that are ineffective. The purpose of this review is to determine the success of these programs in both preserving important resource lands and ensuring adequate TDR credit values. This review is also important in that it may identify elements of these programs that could be incorporated into the Highlands TDR program to ensure its success. Provided below are summaries of a number of the programs that have been reviewed as part of this analysis.

Long Island Pine Barrens

Overview

The 102,500 acre “Central Pine Barrens” region of New York State, located within Suffolk County on Long Island, contains the largest remaining contiguous tract of undeveloped area on Long Island.

The region overlies a significant portion of the U.S. Environmental Protection Agency designated Sole Source Aquifer providing drinking water for the majority of Suffolk County residents.

This is a regional, voluntary TDR program encompassing a pitch pine – oak forest at the juncture of three municipalities: Southampton, Brookhaven, and Riverhead Towns. In 1993, the New York State Legislature enacted the Long Island Pine Barrens Protection Act (NY Environmental Conservation Law Article 57) which divided the region into a Core Preservation Area (55,000 acres) and Compatible Growth Area (47,500 acres). The Core Area is designated for preservation and the Compatible Growth Area is designated for controlled growth. Under the Program, “Pine Barrens Credits” (the term used here for transferable development rights) may be transferred from the Core (sending) area to either the Compatible Growth Area or the “non Pine Barrens” areas (receiving areas) within the three Towns.

Credit values are established on the open real estate market. Developers and landowners (or intermediate owners of Credits) negotiate Credit prices privately as a function of supply and demand. Since Credits are documented through “Credit Certificates” containing the owner’s name and Certificate serial numbers (which are issued by the regional Pine Barrens Commission), sales of Credits can be monitored and tracked by the Commission when Certificates are turned in to the Commission for reissue to a new owner. When that occurs, the Commission is able to record the sales price and number of Credits sold.

This historical data reveals that Brookhaven Credits started at \$7,500 per credit in 1996 and are now selling for \$100,000 per credit in Brookhaven. Riverhead Credits started at \$10,000 per credit 1997 and are now selling for \$80,000 to \$100,000 per credit. Southampton began in 1997 with credits selling in the \$10,000 to \$12,000 per Credit range and now sell in the \$85,000 to \$120,000 per credit range.

The 1995 Central Pine Barrens Comprehensive Land Use Plan, which defines the Program, states “It is the primary purpose of the Pine Barrens Credit Program to maintain value in lands designated for preservation or protection under the Plan by providing for the allocation and use of Pine Barrens Credits (PBCs). The Pine Barrens Credit Program will also promote development which is compact, efficient and orderly, and which is designed to protect the quality and quantity of surface water and groundwater and the long term integrity of the pine barrens ecosystem.”

Sending Areas

New development is generally prohibited or restricted in the sending areas; however, the law provides that certain land use activities (e.g., expansion of existing dwellings; development of certain lots approved before July 1993, etc.) may be permitted.

PBCs are allocated to landowners in the Core Area based on parcel size, the underlying zoning of the parcel as of 1995, and any prior parcel development. No deductions are taken for wetlands, steep slopes or other traditional development constraints, and this is an explicit incentive to attract such properties into the Program. Prospective PBC recipients receive a “Letter of Interpretation” which states the number of Credits to be allocated to each sending area parcel. Applicants can then opt to file a formal appeal if they feel that the allocation is insufficient, and a public hearing is then held by the Commission on each such appeal. The PBC allocation may then be adjusted or left intact by the Commission. Once the allocation is settled, and an applicant indicates a willingness to proceed, a Pine Barrens Credit Certificate for the number of Credits is issued, in direct exchange for a conservation easement on the parcel(s) with the Commission as the grantee.

PBCs can be sold to potential purchasers by reviewing a list of buyers. Additionally, these credits can be listed with a real estate broker or sold to the Pine Barrens Credit Clearinghouse (a branch of the Pine Barrens Commission). The Commission is not involved in the “buyer – seller” negotiations.

PBCs generally stay within the Town in which they were generated, although there is a provision through the Suffolk County Health Department for intertown transfers. Through 2007, approximately 3% of total Credits redeemed were sent across Town boundaries through this option.

Receiving Areas

Generally, throughout all receiving areas, a single PBC permits an increase in intensity of development equal to three hundred (300) gallons per day per acre or the equivalent rated sewage flow as described in the Suffolk County Health Department Standards.

Brookhaven allows additional increases in residential development density of up to 20% with the redemption of Credits; this is “as of right” and subject to ministerial review by the Planning Board. Larger density increases are “non as of right” and are subject to review and approval the Town Board.

Southampton permits receiving areas, which are located in residential overlay zones, to increase density from one unit per five acres to one unit per one acre with the purchase of PBCs. For areas already zoned for one dwelling unit per acre, bonus density can be increased to one unit per half acre.

Riverhead permits increases in commercial and industrial floor area through the use of Credits, based upon the County Health Department’s guidelines.

Strengths and Weakness

Developers can increase residential density by up to 20 percent “as of right” within the receiving areas.

PBCs must be permitted “as of right” in receiving areas for residential projects with a 20% or less increase in density; all other projects using Credits (regardless of location within or outside a receiving area) are subject to discretionary Town approval.

PBCs generally are not transferred between municipalities within the region. There is an exception to this for Credit redemptions through the Suffolk County Health Department where

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the Credits are used to satisfy Health Department requirements; in such cases, Credits can be transferred both “intratown” and “intertown”, and may, in fact, be transferred to a location entirely outside the Pine Barrens area.

The PBC Program is administered by a five-member PBC Clearinghouse Board, which is appointed by the Pine Barrens Commission. The Commission staff serves as staff for the Program’s daily operations.

The Clearinghouse Board may purchase and sell Credits, and currently has a \$3.2 million dedicated fund for this purpose.

As parcels enter the Program and years pass, the easement burdened properties must be periodically inspected for compliance with the easement conditions.

Daily operation of the Program requires close interagency cooperation and communication: Commission, Towns, County Health, County Treasurer, State Department of Environmental Conservation, County Real Estate, etc. are all involved.

Conclusions

As of January 1, 2008, the PBC Program has protected 657 parcels containing 1,345.33 acres. The average parcel size is 2.05 acres.

There have been 772.20 Credits generated overall with 476.636 of the awarded Credits are still outstanding (i.e., unredeemed).

PBC transaction volume (sum of all sales and resales to date) now exceeds \$25,000,000.

Tahoe Regional Planning Agency

Overview

The Tahoe Regional Planning Agency was established in 1969. In 1987, the current master plan was created, which includes six counties in California and Nevada.

The new master plan seeks to implement controlled growth and to promote residential subdivision development in designated areas with proper infrastructure, away from environmentally sensitive land.

This program is a regional with voluntary Receiving Zones for TDR.

Credit values are established on the open market with the developer and landowner negotiating as a function of supply and demand.

Credits in the late 1990’s were approximately \$30,000 per credit, with credits now selling between \$90,000 and \$100,000 per credit. However, there are signs of the market softening, which could have an effect on future credit prices.

Sending/Receiving Areas

Sending areas allow transfer of rights under four scenarios. Two of the scenarios include the transfer of development rights from vacant land and from already improved land. The other two scenarios include the transfer of “land coverage” and “building allocations.”

The transfer of development rights from vacant land can be achieved by allocating rights to a receiving area in order to achieve development, regardless of the designated zoning. All rules and regulations of the existing zoning apply.

The transfer of development rights from already developed land can also have rights transferred by the demolition of existing structures adjacent to environmentally sensitive land.

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The transfer of “land coverage” (i.e. impervious surface) can be obtained at a one to one transfer ratio or greater in certain regions. Once land coverage has been transferred to a receiving site, the sending site is deed restricted since the land coverage rights have been retired. Building allocation rights can be transferred from environmentally sensitive vacant land, which can not be developed due to various regulations. The receiving area must be less environmentally sensitive and planned for residential development. The land in the sending area must be permanently preserved either by deed restriction or transfer of title.

Strengths and Weakness

The success of the program has been the strong demand for development throughout the region.

The main weakness of the program is the confusion associated with TDR and the process of credit allocation.

Conclusions

A significant amount of transfers within the region occur each year.

The program’s combination of strong demand and strict building restrictions in sending areas provide for a good combination to lead to the purchase of TDR.

Montgomery County, Maryland

Overview

The TDR program in Montgomery County is considered one of the most successful TDR programs in the country in terms of the amount of land preserved.

The program was implemented in 1980 in order to preserve agricultural land and raw open space.

This program is a county-wide program and is a voluntary program for TDR.

Credit values are established on the open market with the developers and land owners negotiating as a function of supply and demand.

Credits started at \$3,000 per credit in 1980 to 1982, and are now selling between \$42,000 and \$45,000 per credit.

At the inception of the program, credits sold at a discount due to skepticism in the market. This permitted regional and local developers to purchase the credits inexpensively.

Sending Areas

Zoning within the sending sites, known as the Rural Density Transfer Zone, can be developed with one dwelling per 25 acres; however, through TDR, dwellings can be developed in the receiving areas at one dwelling per 5 acres. If there are any permanent dwellings on the sending site, one development right must be preserved.

Once a TDR has been transferred from a sending area, that TDR is retired from the sending area and recorded as preserved with the County Attorney’s office so that the TDR can not be used again.

Receiving Areas

All of the receiving areas within the County have the ability to receive TDRs.

Two zoning designations are defined for the receiving areas, with one being for non-TDR uses

and a second for developers using TDRs.

With the use of TDRs in the receiving area, developers can achieve bonus densities; however, the Planning Board has complete control over development in order to maintain the vision of the program.

If a developer incorporates moderately priced dwelling units (MPDUs) of at least 12.5% of the total project, a bonus density of up to an additional 20% is permitted beyond the density as allowed through TDR.

The purchase of TDRs is typically sold as a purchase option until a final plat approval is granted by the County.

Strengths and Weakness

The success of the program has been the ability for a landowner to sell a portion of their rights but maintain a fee interest in the property in order to obtain working capital for farming.

The strength of the real estate market over the past few years has increased demand for bonus densities allowed through the use of TDR.

Additional incentives that have led to the program's success include an expedited approval process for developers using TDR.

One weakness of the program has been the time it took to establish the receiving areas. There were 23 master plans developed before the receiving areas were created.

Conclusions

Of the 317,000 acres of total land in the county, 93,000 acres have been designated as the Rural Density Transfer Zone, which is land to potentially be preserved.

To date, approximately 49,000 acres have been preserved through TDR.

Calvert County, Maryland

Overview

The TDR program in Calvert County is considered to be one the most successful TDR programs in the country, similar to Montgomery County.

The program was implemented in 1978 in order to preserve agricultural land and for implementing smart growth in the region.

This program is a county-wide program and is a voluntary TDR program.

Credit values are established on the open market with the developer and landowner negotiating as a function of supply and demand.

The TDR program does not require easements to encumber a site with transferred rights, but rather a recording of covenants prior to sale.

Credits started under at \$1,000 per credit in 1978 and are now selling between \$6,750 and \$9,000 per credit. In 2004, the average credit value was \$5,200 per credit.

The original goal of the program was to preserve 20,000 acres; however, due to the success of the program, the goal of the program has increased to 40,000 acres.

Sending Areas

Owners who have land that is considered by the Agricultural Preservation Advisory Board to be suitable for forestry or agricultural purposes, may have their land designated as an Agricultural

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Preservation District (overlay zone).

The land must be designated as an Agricultural Preservation District or contain a minimum of 50 contiguous acres.

Landowners in the Agricultural Preservation District are allocated TDRs based upon one dwelling unit per five acres. Special areas allocate credits based upon greater density.

Once a TDR has been transferred from a sending area, the land must remain in the Agricultural Preservation District and density is limited to one dwelling unit per 25 acres or a maximum of 4 dwellings unit, regardless of the parcel size.

Receiving Areas

Land in the receiving areas is known as a Transfer Zone District (TDZ). The TDZ includes designated Town Centers and Rural Communities. A TDZ must be approved by the County Commissioners and must be located within a major subdivision with 50% of the site remaining as open space. Density within a TDZ can increase to one dwelling unit per two acres or greater near Town Centers. The purchase of TDRs for use in receiving areas is typically sold as a purchase option until a final plat approval is granted by the County.

Strengths and Weakness

The success of the program has been the ability for developers to obtain increased average density from one unit per ten acres to one unit per two acres.

Many of the sending area landowners desire to continue farming, and utilize the funds obtained from the sale of TDRs as capital for existing farm operations or as extra income.

Conclusions

Of the 140,000 acres of total land in the county, 60% of the County includes farmland, forested land, and vacant land, which has the potential to be preserved.

To date, approximately 11,901 acres have been preserved through TDR. Other land preservation programs have helped preserve more than 20,000 acres throughout the entire county.

Charles County, Maryland

Overview

The TDR program in Charles County was established in 1992 for the preservation of agricultural land.

The county has established a goal to preserve 64,000 acres.

Although the program started almost fifteen years ago, it is only within the past two or three years that TDR has become an acceptable practice.

This program is a county-wide program and voluntary.

The Current amount of potential TDRs is more than 4,600, with only 978 being certified and 298 being extinguished.

Credit values are established on the open market with the developer and landowner negotiating as a function of supply and demand.

Credit values began at \$3,000 per credit in 1992 and are now selling at \$20,000 per credit; only one year ago, developers were paying \$8,600 per credit.

Sending Areas

Sending areas must be farms that are enrolled in the Maryland Agricultural Land Preservation Foundation (MALPF) District and must be in the program for a period of five years before becoming eligible to participate in the TDR program.

Once a parcel is enrolled in the program, the landowner is issued Development Credits. The number of credits is predicated on the existing Rural Conservation and Agricultural Conservation zones which allow for one dwelling unit per three acres.

Three Development Credits equals one Development Right.

Once a landowner is issued TDRs, they can be transferred and owned with the same rights as real property. Additionally, once transferred, the land is encumbered with a deed restriction which only permits agricultural uses.

Receiving Areas

TDRs can be utilized to increase density in the receiving areas.

With the use of TDRs, owners/developers of designated receiving sites can obtain bonus density as of right.

Density in Receiving Zones is one to one, with the ability to develop an additional two units by purchasing TDRs.

Owners in a receiving site area who wish to use TDR must include a subdivision plan and other documentation in order to apply for TDRs.

Strengths and Weakness

TDRs are the only mechanism for increasing density within the receiving areas.

Many sending area sites contain environmentally sensitive land, making development cumbersome. As a result, transferring credits is a good alternative to create value.

A weakness reported by a representative of the County is the lack of consistent regional planning/zoning for both the sending and receiving areas.

Conclusions

Charles County's TDR program has gained momentum over the past few years.

Of the 64,000 acres of total land to be preserved, 2,250 acres has been preserved through TDR.

As successful as the TDR program has been, other preservation resources will be necessary to preserve the 64,000 acres.

Collier County, Florida

Overview

The program was originally implemented in 1974 in order to preserve environmentally sensitive land and for controlling urban sprawl. Changes to the program occurred in December 1999 and most recently in July 2003.

This program is a county-wide program and is an involuntary TDR program.

Credit values are established on the open market with the developer and land owner negotiating as a function of supply and demand.

Minimum credit values are set at \$25,000 per credit.

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Owners within the sending areas receive one credit per five acres.

The TDR program is relatively small program with the majority of TDR transfers occurring in one transaction.

Sending/Receiving Areas

In 1974, more than 80% of the County was placed in a Special Treatment overlay to control growth and limit development in environmentally sensitive land.

Currently, both sending and receiving areas must be located in urban areas designated as “urban” in the County’s Future Land Use Map.

The number of dwelling units that can be transferred from a sending site is based upon the density permitted by the sending site’s underlying zoning.

Base density under current zoning ranges from 1 unit per 2 acres to 1 unit per 10 acres. Bonus densities of five to ten percent are permitted on receiving sites.

Unlike other TDR programs which require preservation/deed restriction of a sending area, land within a sending area can be utilized for certain uses as designated by the Collier County Board of Commissioners.

Strengths and Weakness

The success of the program has been guided by the simple process of selling development rights, and the administrative approval of development on receiving sites that are less than 20 acres in size.

Extreme environmental restrictions in the Special Treatment Zone motivate developers to find alternative sites to develop.

Because landowners of potential receiving sites do not often build at the densities permitted by the underlying zoning, they are not interested in utilizing development rights to increase the density of development on their property.

Conclusions

Although a small TDR program, it has been able to preserve 325 acres of environmentally sensitive land.

A recent change to the zoning code, which permits greater bonus densities on potential receiving sites, has added to the demand for TDR.

Boulder County, Colorado

Overview

The TDR program was implemented in 1995 in order to preserve rural land. It is an outgrowth of two previous programs established by the county. Originally, the county adopted a technique known as Non-Urban Planned Unit Development (NUPUD), which allowed for bonus density for land which is preserved with a conservation easement on 75% of the site. NUPUD was later permitted to allow for a transfer of rights to Non-Contiguous Non-Urban Planned Unit Development (NCNUPUD). This includes the ability to transfer development rights to unincorporated section of cities where development is more prevalent.

The Boulder County TDR program is actually several TDR programs. The county has entered into intergovernmental agreements (IGAs) with a number of cities within the county including Boulder, Longmont, Lafayette, Niwot and Broomfield, to permit the transfer of development rights from vacant and agricultural lands in unincorporated portions of the county to the various

cities.

Credit values are established on the open market with the developer and land owner negotiating as a function of supply and demand.

Credit values under the various IGA TDR programs have averaged \$50,000 per credit.

Sending Areas

Pursuant to the various IGAs, sending site owners are awarded development rights at two units per 35 acres. With an addition of water rights granted to the county by a sending site, the landowner receives an additional development right for a total of 3 units per 35 acres.

The extent of the TDR sending areas varies from program to program. For example, under the IGA with the City of Lafayette, the sending area is a 27-square mile region that extends from one to four miles in each direction from the city limits.

A Development Rights Certificate is obtained by a landowner in the sending area when he or she applies for a conservation easement.

Receiving Areas

Receiving areas are established by each of the cities under their separate IGAs with the county.

Each individual city also establishes the maximum amount of additional density that will be permitted with the receiving areas when TDR is utilized.

Strengths and Weakness

Rules associated with the receiving areas create a predictable development process for developers but also provide site development flexibility.

Use of IGAs has helped bolster the overall program because each TDR program is tailored to the needs of a particular city.

As more land is preserved, there are fewer 35-acre parcels which can be preserved in the sending areas.

Conclusions

The program is not a thriving TDR program, mainly due to the limitations on potential receiving areas.

To date, approximately 6,000 acres have been preserved by the use of TDR.

Appendix C
Zoning Factors

APPENDIX C - REGIONAL ZONING FACTORS

County Average	High Density	Medium Density	Suburban Density	Low Density	Rural Residential	Resource Residential	Estate Residential
Bergen	\$237,667.27	\$285,374.81	\$338,897.49	\$352,199.77	\$575,894.82	\$846,059.46	
Hunterdon	\$108,696.17	\$115,496.94	\$131,543.41	\$140,167.08	\$162,574.92	\$188,682.53	\$270,813.47
Morris	\$152,044.21	\$192,841.96	\$218,457.77	\$249,673.88	\$335,014.28	\$442,019.33	\$683,370.26
Passaic	\$123,412.48	\$140,623.06	\$142,547.56	\$142,259.61	\$164,498.83	\$135,321.47	
Somerset	\$196,561.30	\$219,949.99	\$266,556.45	\$304,130.45	\$447,472.80	\$663,145.23	\$1,185,355.60
Sussex	\$89,415.93	\$100,333.54	\$106,102.90	\$115,277.64	\$118,179.77	\$134,287.17	\$174,915.74
Warren	\$65,950.22	\$78,848.25	\$86,026.88	\$97,196.94	\$110,408.81	\$126,272.99	\$123,977.84
Regional Average	\$139,106.80	\$161,924.08	\$184,304.63	\$200,129.34	\$273,434.89	\$362,255.46	\$487,686.58
Regional ZFs	0.70	0.81	0.92	1.00	1.37	1.81	2.44

BERGEN COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Bergen	MAHWAH TOWNSHIP Municipal EUFs	\$228,432.45	\$316,405.59	\$382,682.36	\$397,319.35	\$457,122.35		
Bergen	OAKLAND BOROUGH Municipal EUFs	\$246,902.08	\$254,344.04	\$295,112.61	\$307,080.19	\$694,667.30	\$846,059.46	
	Average	\$237,667.27	\$285,374.81	\$338,897.49	\$352,199.77	\$575,894.82	\$846,059.46	

HUNTERDON COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Hunterdon	ALEXANDRIA TOWNSHIP	\$89,375.73	\$114,015.35	\$139,645.50	\$161,738.27	\$171,353.99	\$201,868.73	\$235,688.55
Hunterdon	BETHLEHEM TOWNSHIP	\$94,095.53	\$111,344.78	\$122,502.63	\$137,530.77	\$142,788.15	\$154,632.55	
Hunterdon	BLOOMSBURY BOROUGH	\$79,976.25	\$97,750.72	\$113,147.58	\$125,937.20	\$157,314.39		
Hunterdon	CALIFON BOROUGH	\$99,872.32	\$104,834.78	\$108,487.52	\$112,860.43	\$153,961.21	\$246,055.23	
Hunterdon	CLINTON TOWN	\$93,022.50	\$118,329.12	\$120,939.85				
Hunterdon	CLINTON TOWNSHIP	\$128,423.31	\$128,403.56	\$150,145.19	\$162,134.16	\$186,443.82	\$216,456.80	
Hunterdon	GLEN GARDNER BOROUGH	\$66,710.55	\$75,944.10	\$103,878.23	\$127,280.66	\$102,808.30	\$123,260.07	\$147,374.85
Hunterdon	HAMPTON BOROUGH	\$43,706.67	\$54,219.35	\$84,454.94	\$84,930.82	\$109,976.66	\$89,931.66	
Hunterdon	HIGH BRIDGE BOROUGH	\$117,959.71	\$140,975.56	\$143,788.62	\$154,988.61	\$163,556.69		
Hunterdon	HOLLAND TOWNSHIP	\$106,705.08	\$107,026.00	\$112,736.14	\$118,662.75	\$134,029.81	\$167,271.43	
Hunterdon	LEBANON BOROUGH	\$136,498.32	\$145,785.73	\$145,536.56				
Hunterdon	LEBANON TOWNSHIP	\$117,374.31	\$126,370.86	\$134,432.57	\$151,377.79	\$169,224.24	\$189,645.60	\$206,023.90
Hunterdon	MILFORD BOROUGH	\$92,091.72	\$99,182.79	\$113,201.09	\$73,457.39	\$138,127.11	\$108,499.29	
Hunterdon	TEWKSBURY TOWNSHIP	\$237,705.34	\$190,831.79	\$231,009.81	\$260,777.43	\$327,098.53	\$395,770.52	\$498,606.44
Hunterdon	UNION TOWNSHIP	\$126,925.25	\$117,439.69	\$149,244.84	\$150,495.75	\$156,790.99	\$182,115.97	\$266,373.60
	Average	\$108,696.17	\$115,496.94	\$131,543.41	\$140,167.08	\$162,574.92	\$188,682.53	\$270,813.47

MORRIS COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Morris	BOONTON TOWN	\$148,988.71	\$183,588.11	\$198,737.98				
Morris	BOONTON TOWNSHIP	\$123,038.48	\$142,594.95	\$192,689.32	\$250,485.29	\$304,299.95	\$383,999.08	
Morris	BUTLER BOROUGH	\$170,933.00	\$225,370.04	\$249,077.16				
Morris	CHESTER BOROUGH	\$176,792.98	\$191,667.19	\$216,645.03	\$232,487.58	\$277,574.65		
Morris	CHESTER TOWNSHIP	\$131,755.84	\$148,781.03	\$165,242.83	\$218,730.76	\$253,376.58	\$350,342.21	\$547,426.15
Morris	DENVILLE TOWNSHIP	\$174,815.01	\$199,000.19	\$240,569.04	\$240,099.20	\$285,208.25		
Morris	DOVER TOWN	\$91,651.24	\$114,080.52	\$92,827.83				
Morris	HANOVER TOWNSHIP	\$163,754.98	\$197,987.88	\$218,788.16	\$233,314.40			
Morris	HARDING TOWNSHIP	\$243,128.50	\$341,277.36	\$352,255.21	\$513,497.99	\$1,056,849.10	\$1,416,258.10	
Morris	JEFFERSON TOWNSHIP	\$111,419.21	\$120,840.69	\$119,901.19	\$132,341.77	\$125,280.96	\$188,740.46	
Morris	KINNELON BOROUGH	\$169,225.73	\$190,355.67	\$225,745.79	\$283,247.20	\$309,031.31		
Morris	MENDHAM BOROUGH	\$182,323.24	\$198,675.24	\$268,379.21	\$294,839.31	\$677,381.43	\$922,193.47	
Morris	MENDHAM TOWNSHIP	\$178,785.05	\$365,805.03	\$383,827.14	\$419,529.44	\$488,909.47	\$608,287.89	\$819,314.37
Morris	MINE HILL TOWNSHIP	\$96,634.60	\$101,157.02	\$106,586.72	\$112,243.68			
Morris	MONTVILLE TOWNSHIP	\$122,089.78	\$232,459.31	\$262,434.57	\$276,698.80	\$351,573.29	\$344,372.80	
Morris	MORRIS PLAINS BOROUGH	\$175,890.93	\$197,060.84	\$205,277.59	\$204,569.24			

MORRIS COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

Morris	MORRIS TOWNSHIP	\$171,708.90	\$255,996.52	\$286,838.14	\$318,236.71	\$422,080.24	\$486,199.09
Morris	MORRISTOWN TOWN	\$241,499.48	\$285,806.24	\$312,735.98			
Morris	MOUNT ARLINGTON BOROUGH	\$154,315.85	\$178,512.26	\$196,095.83	\$232,695.45		
Morris	MOUNT OLIVE TOWNSHIP	\$84,163.98	\$88,431.66	\$106,735.76	\$115,431.63	\$117,765.49	\$163,351.85
Morris	MOUNTAIN LAKES BOROUGH	\$282,393.05	\$375,012.28	\$460,226.12	\$569,348.97		
Morris	NETCONG BOROUGH	\$74,057.25	\$77,530.86				
Morris	PARSIPPANY TROY HILLS TOWNSHIP	\$153,882.36	\$214,941.48	\$228,237.63	\$239,445.60	\$264,156.37	
Morris	PEQUANNOCK TOWNSHIP	\$157,713.92	\$200,663.81	\$209,911.30	\$186,778.94	\$252,622.81	
Morris	RANDOLPH TOWNSHIP	\$145,967.15	\$174,763.55	\$205,726.29	\$230,673.43	\$232,037.64	\$220,588.75
Morris	RIVERDALE BOROUGH	\$218,914.79	\$232,609.02	\$245,485.29	\$279,904.50		
Morris	ROCKAWAY BOROUGH	\$171,712.60	\$207,745.26	\$221,817.36			
Morris	ROCKAWAY TOWNSHIP	\$156,015.39	\$178,108.34	\$177,969.87	\$226,633.09	\$245,194.76	\$232,153.03
Morris	ROXBURY TOWNSHIP	\$110,529.31	\$137,582.10	\$136,137.00	\$140,904.15	\$185,493.43	\$222,355.77
Morris	VICTORY GARDENS BOROUGH	\$97,850.26					
Morris	WASHINGTON TOWNSHIP	\$95,502.99	\$114,798.29	\$153,385.39	\$164,385.18	\$181,421.38	\$207,408.82
Morris	WHARTON BOROUGH	\$87,960.13	\$104,897.93	\$113,446.22	\$125,324.81		
	Average	\$152,044.21	\$192,841.96	\$218,457.77	\$249,673.88	\$335,014.28	\$442,019.33

\$683,370.26

PASSAIC COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Passaic	BLOOMINGDALE BOROUGH	\$126,228.16	\$145,508.86	\$125,781.96	\$99,264.41	\$185,056.53	\$114,221.50	
Passaic	POMPTON LAKES BOROUGH	\$117,355.48	\$135,719.23	\$148,478.64	\$176,635.98			
Passaic	RINGWOOD BOROUGH	\$160,754.13	\$173,545.53	\$182,006.52	\$184,864.55	\$195,321.30		
Passaic	WANAQUE BOROUGH	\$122,255.39	\$140,923.61	\$141,333.50	\$123,288.63	\$127,865.98		
Passaic	WEST MILFORD TOWNSHIP	\$90,469.24	\$107,418.05	\$115,137.17	\$127,244.48	\$149,751.50	\$156,421.45	
	Average	\$123,412.48	\$140,623.06	\$142,547.56	\$142,259.61	\$164,498.83	\$135,321.47	

SOMERSET COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Somerset	BEDMINSTER TOWNSHIP	\$189,490.52	\$227,237.18	\$239,834.66	\$254,693.45	\$412,626.10	\$596,969.99	\$1,080,323.44
Somerset	BERNARDS TOWNSHIP	\$276,686.77	\$310,132.06	\$350,343.31	\$359,201.21	\$419,281.56	\$460,703.90	
Somerset	BERNARDSVILLE BOROUGH	\$156,472.75	\$194,714.39	\$239,790.68	\$297,652.22	\$538,437.67	\$721,622.46	\$1,042,985.28
Somerset	FAR HILLS BOROUGH	\$156,970.13	\$174,875.52	\$260,168.55	\$297,537.34	\$427,381.91	\$868,711.50	\$1,226,823.51
Somerset	PEAPACK GLADSTONE BOROUGH	\$203,186.34	\$192,790.81	\$242,645.04	\$311,568.01	\$439,636.78	\$667,718.29	\$1,391,290.18
	Average	\$196,561.30	\$219,949.99	\$266,556.45	\$304,130.45	\$447,472.80	\$663,145.23	\$1,185,355.60

SUSSEX COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Sussex	BYRAM TOWNSHIP	\$99,912.30	\$108,894.24	\$114,159.51	\$130,846.82	\$106,045.62	\$168,413.77	
Sussex	FRANKLIN BOROUGH	\$50,816.21	\$60,080.92	\$67,239.27	\$79,955.40	\$91,636.36	\$93,545.45	
Sussex	GREEN TOWNSHIP	\$125,870.95	\$139,847.48	\$143,672.88	\$147,538.99	\$164,120.96	\$177,272.24	
Sussex	HAMBURG BOROUGH	\$66,630.02	\$75,732.84	\$84,239.93				
Sussex	HARDYSTON TOWNSHIP	\$74,754.34	\$79,866.20	\$80,940.37	\$89,182.77	\$98,327.61	\$110,661.70	\$174,915.74
Sussex	HOPATCONG BOROUGH	\$81,074.16	\$103,140.54	\$126,351.47	\$97,521.71	\$112,631.20	\$101,647.40	
Sussex	OGDENSBURG BOROUGH	\$81,632.09	\$92,003.51	\$94,514.77	\$105,203.94	\$92,827.00		
Sussex	SPARTA TOWNSHIP	\$141,757.33	\$155,688.15	\$143,195.36	\$159,364.71	\$168,761.55	\$173,174.07	
Sussex	STANHOPE BOROUGH	\$89,268.08	\$98,195.41	\$109,339.09	\$126,472.36			
Sussex	VERNON TOWNSHIP	\$82,443.79	\$89,886.12	\$97,376.31	\$101,412.07	\$111,087.85	\$115,295.58	
	Average	\$89,415.93	\$100,333.54	\$106,102.90	\$115,277.64	\$118,179.77	\$134,287.17	\$174,915.74

WARREN COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Warren	ALLAMUCHY TOWNSHIP	\$122,545.54	\$145,018.53	\$146,226.67	\$123,987.63	\$140,566.26	\$158,766.77	
Warren	ALPHA BOROUGH	\$71,219.06	\$76,489.13					
Warren	BELVIDERE TOWNSHIP	\$60,216.86	\$65,185.82	\$61,853.70				
Warren	FRANKLIN TOWNSHIP	\$72,489.93	\$78,246.85	\$93,489.81	\$114,551.42	\$117,847.40	\$131,642.94	
Warren	FREHLINGHUYSEN TOWNSHIP	\$46,820.22	\$55,676.67	\$78,891.62	\$95,215.79	\$104,024.49	\$120,741.75	
Warren	GREENWICH TOWNSHIP	\$54,595.14	\$79,778.55	\$86,244.75	\$85,702.82	\$100,971.67	\$113,998.07	\$123,977.84
Warren	HACKETTSTOWN TOWN	\$74,862.72	\$78,815.22	\$79,162.01	\$81,799.48			
Warren	HARMONY TOWNSHIP	\$46,172.52	\$61,241.70	\$74,885.65	\$90,449.68	\$111,040.04	\$137,172.55	
Warren	HOPE TOWNSHIP	\$45,361.72	\$53,359.10	\$59,565.06	\$64,833.16	\$72,922.03	\$93,466.38	
Warren	INDEPENDENCE TOWNSHIP	\$93,351.84	\$109,544.90	\$119,003.51	\$125,603.74	\$135,879.95	\$146,236.75	
Warren	LIBERTY TOWNSHIP	\$68,506.25	\$85,423.56	\$90,099.91	\$97,241.38	\$107,812.11	\$109,597.23	
Warren	LOPATCONG TOWNSHIP	\$63,129.63	\$65,915.52	\$69,072.63	\$80,556.29	\$90,464.21		
Warren	MANSFIELD TOWNSHIP	\$49,034.81	\$107,788.07	\$119,070.55	\$131,113.24	\$144,120.30	\$162,575.55	
Warren	OXFORD TOWNSHIP	\$41,954.81	\$62,000.70	\$62,101.95	\$69,464.88	\$78,869.57	\$83,739.13	
Warren	PHILLIPSBURG TOWNSHIP	\$45,975.56	\$62,325.06	\$72,929.22				
Warren	POHATCONG TOWNSHIP	\$74,807.52	\$76,575.06	\$77,881.43	\$91,204.23	\$110,487.45	\$128,956.25	
Warren	WASHINGTON BOROUGH	\$60,751.83	\$69,365.75	\$74,985.36				
Warren	WASHINGTON TOWNSHIP	\$77,087.61	\$77,389.34	\$81,794.90	\$97,071.28	\$108,052.97	\$112,869.67	
Warren	WHITE TOWNSHIP	\$84,170.47	\$87,977.12	\$101,224.95	\$109,159.05	\$122,664.95	\$141,785.71	
	Average	\$65,950.22	\$78,848.25	\$86,026.88	\$97,196.94	\$110,408.81	\$126,272.95	\$123,977.84

Appendix D
Location Factors

Appendix D - Location Factors
>10 Acre Lot Size

COUNTY_ID	MUNI_ID	MUNI_CODE	COMP_ZONE_PSC	CountOfPIN	MinOfELV_Per_Acre	MaxOfELV_Per_Acre	AvgOfELV_Per_Acre	Tier	Weighted Avg/Tier
Warren	POHATCONG TOWNSHIP	2120	ER PSC	3	\$1,377.59	\$8,816.23	\$4,277.95	1	\$4,277.95
				3					\$4,277.95
Warren	HOPE TOWNSHIP	2111	ER PSC	15	\$1,080.80	\$10,506.11	\$6,815.16	2	\$2,377.38
Sussex	FRANKLIN BOROUGH	1906	ER PSC	3	\$5,373.95	\$8,144.48	\$6,844.15	2	\$477.50
Sussex	BYRAM TOWNSHIP	1904	ER PSC	12	\$1,208.89	\$15,064.40	\$7,586.44	2	\$2,117.15
Sussex	HOPATCONG BOROUGH	1912	ER PSC	5	\$5,776.02	\$12,371.72	\$8,449.33	2	\$982.48
Warren	WASHINGTON TOWNSHIP	2122	ER PSC	8	\$5,768.83	\$12,225.88	\$9,250.27	2	\$1,720.98
				43					\$7,675.49
Warren	ALLAMUCHY TOWNSHIP	2101	ER PSC	8	\$3,133.37	\$15,099.42	\$9,627.40	3	\$300.86
Sussex	VERNON TOWNSHIP	1922	ER PSC	20	\$1,423.48	\$15,865.96	\$10,143.74	3	\$792.48
Sussex	HARDYSTON TOWNSHIP	1911	ER PSC	10	\$7,475.19	\$12,433.40	\$10,282.33	3	\$401.65
Warren	HARMONY TOWNSHIP	2110	ER PSC	8	\$6,991.00	\$14,875.74	\$10,395.34	3	\$324.85
Warren	FREHLINGHUYSEN TOWNSHIP	2106	ER PSC	25	\$1,941.64	\$14,797.13	\$10,759.85	3	\$1,050.77
Warren	WHITE TOWNSHIP	2123	ER PSC	29	\$4,679.03	\$15,709.74	\$10,977.08	3	\$1,243.50
Warren	LIBERTY TOWNSHIP	2114	ER PSC	15	\$3,949.06	\$13,630.49	\$11,000.49	3	\$644.56
Passaic	WEST MILFORD TOWNSHIP	1615	ER PSC	26	\$3,113.66	\$17,435.64	\$11,462.33	3	\$1,164.14
Warren	FRANKLIN TOWNSHIP	2105	ER PSC	11	\$6,278.52	\$14,697.99	\$11,508.90	3	\$494.52
Morris	MOUNT OLIVE TOWNSHIP	1427	ER PSC	12	\$7,773.32	\$17,712.14	\$11,964.27	3	\$560.83
Warren	INDEPENDENCE TOWNSHIP	2112	ER PSC	12	\$6,618.69	\$16,234.83	\$12,105.83	3	\$567.46
Hunterdon	BETHLEHEM TOWNSHIP	1002	ER PSC	20	\$6,340.86	\$16,690.43	\$12,377.78	3	\$967.01
Warren	MANSFIELD TOWNSHIP	2116	ER PSC	23	\$6,808.52	\$18,796.41	\$13,065.37	3	\$1,173.84
Sussex	SPARTA TOWNSHIP	1918	ER PSC	37	\$5,698.65	\$32,855.78	\$13,628.77	3	\$1,969.78
				256					\$11,656.26
Hunterdon	HOLLAND TOWNSHIP	1015	ER PSC	40	\$7,544.33	\$18,993.48	\$14,477.26	4	\$2,060.82
Sussex	GREEN TOWNSHIP	1908	ER PSC	15	\$8,273.93	\$17,976.07	\$15,186.70	4	\$810.68
Passaic	RINGWOOD BOROUGH	1611	ER PSC	5	\$8,114.91	\$21,531.82	\$15,254.10	4	\$271.43
Hunterdon	LEBANON TOWNSHIP	1019	ER PSC	35	\$4,987.53	\$22,491.00	\$15,604.66	4	\$1,943.64
Hunterdon	CLINTON TOWNSHIP	1006	ER PSC	15	\$8,037.34	\$25,249.82	\$16,428.60	4	\$876.97
Morris	ROCKAWAY TOWNSHIP	1435	ER PSC	28	\$7,487.36	\$24,331.26	\$16,561.03	4	\$1,650.21
Morris	RANDOLPH TOWNSHIP	1432	ER PSC	6	\$2,194.84	\$25,519.88	\$16,609.43	4	\$354.65
Hunterdon	UNION TOWNSHIP	1025	ER PSC	14	\$8,542.40	\$24,337.29	\$16,671.73	4	\$830.62
Morris	JEFFERSON TOWNSHIP	1414	ER PSC	15	\$6,847.02	\$34,802.15	\$17,573.29	4	\$938.08
Hunterdon	ALEXANDRIA TOWNSHIP	1001	ER PSC	59	\$8,605.83	\$26,895.58	\$17,579.05	4	\$3,690.98
Morris	WASHINGTON TOWNSHIP	1438	ER PSC	40	\$9,755.83	\$23,936.40	\$17,866.96	4	\$2,543.34
Morris	ROXBURY TOWNSHIP	1436	ER PSC	9	\$7,870.17	\$41,108.94	\$20,641.94	4	\$661.13
				281					\$16,632.53
Morris	KINNELON BOROUGH	1415	ER PSC	21	\$4,796.10	\$46,555.65	\$24,835.15	5	\$5,113.12
Morris	MONTVILLE TOWNSHIP	1421	ER PSC	8	\$13,023.08	\$34,163.70	\$25,109.07	5	\$1,969.34
Morris	BOONTON TOWNSHIP	1402	ER PSC	18	\$11,928.83	\$36,187.86	\$25,416.53	5	\$4,485.27
Morris	DENVILLE TOWNSHIP	1408	ER PSC	5	\$9,168.05	\$47,569.17	\$26,615.87	5	\$1,304.70
Morris	CHESTER TOWNSHIP	1407	ER PSC	50	\$9,388.08	\$50,919.14	\$30,997.20	5	\$15,194.70
				102					\$28,067.13
Somerset	PEAPACK GLADSTONE BOROUGH	1815	ER PSC	3	\$14,975.71	\$74,668.05	\$35,907.15	6	\$1,538.88
Hunterdon	TEWKSBURY TOWNSHIP	1024	ER PSC	38	\$10,146.36	\$55,969.20	\$37,034.15	6	\$20,104.25
Morris	MORRIS TOWNSHIP	1422	ER PSC	5	\$5,627.79	\$62,440.58	\$39,036.50	6	\$2,788.32
Somerset	BERNARDS TOWNSHIP	1802	ER PSC	15	\$23,636.52	\$54,587.11	\$40,208.87	6	\$8,616.19
Bergen	MAHWAH TOWNSHIP	0233	ER PSC	9	\$8,803.46	\$82,031.14	\$44,688.17	6	\$5,745.62
				70					\$38,793.26
Morris	RIVERDALE BOROUGH	1433	ER PSC	3	\$46,939.10	\$60,186.80	\$51,728.52	7	\$3,167.05
Morris	MENDHAM BOROUGH	1418	ER PSC	7	\$30,195.67	\$98,508.43	\$54,602.88	7	\$7,800.41
Morris	MENDHAM TOWNSHIP	1419	ER PSC	39	\$53,224.67	\$89,394.22	\$66,961.47	7	\$53,295.86
				49					\$64,263.32
Somerset	BEDMINSTER TOWNSHIP	1801	ER PSC	26	\$38,210.29	\$112,508.95	\$80,318.33	8	\$19,888.35
Somerset	BERNARDSVILLE BOROUGH	1803	ER PSC	29	\$44,283.91	\$103,505.06	\$80,781.03	8	\$22,310.95
Somerset	FAR HILLS BOROUGH	1807	ER PSC	50	\$47,519.53	\$160,412.03	\$97,659.74	8	\$46,504.64
				105					\$88,703.94
Morris	HARDING TOWNSHIP	1413	ER PSC	30	\$34,374.70	\$264,851.68	\$173,368.67	10	\$173,368.67
				30			\$27,311.16		

Tier	Range Per Tier	Weighted Avg ELVA Per Tier	LF Per Tier
1	\$4,277.95	\$6,416.92	1.00
2	\$6,416.92	\$9,625.38	1.79
3	\$9,625.38	\$14,438.07	2.72
4	\$14,438.07	\$21,657.11	3.89
5	\$21,657.11	\$32,485.67	6.56
6	\$32,485.67	\$48,728.51	9.07
7	\$48,728.51	\$73,092.77	15.02
8	\$73,092.77	\$109,639.16	20.74
9	\$109,639.16	\$164,458.74	0.00
10	\$164,458.74	\$246,688.11	40.53

\$546,223.19

Appendix D - Location Factors

>5 to 10 Acre Lot Size

COUNTY_ID	MUNI_ID	MUNI_CODE	COMP_ZONE_PSC	CountOfPIN	MinOfELV_Per_Acre	MaxOfELV_Per_Acre	AvgOfELV_Per_Acre	Tier	Weighted Avg Per Tier
Warren	OXFORD TOWNSHIP	2117	RESR PSC	7	\$10,261.96	\$16,281.57	\$13,087.10	1	\$416.41
Sussex	FRANKLIN BOROUGH	1906	RESR PSC	5	\$9,942.38	\$18,148.51	\$14,408.64	1	\$327.47
Warren	HOPE TOWNSHIP	2111	RESR PSC	44	\$11,140.88	\$17,179.81	\$14,457.04	1	\$2,891.41
Hunterdon	HAMPTON BOROUGH	1013	RESR PSC	4	\$10,467.25	\$21,869.95	\$15,078.70	1	\$274.16
Sussex	HARDYSTON TOWNSHIP	1911	RESR PSC	37	\$10,333.19	\$20,620.10	\$16,171.12	1	\$2,719.69
Sussex	HOPATCONG BOROUGH	1912	RESR PSC	7	\$10,270.30	\$30,472.24	\$16,863.33	1	\$536.56
Hunterdon	GLEN GARDNER BOROUGH	1012	RESR PSC	5	\$11,704.44	\$19,777.26	\$17,244.00	1	\$391.91
Warren	GREENWICH TOWNSHIP	2107	RESR PSC	8	\$12,429.39	\$21,669.66	\$18,231.74	1	\$662.97
Warren	WASHINGTON TOWNSHIP	2122	RESR PSC	25	\$14,080.27	\$25,949.30	\$18,525.56	1	\$2,105.18
Passaic	WANAQUE BOROUGH	1613	RESR PSC	6	\$7,551.43	\$26,922.58	\$19,036.15	1	\$519.17
Warren	FREHLINGHUYSEN TOWNSHIP	2106	RESR PSC	72	\$12,265.84	\$24,254.12	\$19,070.76	1	\$6,241.34
				220					\$17,086.26
Sussex	VERNON TOWNSHIP	1922	RESR PSC	53	\$11,887.30	\$27,364.10	\$19,767.35	2	\$1,031.17
Warren	LOPATCONG TOWNSHIP	2115	RESR PSC	9	\$13,773.32	\$25,240.69	\$19,858.47	2	\$175.91
Warren	LIBERTY TOWNSHIP	2114	RESR PSC	17	\$15,873.91	\$24,161.03	\$20,009.22	2	\$334.80
Warren	POHATCONG TOWNSHIP	2120	RESR PSC	18	\$12,493.46	\$25,254.43	\$20,031.08	2	\$354.88
Warren	HARMONY TOWNSHIP	2110	RESR PSC	47	\$15,058.70	\$26,241.72	\$21,162.42	2	\$978.97
Warren	FRANKLIN TOWNSHIP	2105	RESR PSC	25	\$14,074.97	\$25,389.14	\$21,232.35	2	\$522.45
Warren	WHITE TOWNSHIP	2123	RESR PSC	49	\$15,425.04	\$27,486.63	\$21,892.71	2	\$1,055.85
Warren	ALLAMUCHY TOWNSHIP	2101	RESR PSC	12	\$11,507.78	\$28,038.75	\$21,990.97	2	\$259.74
Passaic	WEST MILFORD TOWNSHIP	1615	RESR PSC	55	\$15,805.18	\$32,910.31	\$23,284.49	2	\$1,260.48
Warren	INDEPENDENCE TOWNSHIP	2112	RESR PSC	45	\$17,554.87	\$28,742.10	\$23,836.40	2	\$1,055.75
Warren	MANSFIELD TOWNSHIP	2116	RESR PSC	60	\$14,926.67	\$31,644.45	\$24,780.10	2	\$1,463.39
Hunterdon	HOLLAND TOWNSHIP	1015	RESR PSC	95	\$17,655.11	\$30,816.97	\$24,885.03	2	\$2,326.85
Hunterdon	BETHLEHEM TOWNSHIP	1002	RESR PSC	179	\$18,159.54	\$31,659.64	\$25,040.91	2	\$4,411.73
Hunterdon	CALIFON BOROUGH	1004	RESR PSC	3	\$20,500.62	\$28,766.45	\$25,158.85	2	\$74.29
Sussex	BYRAM TOWNSHIP	1904	RESR PSC	24	\$11,029.79	\$38,702.33	\$25,315.82	2	\$598.01
Morris	PEQUANNOCK TOWNSHIP	1431	RESR PSC	5	\$1,962.14	\$37,014.43	\$26,043.47	2	\$128.17
Sussex	SPARTA TOWNSHIP	1918	RESR PSC	80	\$15,936.74	\$37,960.99	\$26,660.29	2	\$2,099.24
Morris	MOUNT OLIVE TOWNSHIP	1427	RESR PSC	37	\$14,111.54	\$49,673.74	\$26,756.11	2	\$974.39
Morris	JEFFERSON TOWNSHIP	1414	RESR PSC	31	\$16,258.65	\$56,464.35	\$27,777.23	2	\$847.53
Sussex	GREEN TOWNSHIP	1908	RESR PSC	59	\$20,169.03	\$35,648.67	\$27,974.41	2	\$1,624.50
Hunterdon	HIGH BRIDGE BOROUGH	1014	RESR PSC	3	\$23,524.18	\$31,467.33	\$28,133.43	2	\$83.07
Hunterdon	UNION TOWNSHIP	1025	RESR PSC	92	\$19,224.83	\$39,253.28	\$28,486.76	2	\$2,579.51
Morris	ROXBURY TOWNSHIP	1436	RESR PSC	18	\$14,870.75	\$51,862.34	\$28,765.88	2	\$509.63
				1016					\$24,750.30
Hunterdon	ALEXANDRIA TOWNSHIP	1001	RESR PSC	143	\$23,316.73	\$40,277.90	\$31,048.00	3	\$4,815.47
Hunterdon	LEBANON TOWNSHIP	1019	RESR PSC	324	\$23,424.89	\$39,296.04	\$31,925.60	3	\$11,218.98
Morris	WASHINGTON TOWNSHIP	1438	RESR PSC	207	\$21,873.73	\$43,295.81	\$32,631.02	3	\$7,326.05
Morris	RANDOLPH TOWNSHIP	1432	RESR PSC	46	\$21,787.00	\$53,301.64	\$34,755.73	3	\$1,734.02
Hunterdon	CLINTON TOWNSHIP	1006	RESR PSC	127	\$24,328.15	\$48,223.73	\$35,231.48	3	\$4,852.93
Passaic	RINGWOOD BOROUGH	1611	RESR PSC	16	\$25,727.65	\$45,035.56	\$37,976.34	3	\$659.03
Morris	ROCKAWAY TOWNSHIP	1435	RESR PSC	48	\$24,805.52	\$57,852.53	\$39,481.86	3	\$2,055.45
Morris	HANOVER TOWNSHIP	1412	RESR PSC	3	\$25,416.70	\$74,472.69	\$41,768.70	3	\$135.91
Morris	PARSIPPANY TROY HILLS TOWNSHIP	1429	RESR PSC	8	\$30,327.28	\$54,254.50	\$42,528.83	3	\$369.01
				922					\$33,166.84
Morris	MONTVILLE TOWNSHIP	1421	RESR PSC	30	\$33,112.63	\$67,740.48	\$51,327.91	4	\$2,789.56
Morris	CHESTER TOWNSHIP	1407	RESR PSC	167	\$30,700.65	\$84,216.25	\$51,930.67	4	\$15,710.91
Bergen	OAKLAND BOROUGH	0242	RESR PSC	9	\$38,963.48	\$73,362.71	\$53,505.02	4	\$872.36
Morris	DENVILLE TOWNSHIP	1408	RESR PSC	22	\$29,035.11	\$88,389.34	\$55,131.11	4	\$2,197.25
Morris	BOONTON TOWNSHIP	1402	RESR PSC	41	\$29,194.48	\$102,368.89	\$56,611.53	4	\$4,204.84
Morris	KINNELON BOROUGH	1415	RESR PSC	59	\$31,209.44	\$108,990.83	\$60,512.73	4	\$6,467.85
Hunterdon	TEWKSBURY TOWNSHIP	1024	RESR PSC	224	\$37,418.06	\$91,660.47	\$62,644.94	4	\$25,421.14
				552					\$57,663.91
Somerset	BERNARDS TOWNSHIP	1802	RESR PSC	68	\$48,569.14	\$94,382.01	\$71,061.45	5	\$22,165.96
Bergen	MAHWAH TOWNSHIP	0233	RESR PSC	17	\$15,811.62	\$124,471.17	\$76,924.16	5	\$5,998.67
Morris	MORRIS TOWNSHIP	1422	RESR PSC	28	\$64,696.75	\$105,898.12	\$82,058.94	5	\$10,539.68
Somerset	PEAPACK GLADSTONE BOROUGH	1815	RESR PSC	24	\$34,405.65	\$131,018.71	\$95,692.72	5	\$10,534.98
Somerset	BEDMINSTER TOWNSHIP	1801	RESR PSC	81	\$55,306.89	\$148,326.57	\$98,020.06	5	\$36,420.30
				218					\$85,659.58
Morris	MENDHAM TOWNSHIP	1419	RESR PSC	309	\$69,621.27	\$144,259.66	\$102,783.64	6	\$43,867.60
Somerset	FAR HILLS BOROUGH	1807	RESR PSC	26	\$59,431.67	\$147,262.06	\$104,954.31	6	\$3,769.08
Somerset	BERNARDSVILLE BOROUGH	1803	RESR PSC	314	\$77,719.08	\$159,949.29	\$118,884.79	6	\$51,560.53
Morris	MENDHAM BOROUGH	1418	RESR PSC	75	\$88,717.07	\$215,345.26	\$147,714.83	6	\$15,301.95
				724					\$114,499.16
Morris	HARDING TOWNSHIP	1413	RESR PSC	133	\$70,685.38	\$337,605.03	\$221,543.74	7	\$221,543.74
				133			\$42,994		\$221,543.74

Tier	Range Per Tier	Weighted Avg ELVA Pt	LF Per Tier	
1	\$13,087.10	\$19,630.65	\$17,068.26	1.00
2	\$19,630.65	\$29,445.98	\$24,750.30	1.45
3	\$29,445.98	\$44,168.97	\$33,166.85	1.94
4	\$44,168.97	\$66,253.46	\$57,663.91	3.38
5	\$66,253.46	\$99,380.19	\$85,659.58	5.02
6	\$99,380.19	\$149,070.29	\$114,499.16	6.71
7	\$149,070.29	\$223,605.44	\$221,543.74	12.98

\$307,103.33

Appendix D - Location Factors
>2 to 5 Acre Lot Size

COUNTY_ID	MUNI_ID	MUNI_CODE	COMP_ZONE_PSC	CountOPIN	MinOELV_Per_Acre	MaxOELV_Per_Acre	AvgOELV_Per_Acre	Tier	Weighted Avg Per Tier
Warren	BELVIDERE TOWNSHIP	2103	RURR PSC	4	\$7,577.40	\$35,100.48	\$23,718.32	1	\$231.40
Warren	HOPE TOWNSHIP	2111	RURR PSC	140	\$17,574.34	\$33,270.08	\$25,461.27	1	\$8,694.09
Warren	WASHINGTON BOROUGH	2121	RURR PSC	3	\$23,732.30	\$28,536.99	\$26,293.53	1	\$192.39
Warren	OXFORD TOWNSHIP	2117	RURR PSC	29	\$19,056.38	\$35,933.25	\$28,954.98	1	\$2,048.04
Sussex	FRANKLIN BOROUGH	1906	RURR PSC	27	\$21,015.62	\$43,655.87	\$31,012.25	1	\$2,042.27
Warren	LOPATCONG TOWNSHIP	2115	RURR PSC	41	\$21,356.93	\$43,745.09	\$33,470.75	1	\$3,347.08
Sussex	HARDYSTON TOWNSHIP	1911	RURR PSC	97	\$21,180.19	\$47,350.71	\$34,770.79	1	\$8,226.26
Warren	POHATCONG TOWNSHIP	2120	RURR PSC	61	\$24,086.37	\$49,541.96	\$34,872.67	1	\$5,188.37
Morris	MINE HILL TOWNSHIP	1420	RURR PSC	8	\$26,056.53	\$45,423.11	\$35,224.77	1	\$687.31
				410					\$30,657.21
Warren	FREHLINGHUYSEN TOWNSHIP	2106	RURR PSC	201	\$21,659.49	\$49,149.76	\$35,796.90	2	\$1,704.61
Sussex	OGDENSBURG BOROUGH	1916	RURR PSC	6	\$25,622.53	\$50,090.35	\$36,192.90	2	\$51.45
Hunterdon	BLOOMSBURY BOROUGH	1003	RURR PSC	4	\$23,253.91	\$48,668.98	\$37,668.45	2	\$35.70
Warren	HARMONY TOWNSHIP	2110	RURR PSC	153	\$25,247.01	\$50,341.31	\$37,931.00	2	\$1,374.90
Warren	WASHINGTON TOWNSHIP	2122	RURR PSC	290	\$22,498.90	\$53,588.79	\$38,433.73	2	\$2,640.55
Warren	FRANKLIN TOWNSHIP	2105	RURR PSC	133	\$25,011.03	\$56,176.46	\$38,898.13	2	\$1,225.65
Warren	LIBERTY TOWNSHIP	2114	RURR PSC	179	\$24,757.72	\$51,261.35	\$39,334.62	2	\$1,668.06
Hunterdon	GLEN GARDNER BOROUGH	1012	RURR PSC	26	\$21,713.24	\$53,403.64	\$39,885.42	2	\$245.68
Warren	GREENWICH TOWNSHIP	2107	RURR PSC	77	\$26,476.86	\$48,701.88	\$39,907.19	2	\$727.99
Warren	HACKETTSTOWN	2108	RURR PSC	7	\$22,927.52	\$53,261.03	\$40,625.20	2	\$67.37
Sussex	VERNON TOWNSHIP	1922	RURR PSC	311	\$24,018.52	\$64,035.26	\$40,631.55	2	\$2,993.70
Hunterdon	CALIFON BOROUGH	1004	RURR PSC	27	\$33,340.13	\$71,992.99	\$42,803.83	2	\$273.80
Sussex	HAMBURG BOROUGH	1909	RURR PSC	7	\$33,909.28	\$56,162.22	\$43,115.03	2	\$71.50
Warren	WHITE TOWNSHIP	2123	RURR PSC	225	\$28,624.69	\$57,933.17	\$43,138.65	2	\$2,299.50
Warren	ALLAMUCHY TOWNSHIP	2101	RURR PSC	49	\$32,069.65	\$59,808.62	\$45,493.83	2	\$528.12
Hunterdon	HOLLAND TOWNSHIP	1015	RURR PSC	406	\$31,107.36	\$61,668.29	\$45,719.62	2	\$4,397.58
Passaic	WEST MILFORD TOWNSHIP	1615	RURR PSC	367	\$29,627.47	\$66,021.53	\$45,817.28	2	\$3,983.64
Morris	MOUNT OLIVE TOWNSHIP	1427	RURR PSC	193	\$27,410.15	\$67,028.96	\$45,930.95	2	\$2,100.14
Warren	MANSFIELD TOWNSHIP	2116	RURR PSC	205	\$25,665.14	\$65,564.88	\$46,238.34	2	\$2,245.64
Warren	INDEPENDENCE TOWNSHIP	2112	RURR PSC	207	\$29,559.67	\$64,019.57	\$47,482.70	2	\$2,328.58
Hunterdon	BETHEHEM TOWNSHIP	1002	RURR PSC	309	\$30,148.15	\$74,425.07	\$47,860.20	2	\$3,503.63
Sussex	STANHOPE BOROUGH	1919	RURR PSC	5	\$37,490.70	\$56,166.89	\$48,100.91	2	\$56.98
Sussex	BYRAM TOWNSHIP	1904	RURR PSC	78	\$20,656.48	\$87,969.74	\$49,248.73	2	\$910.07
Hunterdon	HAMPTON BOROUGH	1013	RURR PSC	10	\$27,634.25	\$77,547.17	\$49,294.52	2	\$116.78
Passaic	BLOOMINGDALE BOROUGH	1601	RURR PSC	5	\$38,461.18	\$58,963.19	\$49,493.14	2	\$58.63
Morris	JEFFERSON TOWNSHIP	1414	RURR PSC	166	\$23,697.61	\$88,738.97	\$49,522.10	2	\$1,947.56
Hunterdon	MILFORD BOROUGH	1020	RURR PSC	12	\$27,938.27	\$60,895.90	\$49,796.72	2	\$141.57
Hunterdon	LEBANON TOWNSHIP	1019	RURR PSC	529	\$35,118.86	\$73,153.02	\$51,512.70	2	\$6,455.87
Passaic	WANAQUE BOROUGH	1613	RURR PSC	34	\$34,757.98	\$66,945.97	\$51,974.72	2	\$418.65
				4221					\$44,573.89
Sussex	GREEN TOWNSHIP	1908	RURR PSC	309	\$34,486.73	\$78,414.48	\$56,405.53	3	\$4,762.11
Hunterdon	UNION TOWNSHIP	1025	RURR PSC	340	\$35,500.85	\$82,771.28	\$57,570.75	3	\$5,348.10
Hunterdon	HIGH BRIDGE BOROUGH	1014	RURR PSC	22	\$37,347.62	\$86,839.74	\$58,438.29	3	\$51.27
Hunterdon	ALEXANDRIA TOWNSHIP	1001	RURR PSC	380	\$39,039.30	\$85,211.13	\$59,217.39	3	\$6,148.25
Sussex	SPARTA TOWNSHIP	1918	RURR PSC	380	\$32,579.05	\$94,492.95	\$59,577.30	3	\$6,185.62
Morris	WASHINGTON TOWNSHIP	1438	RURR PSC	1372	\$38,136.22	\$95,764.68	\$62,875.59	3	\$23,569.76
Morris	ROXBURY TOWNSHIP	1436	RURR PSC	101	\$32,202.49	\$102,021.64	\$63,380.54	3	\$1,749.03
Passaic	POMPTON LAKES BOROUGH	1609	RURR PSC	4	\$53,769.03	\$72,996.65	\$63,467.52	3	\$69.36
Hunterdon	CLINTON TOWNSHIP	1006	RURR PSC	571	\$41,806.80	\$96,105.12	\$65,858.84	3	\$10,274.70
Sussex	HOPATCONG BOROUGH	1912	RURR PSC	31	\$22,871.47	\$165,168.62	\$66,984.23	3	\$567.35
Passaic	RINGWOOD BOROUGH	1611	RURR PSC	150	\$45,673.66	\$100,413.56	\$72,522.55	3	\$2,972.24
				3660					\$61,997.78
Morris	RANDOLPH TOWNSHIP	1432	RURR PSC	277	\$42,535.60	\$134,963.12	\$82,891.96	4	\$6,118.06
Morris	PARSIPPANY TROY HILLS TOWNSHIP	1429	RURR PSC	62	\$47,707.49	\$123,120.41	\$88,218.10	4	\$1,457.37
Morris	CHESTER TOWNSHIP	1407	RURR PSC	1120	\$49,457.61	\$152,290.39	\$90,238.62	4	\$26,929.72
Morris	ROCKAWAY TOWNSHIP	1435	RURR PSC	292	\$49,927.41	\$136,508.96	\$90,542.88	4	\$7,044.64
Morris	PEQUANNOCK TOWNSHIP	1431	RURR PSC	41	\$51,328.53	\$189,800.77	\$93,114.44	4	\$1,017.24
Morris	DENVILLE TOWNSHIP	1408	RURR PSC	134	\$54,314.97	\$172,381.20	\$95,143.01	4	\$3,397.06
Morris	MOUNT ARLINGTON BOROUGH	1426	RURR PSC	6	\$41,772.35	\$224,972.75	\$97,116.29	4	\$155.26
Morris	MORRIS PLAINS BOROUGH	1423	RURR PSC	5	\$56,753.09	\$143,030.96	\$98,222.83	4	\$130.86
Morris	CHESTER BOROUGH	1406	RURR PSC	17	\$73,660.21	\$144,214.17	\$100,358.40	4	\$454.59
Morris	BOONTON TOWN	1401	RURR PSC	7	\$67,218.24	\$118,100.96	\$101,733.81	4	\$189.75
Hunterdon	TEWKSBURY TOWNSHIP	1024	RURR PSC	881	\$67,213.42	\$164,018.26	\$104,725.79	4	\$24,583.91
Morris	HANOVER TOWNSHIP	1412	RURR PSC	19	\$70,878.73	\$151,484.01	\$111,568.73	4	\$564.83
Morris	BOONTON TOWNSHIP	1402	RURR PSC	236	\$66,745.40	\$158,576.72	\$112,114.45	4	\$7,050.10
Somerset	FAR HILLS BOROUGH	1807	RURR PSC	7	\$48,912.51	\$143,557.57	\$112,124.30	4	\$209.13
Morris	MONTVILLE TOWNSHIP	1421	RURR PSC	247	\$63,524.86	\$162,778.30	\$113,682.31	4	\$7,481.89
Morris	ROCKAWAY BOROUGH	1434	RURR PSC	3	\$103,394.28	\$127,003.31	\$114,435.41	4	\$91.48
Morris	KINNELON BOROUGH	1415	RURR PSC	399	\$61,632.30	\$182,070.41	\$115,385.90	4	\$12,267.25
				3,753					\$99,143.13
Somerset	BEDMINSTER TOWNSHIP	1801	RURR PSC	93	\$71,598.50	\$189,567.70	\$120,667.00	5	\$5,209.86
Bergen	OAKLAND BOROUGH	0242	RURR PSC	41	\$58,212.53	\$179,838.55	\$123,928.83	5	\$2,358.91
Somerset	BERNARDSVILLE BOROUGH	1803	RURR PSC	240	\$80,450.25	\$197,181.03	\$133,038.21	5	\$14,823.20
Morris	MORRIS TOWNSHIP	1422	RURR PSC	276	\$95,820.13	\$216,435.00	\$139,581.74	5	\$17,885.12
Somerset	BERNARDS TOWNSHIP	1802	RURR PSC	589	\$94,114.14	\$207,040.26	\$145,727.10	5	\$39,848.31
Somerset	PEAPACK GLADSTONE BOROUGH	1815	RURR PSC	117	\$84,149.69	\$226,092.63	\$146,874.22	5	\$7,977.85
Morris	MENDHAM TOWNSHIP	1419	RURR PSC	583	\$102,534.09	\$216,149.31	\$151,239.68	5	\$40,934.42
Morris	BUTLER BOROUGH	1403	RURR PSC	4	\$63,673.21	\$385,000.40	\$155,623.49	5	\$288.99
Bergen	MAHWAH TOWNSHIP	0233	RURR PSC	126	\$75,106.42	\$231,291.55	\$158,609.28	5	\$9,277.98
Morris	MENDHAM BOROUGH	1418	RURR PSC	85	\$104,645.87	\$231,712.65	\$160,978.94	5	\$6,352.47
				2,154					\$144,957.10
Morris	MORRISTOWN TOWN	1424	RURR PSC	5	\$132,691.27	\$251,334.89	\$197,854.27	6	\$70,662.24
Morris	MOUNTAIN LAKES BOROUGH	1425	RURR PSC	9	\$160,331.45	\$235,673.50	\$206,622.98	6	\$132,829.06
				14					\$203,491.30
Morris	HARDING TOWNSHIP	1413	RURR PSC	618	\$128,921.77	\$486,905.08	\$297,189.36	7	\$297,189.36
				618			\$77,183.28		

Tier	Range Per Tier	Average ELVA Per Tie	LF Per Tier	
1	\$23,718.32	\$35,577.48	\$30,657.21	1.00
2	\$35,577.48	\$53,366.22	\$44,573.89	1.45
3	\$53,366.22	\$80,049.33	\$61,997.78	2.02
4	\$80,049.33	\$120,074.00	\$99,143.13	3.23
5	\$120,074.00	\$180,111.00	\$144,957.10	4.73
6	\$180,111.00	\$270,166.50	\$203,491.30	6.64
7	\$270,166.50	\$405,249.75	\$297,189.36	9.69

Appendix E

Sample Residential Allocation Calculations

Appendix E
Sample Residential Allocation Calculations (Revised October 2010)

Parcel Example	Municipality	Parcel Size (Acres)	Net Yield (Potential Lots)	Applicable ZF (see Appendix A)	Applicable LF (see Appendices B & C)		Value of HDC Allocation*	HDC Value Per Lot	HDC Value Per Acre
					HDC Allocation	HDC Allocation			
A	Chester Twp 3 acre lots	20	6	1.37	3.23	26.55	\$ 424,809.60	\$ 70,801.60	\$ 21,240.48
B	Bethlehem 3 acre lots	16	5	1.37	1.45	9.93	\$ 158,920.00	\$ 31,784.00	\$ 9,932.50
C	Tewksbury 12 acre lots	84	7	2.44	9.07	154.92	\$ 2,478,649.60	\$ 354,092.80	\$ 29,507.73
D	West Milford 2 acre lots	12	6	1.00	1.44	8.64	\$ 138,240.00	\$ 23,040.00	\$ 11,520.00
E	Chester Twp 3 acre lots; 5 acres wet (High Conservation Value)	20	6.25	1.37	3.23	27.66	\$ 442,510.00	\$ 70,801.60	\$ 22,125.50

Examples A through D assume no pre-Highlands Act environmental constraints

Example E assumes that parcel located in High Value Conservation Priority Area and receives a 25% bonus

* HDC Price = \$16,000 per HDC

Appendix F

Marginal Lot Value Analysis (Initial HDC Price)

APPENDIX F
MARGINAL LOT VALUE ANALYSIS

County	Township	Marginal Value (from 4 to 5 lots/acre)	Marginal Value (from 4 to 5 lots/acre)	Marginal Value (from 4 to 5 lots/acre)	Marginal Value (from 4 to 5 lots/acre)	Lowest Value w/ Best Fit	30% Reduction
		Quadratic Polynomial Marginal Revenue	Cubic Polynomial Marginal Revenue	Linear Log Marginal Revenue	Polynomial Inverse First Order Marginal Revenue		
Bergen	Mahwah	\$ 79,185	\$ 41,233	\$ 197,008	\$ 284,864	\$ 41,233.00	\$ 28,863.10
Bergen	Oakland	\$ 1,024,656	\$ (1,744,351)	\$ 128,175	\$ 243,537	\$ 128,175.00	\$ 89,722.50
Hunterdon	Alexandria	\$ 122,222	\$ (116,539)	\$ 81,916	\$ 131,319	\$ 81,916.00	\$ 57,341.20
Hunterdon	Bethlehem	\$ 82,400	\$ 52,258	\$ 87,827	\$ 112,606	\$ 82,400.00	\$ 57,680.00
Hunterdon	Bloomsbury	\$ 91,069	\$ (37,293)	\$ 62,818	\$ 87,309	\$ 62,818.00	\$ 43,972.60
Hunterdon	Califon	\$ 202,008	\$ (463,665)	\$ 66,875	\$ 92,521	\$ 92,521.00	\$ 64,764.70
Hunterdon	CLINTON TOWN	\$ 21,301	\$ 17,257	\$ 71,246	\$ 82,613	\$ 17,257.00	\$ 12,079.90
Hunterdon	CLINTON TOWNSHIP	\$ 202,008	\$ 46,949	\$ 104,703	\$ 135,810	\$ 104,703.00	\$ 73,292.10
Hunterdon	GLEN GARDNER BOROUGH	\$ 56,192	\$ 120,658	\$ 64,394	\$ 92,751	\$ 56,192.00	\$ 39,334.40
Hunterdon	HAMPTON BOROUGH	\$ 17,025	\$ 163,114	\$ 40,729	\$ 67,018	\$ 17,025.00	\$ 11,917.50
Hunterdon	HIGH BRIDGE BOROUGH	\$ 242,573	\$ 12,776	\$ 110,802	\$ 130,128	\$ 110,802.00	\$ 77,561.40
Hunterdon	HOLLAND TOWNSHIP	\$ 171,563	\$ (58,494)	\$ 87,933	\$ 105,776	\$ 105,776.00	\$ 74,043.20
Hunterdon	LEBANON BOROUGH	\$ 106,060	\$ 104,875	\$ 128,966	\$ 133,517	\$ 104,875.00	\$ 73,412.50
Hunterdon	LEBANON TOWNSHIP	\$ 180,830	\$ (42,283)	\$ 102,906	\$ 137,717	\$ 102,906.00	\$ 72,034.20
Hunterdon	MILFORD BOROUGH	\$ 92,625	\$ (75,644)	\$ 88,013	\$ 98,447	\$ 88,013.00	\$ 61,609.10
Hunterdon	TEWKSBURY TOWNSHIP	\$ 659,816	\$ (213,726)	\$ 157,676	\$ 239,460	\$ 157,676.00	\$ 110,373.20
Hunterdon	UNION TOWNSHIP	\$ 251,173	\$ (124,994)	\$ 98,815	\$ 132,458	\$ 98,815.00	\$ 69,170.50
Morris	BOONTON TOWN	\$ 90,424	\$ 102,712	\$ 110,182	\$ 126,712	\$ 90,424.00	\$ 63,296.80
Morris	BOONTON TOWNSHIP	\$ 285,929	\$ (106,225)	\$ 84,380	\$ 158,486	\$ 84,380.00	\$ 59,066.00
Morris	BUTLER BOROUGH	\$ 78,350	\$ 96,181	\$ 112,447	\$ 135,973	\$ 78,350.00	\$ 54,845.00
Morris	CHESTER BOROUGH	\$ 215,898	\$ 67,306	\$ 146,992	\$ 181,751	\$ 146,992.00	\$ 102,894.40
Morris	CHESTER TOWNSHIP	\$ 510,166	\$ (991,450)	\$ 85,267	\$ 165,310	\$ 85,267.00	\$ 59,686.90
Morris	DENVILLE TOWNSHIP	\$ 159,180	\$ 128,604	\$ 150,040	\$ 190,489	\$ 150,040.00	\$ 105,028.00
Morris	HANOVER TOWNSHIP	\$ 101,746	\$ 179,058	\$ 138,614	\$ 169,413	\$ 101,746.00	\$ 71,222.20
Morris	HARDING TOWNSHIP	\$ 1,472,247	\$ (3,455,006)	\$ 110,228	\$ 288,264	\$ 110,228.00	\$ 77,159.60
Morris	JEFFERSON TOWNSHIP	\$ 161,680	\$ (155,961)	\$ 94,970	\$ 111,706	\$ 111,706.00	\$ 78,194.20
Morris	KINNELON BOROUGH	\$ 221,646	\$ 250,304	\$ 129,442	\$ 182,128	\$ 129,442.00	\$ 90,609.40
Morris	MENDHAM BOROUGH	\$ 1,031,510	\$ (2,045,347)	\$ 80,523	\$ 188,542	\$ 80,523.00	\$ 56,366.10
Morris	MENDHAM TOWNSHIP	\$ 219,948	\$ (1,892,707)	\$ 179,164	\$ 346,242	\$ 179,164.00	\$ 125,414.80
Morris	MINE HILL TOWNSHIP	\$ 96,280	\$ 110,730	\$ 88,827	\$ 95,795	\$ 88,827.00	\$ 62,178.90
Morris	MONTVILLE TOWNSHIP	\$ (45,602)	\$ (362,755)	\$ 124,442	\$ 216,717	\$ 124,442.00	\$ 87,109.40
Morris	MORRIS PLAINS BOROUGH	\$ 117,767	\$ 178,305	\$ 167,789	\$ 183,306	\$ 117,767.00	\$ 82,436.90
Morris	MORRIS TOWNSHIP	\$ 217,081	\$ (602,671)	\$ 142,941	\$ 240,963	\$ 142,941.00	\$ 100,058.70
Morris	MORRISTOWN TOWN	\$ 192,181	\$ 220,254	\$ 184,900	\$ 207,742	\$ 184,900.00	\$ 129,430.00
Morris	MOUNT ARLINGTON BOROUGH	\$ 161,929	\$ 81,851	\$ 121,161	\$ 148,517	\$ 121,161.00	\$ 84,812.70
Morris	MOUNT OLIVE TOWNSHIP	\$ 126,331	\$ (22,838)	\$ 68,823	\$ 90,856	\$ 68,823.00	\$ 48,176.10
Morris	MOUNTAIN LAKES BOROUGH	\$ 256,038	\$ 326,886	\$ 182,008	\$ 269,883	\$ 182,008.00	\$ 127,405.60
Morris	NETCONG BOROUGH	\$ -	\$ -	\$ 69,050	\$ -	\$ 69,050.00	\$ 48,335.00
Morris	PARSIPPANY TROY HILLS TOWNSHIP	\$ 40,365	\$ (112,847)	\$ 143,579	\$ 188,293	\$ 40,365.00	\$ 28,255.50
Morris	PEQUANNOCK TOWNSHIP	\$ 101,485	\$ (318,410)	\$ 146,745	\$ 173,666	\$ 101,485.00	\$ 71,039.50
Morris	RANDOLPH TOWNSHIP	\$ 71,234	\$ 313,531	\$ 146,003	\$ 186,750	\$ 71,234.00	\$ 49,863.80
Morris	RIVERDALE BOROUGH	\$ 250,333	\$ 149,538	\$ 187,997	\$ 210,410	\$ 210,410.00	\$ 147,287.00
Morris	ROCKAWAY BOROUGH	\$ 104,906	\$ 115,486	\$ 132,078	\$ 149,698	\$ 104,906.00	\$ 73,434.20
Morris	ROCKAWAY TOWNSHIP	\$ 172,545	\$ 171,020	\$ 142,000	\$ 182,402	\$ 142,000.00	\$ 99,400.00
Morris	ROXBURY TOWNSHIP	\$ 163,014	\$ (331,295)	\$ 92,026	\$ 124,215	\$ 92,026.00	\$ 64,418.20
Morris	WASHINGTON TOWNSHIP	\$ 91,470	\$ 78,825	\$ 83,254	\$ 124,813	\$ 91,470.00	\$ 64,029.00
Morris	WHARTON BOROUGH	\$ 65,913	\$ 56,968	\$ 73,801	\$ 89,209	\$ 65,913.00	\$ 46,139.10
Passaic	BLOOMINGDALE BOROUGH	\$ 121,803	\$ (143,917)	\$ 129,591	\$ 133,837	\$ 121,803.00	\$ 85,262.10
Passaic	POMPTON LAKES BOROUGH	\$ 123,729	\$ 54,562	\$ 92,270	\$ 112,867	\$ 92,270.00	\$ 64,589.00
Passaic	RINGWOOD BOROUGH	\$ 143,092	\$ 116,679	\$ 153,526	\$ 168,258	\$ 143,092.00	\$ 100,164.40
Passaic	WANAQUE BOROUGH	\$ 53,112	\$ 10,659	\$ 133,695	\$ 133,734	\$ 53,112.00	\$ 37,178.40
Passaic	WEST MILFORD TOWNSHIP	\$ 101,080	\$ (21,706)	\$ 80,617	\$ 106,979	\$ 80,617.00	\$ 56,431.90
Somerset	BEDMINSTER TOWNSHIP	\$ 1,077,145	\$ (2,971,658)	\$ 103,457	\$ 221,140	\$ 221,140.00	\$ 154,798.00
Somerset	BERNARDS TOWNSHIP	\$ 321,469	\$ (30,033)	\$ 253,917	\$ 313,414	\$ 253,917.00	\$ 177,741.90
Somerset	BERNARDSVILLE BOROUGH	\$ 1,052,251	\$ (2,385,779)	\$ 86,104	\$ 253,348	\$ 86,104.00	\$ 60,272.80
Somerset	FAR HILLS BOROUGH	\$ 1,293,386	\$ (3,271,783)	\$ 75,423	\$ 233,937	\$ 75,423.00	\$ 52,796.10
Somerset	PEAPACK GLADSTONE BOROUGH	\$ 1,464,706	\$ (3,426,494)	\$ 91,317	\$ 212,662	\$ 212,662.00	\$ 148,863.40
Sussex	BYRAM TOWNSHIP	\$ 121,700	\$ (45,809)	\$ 88,932	\$ 104,016	\$ 88,932.00	\$ 62,252.40
Sussex	FRANKLIN BOROUGH	\$ 58,834	\$ 30,534	\$ 44,339	\$ 62,564	\$ 30,534.00	\$ 21,373.80
Sussex	GREEN TOWNSHIP	\$ 134,429	\$ (21,615)	\$ 116,970	\$ 136,197	\$ 116,970.00	\$ 81,879.00
Sussex	HAMBURG BOROUGH	\$ 66,641	\$ 77,220	\$ 52,375	\$ 57,628	\$ 52,375.00	\$ 36,662.50
Sussex	HARDYSTON TOWNSHIP	\$ 160,568	\$ (233,974)	\$ 57,665	\$ 79,986	\$ 79,986.00	\$ 55,990.20
Sussex	OGDENSBURG BOROUGH	\$ 51,508	\$ 134,762	\$ 82,032	\$ 90,460	\$ 51,508.00	\$ 36,055.60
Sussex	SPARTA TOWNSHIP	\$ 153,624	\$ 475	\$ 134,839	\$ 148,429	\$ 134,839.00	\$ 94,387.30
Sussex	STANHOPE BOROUGH	\$ 100,170	\$ 95,831	\$ 71,944	\$ 85,410	\$ 95,831.00	\$ 67,081.70
Sussex	VERNON TOWNSHIP	\$ 84,056	\$ 48,066	\$ 77,018	\$ 91,117	\$ 48,066.00	\$ 33,646.20
Warren	ALLAMUCHY TOWNSHIP	\$ 86,519	\$ (156,243)	\$ 124,031	\$ 132,156	\$ 86,519.00	\$ 60,563.30
Warren	ALPHA BOROUGH	\$ 51,770	\$ 37,414	\$ 63,726	\$ 65,525	\$ 63,726.00	\$ 44,608.20
Warren	BELVIDERE TOWNSHIP	\$ 33,023	\$ 27,327	\$ 59,192	\$ 60,844	\$ 27,327.00	\$ 19,128.90
Warren	FRANKLIN TOWNSHIP	\$ 93,313	\$ 110,464	\$ 61,456	\$ 85,506	\$ 61,456.00	\$ 43,019.20
Warren	FREHLINGHUYSEN TOWNSHIP	\$ 61,487	\$ 71,138	\$ 37,539	\$ 64,209	\$ 37,539.00	\$ 26,277.30
Warren	GREENWICH TOWNSHIP	\$ 40,659	\$ (156,573)	\$ 55,419	\$ 80,165	\$ 40,659.00	\$ 28,461.30
Warren	HACKETTSTOWN TOWN	\$ 69,071	\$ 50,883	\$ 72,159	\$ 75,345	\$ 50,883.00	\$ 35,618.10
Warren	HARMONY TOWNSHIP	\$ 80,306	\$ (97,141)	\$ 35,326	\$ 62,054	\$ 35,326.00	\$ 24,728.20
Warren	HOPE TOWNSHIP	\$ 63,433	\$ (62,116)	\$ 37,828	\$ 51,920	\$ 37,828.00	\$ 26,479.60
Warren	INDEPENDENCE TOWNSHIP	\$ 82,282	\$ 12,814	\$ 87,899	\$ 108,830	\$ 82,282.00	\$ 57,597.40
Warren	LIBERTY TOWNSHIP	\$ 50,230	\$ (2,936)	\$ 66,004	\$ 83,619	\$ 50,230.00	\$ 35,161.00
Warren	LOPATCONG TOWNSHIP	\$ 85,652	\$ 32,391	\$ 52,708	\$ 62,878	\$ 52,708.00	\$ 36,895.60
Warren	MANSFIELD TOWNSHIP	\$ (51,524)	\$ (217,470)	\$ 52,420	\$ 95,755	\$ 52,420.00	\$ 36,694.00
Warren	OXFORD TOWNSHIP	\$ 20,452	\$ (75,476)	\$ 40,781	\$ 56,917	\$ 20,452.00	\$ 14,316.40
Warren	PHILLIPSBURG TOWNSHIP	\$ 30,051	\$ 40,521	\$ 26,569	\$ 33,055	\$ 30,051.00	\$ 21,035.70
Warren	POHATCONG TOWNSHIP	\$ 137,398	\$ (52,360)	\$ 58,315	\$ 76,260	\$ 76,260.00	\$ 53,382.00
Warren	WASHINGTON BOROUGH	\$ 52,473	\$ 58,792	\$ 49,167	\$ 53,922	\$ 49,167.00	\$ 34,416.90
Warren	WASHINGTON TOWNSHIP	\$ 114,726	\$ 71,434	\$ 65,167	\$ 81,279	\$ 65,167.00	\$ 45,616.90
Warren	WHITE TOWNSHIP	\$ 118,803	\$ 22,956	\$ 70,963	\$ 91,449	\$ 70,963.00	\$ 49,674.10

Regional Lot Avg = \$ 64,657.25 \$ 16,164.31 HDC Value

Appendix G

Consultant's Report – Phase III: Highlands Region TDR Valuation Analysis

**CONSULTANT'S REPORT – PHASE III
Highlands Region TDR Valuation Analysis**

Highlands Region

Transfer Development Rights (TDR) Study
Portions of Sussex, Warren, Hunterdon, Somerset, Morris,
Passaic, Bergen Counties- New Jersey

PREPARED FOR:

Jeffrey LeJava, Esq.
New Jersey Highlands Water Protection & Planning Council
100 North Road
Chester, NJ 07930
IRR File No.: NJ_157 / 109-2005-0361

EFFECTIVE DATE OF THE REPORT:

June 30, 2008



INTEGRA Realty Resources

LOCAL EXPERTISE...NATIONALLY

June 30, 2008

Jeffrey LeJava, Esq.
New Jersey Highlands Water Protection & Planning Council
100 North Road
Chester, NJ 07930

RE: Consultant's Report – Phase III
Supply – Demand Study
Highlands Region
Transfer Development Rights (TDR) Study
Portions of Sussex, Warren, Hunterdon, Somerset, Morris, Passaic, Bergen Counties-
New Jersey
IRR File No. NJ_157 / 109-2005-0361

Dear Mr. LeJava:

In accordance with your request, enclosed please find the Phase III Consulting Report consistent with our Scope of Services outline (See Addenda).

If you have any questions or comments, please contact the undersigned. Thank you for the opportunity to be of service.

Respectfully submitted,

INTEGRA REALTY RESOURCES



Matthew S. Krauser
State of NJ, Certified General
Real Estate Appraiser RG01912



Anthony M. Graziano
State of NJ, Certified General
Real Estate Appraiser RG01261
AMG/me

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IRR.

INTRODUCTION

IDENTIFICATION OF PROBLEM:

Subsequent to Integra's delivery of their Phase I and II report, Integra Realty Resources was engaged to assist the Highlands Council staff in validating various components of the TDR program elements developed by staff.

Integra was engaged within a Phase III deliverable to assist in validating the Location Factor Tier System developed by Highlands Council staff using Mod4 Assessment Data compiled by each of the 88 municipalities in the context of their tax administration policies as promulgated by the NJ Division of Taxation.

Integra was also retained to opine on the reasonableness of a "Non-Residential Adjustment Factor" utilizing sewer capacity models to provide rough equivalents of non-residential floor area ratios (FAR) to development units in residential. This was abandoned as an alternative midway through our investigation period.

Integra was further requested to assist and make recommendations on a non-residential credit allocation method for the relevant Highlands Sending Area property owners.

Lastly, within the scope of services, Integra has been retained to assist in the development and determination of a initial credit value to be initially applied to the allocated Highlands Development Credits (HDCs) to the extent that program elements are reasonably defined to facilitate such an analysis within this Phase III deliverable. The scope of services was modified in early March 2008, and Integra was asked to comment on the Highland Council staff's recommendations concerning initial credit price as outlined in a May 15, 2008 staff memorandum attached hereto.

PURPOSE, USE AND EFFECTIVE DATE

The Highlands Council and its staff are developing a TDR program within the context of the Highlands Act mandate. The purpose of Integra's work product is for technical valuation guidance and subsequent development of applicable valuation methods to be used in implementing the TDR program.

The use of the report is for technical guidance and documentation of on-going meetings, fact-finding, and conclusions within the Scope of the Assignment.

The effective date for Integra's work under this project is August 10, 2004, the date upon which the Highlands Act was signed into law. While Integra has considered information after the effective date, Integra recognizes that for purposes of valuation and valuation guidelines, August 10, 2004 is the critical effective date to consider with respect to data, regulatory impositions, zoning, and other time-based factual data impacting real property value.

SCOPE OF THE STUDY (PHASE III)

In preparing this report, Integra has completed the following steps in arriving at its current conclusions:

1. Integra developed a reasonable verification methodology to analyze the Location Factor Tier system as developed by Highlands Council staff. Integra engaged in numerous telephone and in-person meetings with Highlands Council staff to understand the development of the Location Factor Tier system, discuss the strengths and weaknesses of the data set used to develop the system, and to make relevant recommendations of dependencies within the system development.
2. Integra reviewed the provided published material on sewer capacity studies, and provided additional support based on accepted ratios of persons per square foot relating to non-residential development to equate a reasonable equivalent of non-residential space to residential dwelling units.
3. Integra assisted in making initial recommendations on a reasonable non-residential allocation method for award of Highlands Development Credits to non-residentially zoned parcels within the Preservation Area.
4. Integra has developed an opinion of the initial Highlands Development Credit value based upon the Highlands TDR Program parameters and allocation methods described in this report.

ANALYSIS AND VALIDATION OF LOCATION FACTOR TIERS

SUMMARY OVERVIEW OF KEY ELEMENTS:

Subsequent to Integra’s initial Phase I and II reports, the Highlands Council and staff pursued various strategies to develop an HDC allocation method consistent with recommendations provided in Integra’s previous reports. Integra’s recommendations included:

- development of credits-based program;
- adoption of valuation techniques using mass assessment model;
- development of an allocation mechanism which is verifiable by market; and
- development of a Highlands Development Credit allocation method based on a parcel’s physical development capacity as starting point.

SUMMARY OF LOCATION FACTOR AND CREDIT ALLOCATION METHOD (RESIDENTIAL):

The current residential proposal for HDC allocation is to determine the physical capacity analysis of the property using pre-Highlands Act statutory and regulatory restrictions to determine the number of residential units permitted under municipal zoning.¹

The relevant unit count will then be multiplied by the Location Factor (LF) based on the tier system developed by the Highlands Council staff. These LFs were developed using equalized assessment data from the land assessment of improved residential properties at the relevant “as-built” densities within the specific municipalities.

The development of the LFs and their tiering is the subject of this validation process.

IDENTIFICATION OF ISSUE:

The Location Factors seek to provide a relative “adjustment” of credits to areas which exceed the baseline real property assessed values within a specific lot size range. The Highlands Council staff has identified seven categories of typical residential lot sizes across the Highlands Region as follows:

<u>Category</u>	<u>Lot Size Range</u>
Category A:	> 10 Acres
Category B:	>5 to 10 Acres
Category C:	>2 to 5 Acres
Category D:	1 to 2 Acres

¹ Other considerations apply, including physical constraints applicable at the time (steep slopes, wetlands and buffer areas, etc.)

Category E:	0.5 to <1 Acres
Category F:	0.33 to <0.5 Acres
Category G:	0.125 to < 0.33 Acres

For each category, Highlands Council staff has proposed a framework of tiers to provide a multiplier which accounts for regional value/price variations given that the lowest tier in any given category represents a Base 1.0 multiple, and then subsequent tiers represent a multiplier based on the relative difference in equalized assessed values over the Base 1.0 assessments for that category.

The breakpoints were assigned by the Highlands Council staff, generally equating to breakpoints within established average acre values of \$25,000 per acre.

The Highlands Council staff requested an analysis of the LF's dated October 4, 2007, to validate that the placement of municipalities within the designated tiers is generally consistent with regional value variations of underlying land value observed in the real estate market.

VALIDATION METHODOLOGY

The Highlands Council staff, in conjunction with Integra, identified early within the LF development process that insufficient land sales data (actual sales transaction data) existed to complete a region-wide value comparison analysis.

Further, the physical differences in real estate (without equalization) would make sample data highly suspect given the limited population of sales data available. Physical differences, such as availability of water/sewer, were the primary variable which skewed underlying value comparisons of vacant land transaction data.

By using equalized assessment data for the land portion only of improved residential properties, the development capacity of the relevant land was not in questions since the land was already improved. Further, the land assessment data is equalized, and validated annually, through the county tax assessment offices, which is further accepted by the State Division of Taxation and the specific municipality through administration by the local tax assessor.

Therefore, we conclude that the development of the LF's through use of equalized land assessment data represents the best method for providing a relevant value ranking to all municipalities by category. Further, by using existing residential sales which are already developed at the relevant density, staff has properly isolated most of the significant variables that contribute to value differences (variances, approval status, development potential, etc.)

Integra has been requested to review the relevant municipal rankings for each category, and to provide a fairness opinion on the overall plan as proposed within the October 2007 LF rankings.

LF VALIDATION

To conduct this analysis, we have undertaken a three-step process to provide the relevant validation.

The first step was a “subjective overview” of the LF’s. Specifically, Integra is regularly engaged in the valuation of real estate throughout the entire Highlands Region, and works for developers, government entities, investors and property owners in our regular course of appraisal/consulting business. This provides our professionals with a broad understanding of general value dynamics.

Based upon Integra’s experience, our review of the LF’s and relative placement of various municipalities into tiers did not identify any significant outliers. The individual tier system, by lot size category, appeared reasonable based on our experience. We did note within our initial subjective review that within Category A (lot sizes greater than 10 acres), Riverdale Borough appeared as a Tier 7 municipality and our experience indicates that this should likely be considered a Tier 4 or 5 municipality based on expected average unit values. This municipality only had (3) assessments analyzed in developing its ranking. Riverdale did not appear in Category C (lot sizes from 2 to 5 acres) or Category D (lot sizes from 1 to 2 acres), and is in Tier 4 or 5 in the balance of the categories. Given the low sample base, we recommend moving Riverdale to Tier 5 in Category A.

The second validation method was to analyze which Tier a municipality was assigned for each lot size category. We entitled this assessment the Cross-Category Analysis. We did not identify any municipality that was more than two tiers removed for each of the Categories (other than Riverdale as noted above). The results of that assessment are presented within the Addenda entitled “Cross-Category Analysis.”

The third validation method was based on analysis of sample municipalities and aggregation of actual land sales and improved sales data. We identified nine (9) sample municipalities, and compiled relevant land sales and improved sales data from the regional multiple listing services for the time period January 2003 – December 2004. We then validated the acreage data from public sources, and arrayed the data (vacant land and improved) using the same lot size categories. We then analyzed each category to verify that the tier assigned by the Highlands Council staff bore a reasonable relationship to the relative evidence from actual transaction data (either land, residential², or both).

The results of our analysis per lot size category are on the following pages.

² Using residential resale data is considered appropriate for this type validation since the value of underlying land will bear a reasonable relationship to the end-unit housing values within a locale and given similar land sizes. The data does not isolate for housing age, bedroom or bath count, and other critical factors, so the averages are subject to wider variation. Where sample sizes exceed 30+ transactions, the data is deemed more reliable. Where sample sizes are less than 30 transactions, these results are less reliable, but still considered valid.

CATEGORY A (LOT SIZE > 10 ACRES)

County	Municipality	10+ Acres			Highlands Tier	Highlands Range
		Estate Price	\$/Acre	# Sales		
Morris	Harding Land	\$1,915,000	\$132,000	3	10	\$175,000
Morris	Harding Residential	\$2,825,000		2		
Somerset	Far Hills Land	\$1,115,000	\$72,863	6	8	\$97,659
Somerset	Far Hills Residential	\$2,000,000		3		
Morris	Morris Land	Na			6	\$39,036
Morris	Morris Residential	Na				
Hunterdon	Tewksbury	\$635,000	\$25,000	24	6	\$37,034
Hunterdon	Tewksbury Residential	\$1,300,000		5		
Morris	Chester	\$310,000	\$25,000	6	5	\$30,997
Morris	Chester Residential	\$1,490,000		5		
Morris	Hanover	Na			Na	Na
Morris	Hanover Residential	Na				
Warren	Washington	\$320,000	\$7,500	20	2	\$9,250
Warren	Washington Residential					
Passaic	West Milford	\$240,000	\$10,000	14	3	\$11,462
Passaic	West Milford Residential	Na				
Warren	Lopatcong	Na			Na	Na
Warren	Lopatcong Residential	Na				

Within Category A, we compiled data from (9) sample municipalities for land and improved re-sales.

The Highlands tier ranking on a dollar per acre (\$/Acre) basis is consistent with both the actual land transaction values, and the end unit pricing categories based on the transaction data we reviewed.

Notably, Hanover and Lopatcong were not included in any tier because no properties assessments existed in those municipalities (for 10+ Acre sites) to properly include them within a tier. We verified a lack of transaction detail (land and improved) for similar 10+ acre properties within those municipalities from the MLS transaction data sets.

Washington Township (Warren County) is assigned in Highlands Tier 2, and demonstrated a lower average acreage value than West Milford among 20 and 14 transactions respectively. The gross prices for Washington were slightly higher, but this was due to larger tracts being available, which increased the average gross price.

Based on our sample, we conclude that the relative ranking of these 9 municipalities is consistent with the LF Tiers as established by the Highlands Council staff.

CATEGORY B ((LOT SIZES >5 TO 10 ACRES))

County	Municipality	5-10 Acres			Highlands Tier	Highlands Range
		Resource Residential Price	\$/Acre	# Sales		
Morris	Harding Land	\$650,000	\$102,000	9	7	\$221,543
Morris	Harding Residential	\$1,550,000		7		
Somerset	Far Hills Land	\$480,000	\$90,000	1	6	\$104,954
Somerset	Far Hills Residential					
Morris	Morris Land	\$292,500	\$54,000	2	5	\$82,058
Morris	Morris Residential	Na				
Hunterdon	Tewksbury	\$296,000	\$44,000	20	4	\$62,644
Hunterdon	Tewksbury Residential	\$1,210,000		8		
Morris	Chester	\$295,000	\$52,000	13	4	\$51,930
Morris	Chester Residential	\$920,000		11		
Morris	Hanover	Na			3	\$41,768
Morris	Hanover Residential	Na				
Warren	Washington	\$125,000	\$18,000	27	3	\$32,631
Warren	Washington Residential	\$635,000		8		
Passaic	West Milford	\$145,000	\$20,000	6	2	\$23,284
Passaic	West Milford Residential	\$540,000		6		
Warren	Lopatcong	Na			2	\$19,858
Warren	Lopatcong Residential	Na				

The relevant tiers proposed by the Highlands Council staff were consistent with actual transaction data within Category B. We did not identify any transaction data within Lopatcong to support the tier, but would note that the assessment averages for West Milford (\$23,284) is highly correlated to average \$dollar per acre of land sales data within this tier.

Further, all of the average assessment data for the sample municipalities had a high degree of correlation with the land transaction value averages within Tiers 2-4.

The higher tiers began to diverge from the actual sales data averages; however, the relative ranking remained correct based on actual transaction data.

The average residential home prices also correlated directly with the tier rankings developed by the Highlands Council staff, lending additional support to the overall tier allocations.

CATEGORY C (LOT SIZES >2 TO 5 ACRES)

County	Municipality	2-5 acres Rural Residential		# Sales	Highlands Tier	Highlands Range
		Price	\$/Acre			
Morris	Harding Land	\$610,000	\$180,000	43	7	\$297,189
Morris	Harding Residential	\$1,500,000		24		
Somerset	Far Hills Land	Na			5	\$112,124
Somerset	Far Hills Residential					
Morris	Morris Land	Na			5	\$139,581
Morris	Morris Residential	\$1,081,000		14		
Hunterdon	Tewksbury	\$308,000	\$91,000	29	4	\$104,725
Hunterdon	Tewksbury Residential	\$890,000		41		
Morris	Chester	\$275,000	\$85,000	37	4	\$100,358
Morris	Chester Residential	\$860,000		54		
Morris	Hanover	Na			4	\$111,568
Morris	Hanover Residential	Na				
Warren	Washington	\$115,000	\$35,000	65	3	\$62,875
Warren	Washington Residential	\$580,000		67		
Passaic	West Milford	\$115,000	\$30,000	8	2	\$45,817
Passaic	West Milford Residential	\$515,000		11		
Warren	Lopatcong	Na			1	\$33,470
Warren	Lopatcong Residential	\$440,000		7		

Within Category C, the relevant tiers are consistent with actual market data, and are within a similar order of magnitude between the Highlands indicated range and the actual sales data.

Notably, the Far Hills Borough land values identified by the Highlands Council staff analysis appear lower than similar Morris Township land values based on the Highlands assessment data. There were no identified transactions (land or improved) upon which to validate this data. The Highlands Council staff analysis only utilized (7) parcels to establish the range. However, both municipalities are in the same tier, and therefore, the difference in acreage values and apparent reversal of Far Hills and Morris Township is consistent and credible even though the averages in Far Hills Borough are lower.

The Tier 4 municipalities have a high degree of correlation with actual land transaction data. The Tier 2 and 3 municipalities are higher as identified by the Highlands Council staff analysis, but again, the relative ranking and tier breaks appropriately scale these municipalities into lower relative Tiers.

Overall, the actual market data supports the relative Highland averages and tier system.

Category D (LOT SIZES 1 TO 2 ACRES)

County	Municipality	1-2 Acres			Highlands	Highlands
		Price	\$/Acre	# Sales	Tier	Range
Morris	Harding Land	Na			5	\$351,700
Morris	Harding Residential	\$620,000		1		
Somerset	Far Hills Land	Na			4	\$195,601
Somerset	Far Hills Residential					
Morris	Morris Land	\$545,000	\$243,000	7	5	\$249,708
Morris	Morris Residential	\$700,000		16		
Hunterdon	Tewksbury	\$183,750	\$112,000	2	4	\$177,225
Hunterdon	Tewksbury Residential	\$535,000		6		
Morris	Chester	\$115,000	\$70,000	10	4	\$186,423
Morris	Chester Residential	\$830,000		36		
Morris	Hanover	\$275,000	\$210,000	2	4	\$188,134
Morris	Hanover Residential	Na				
Warren	Washington	\$90,000	\$50,000	20	3	\$111,320
Warren	Washington Residential	\$455,000		38		
Passaic	West Milford	\$70,000	\$55,000	13	2	\$94,044
Passaic	West Milford Residential	\$390,000		26		
Warren	Lopatcong	Na			1	\$61,920
Warren	Lopatcong Residential	\$470,000		6		

The samples for Morris Township showed land price per acre at \$243,000 (7 transactions) versus the Highlands estimate at \$249,708, validating the relative inclusion in Tier 5 for Morris Township.

Within Category D, we note that Tiers 2, 3, and 4 have a large divergence between Highlands average acreage values and actual transactions (the exception being Hanover Township).

Washington and West Milford demonstrate relatively comparable \$dollar per acre values by actual MLS transaction data. However, end unit pricing in West Milford is proportionally lower in West Milford than Washington (Warren), generally in the same proportion to the Highlands average acreage difference. These two municipalities are at the tier split between Tiers 2 and 3, and the inclusion of West Milford in Tier 2 versus 3 is supported by the end unit transactions and overall lot prices, even though the \$dollar per acre from MLS transactions appears equal.

Accordingly, based on the data, we conclude that the Highlands average acreage data and relative tier system are consistent and fair based on the sample municipalities.

CATEGORY E (LOT SIZES 0.5 TO < 1 ACRE)

	Municipality	Price	\$/Acre	# Sales	Highlands Tier	Highlands Range
Morris	Harding Land	Na			5	\$535,135
Morris	Harding Residential	\$705,000		6		
Somerset	Far Hills Land	Na			3	\$365,062
Somerset	Far Hills Residential	Na				
Morris	Morris Land	\$323,000	\$378,000		5	\$406,782
Morris	Morris Residential	\$738,000		74		
Hunterdon	Tewksbury Land	Na			4	\$282,934
Hunterdon	Tewksbury Residential	\$460,000		5		
Morris	Chester Land	Na			4	\$347,424
Morris	Chester Residential	\$405,000		5		
Morris	Hanover Land	\$105,000	\$170,000	4	4	\$347,356
Morris	Hanover Residential	\$550,000		13		
Warren	Washington Land	\$95,000	\$160,000	3	3	\$213,068
Warren	Washington Residential	\$450,000		71		
Passaic	West Milford Land	\$135,000	\$215,000	13	2	\$170,953
Passaic	West Milford Residential	\$350,000		31		
Warren	Lopatcong Land	Na			1	\$97,161
Warren	Lopatcong Residential	\$380,000		8		

We again note that Far Hills Borough lacked any verifiable market data to support or refute the Highlands Tier classification based on assessment data. However, the value by tier continues to decline into the smaller lot categories. This infers that Far Hills Borough may be in the wrong tier in earlier categories, or the lack of data (only 7 assessments reviewed) continues to skew the data.

We would also note that Chester Township’s Highland average per acre at \$347,000 appears inconsistent with end unit residential sales at an average of \$405,000. However, all of the Tier 4 sample municipalities had end-unit re-sales between \$460,000 - \$550,000, indicating that the relative tier classification remains valid.

The Tier 1 through 3 averages estimated by the Highlands Council staff appear consistent with actual transaction data.

CATEGORY F (LOT SIZES 0.33 TO < 0.5)

	Municipality	Price	\$/Acre	# Sales	Highlands Tier	Highlands Range
Morris	Harding Land	Na			5	\$867,554
Morris	Harding Residential	\$640,000		3		
Somerset	Far Hills Land	Na			3	\$390,798
Somerset	Far Hills Residential	Na				
Morris	Morris Land	\$233,750	\$648,100	5	4	\$639,257
Morris	Morris Residential	\$608,000		42		
Hunterdon	Tewksbury Land	Na			4	\$480,584
Hunterdon	Tewksbury Residential	\$410,000		2		
Morris	Chester Land	Na			3	\$355,026
Morris	Chester Residential	\$330,000		2		
Morris	Hanover Land	\$330,000	\$917,000	2	4	\$499,527
Morris	Hanover Residential	\$480,000		25		
Warren	Washington Land	Na			2	\$284,736
Warren	Washington Residential	\$405,000		8		
Passaic	West Milford Land	\$50,000	\$115,000	11	2	\$257,145
Passaic	West Milford Residential	\$325,000		34		
Warren	Lopatcong Land	Na			1	\$174,415
Warren	Lopatcong Residential	\$275,000		13		

With respect to Category F, Far Hills Borough remained in Tier 3 as in Category E. Chester Township moved down one tier in this analysis. However, in comparing Hanover end unit residential values (\$480,000) in Tier 4 with Chester end unit residential values (\$330,000), this reduction in tier level for Chester appears consistent with market data.

The overall sample indicates that the tier levels are consistent with the available market data based on the end unit residential re-sales. The Highlands Council staff calculated average per acre, when applied to .33 - .5 lot sizes, appear consistent with end unit residential resale prices, offering further support for the overall tier classifications for this parcel size class.

CATEGORY G (LOT SIZES 0.125 TO < 0.33)

Integra was unable to assemble sufficient data of “high-density” residential sales in any of the sample communities to provide meaningful analysis.

OVERALL SAMPLE ANALYSIS CONCLUSIONS:

- We sampled a consistent number of municipalities against the overall tier development and rankings prepared by the Highlands Council staff.
- One of the nine municipalities (Far Hills Borough), for which almost no actual transaction data was available, and which was based on a small assessment sample, moved more than one (1) tier through all categories of the residential parcels.
- Two of the nine municipalities (Washington (Warren County) and Chester) moved to lower tiers in the lot size categories, but this movement was corroborated by end unit re-sales data supporting this migration.
- The remaining municipalities stayed within their relative tier classification throughout most categories, which supports a conclusion that the relative municipal tier system is consistent.
- The average acreage values estimated by the Highlands Council staff analysis based upon equalized assessment data was highly consistent with the actual average acreage values from land sales (where available) in the larger lot size categories. The average acreage values in smaller lot size categories were significantly higher under the Highlands Council staff analysis than was supported by actual land data (or residential resale ratios). However, the relative ordering of municipalities within the various tiers appears consistent with the available market data.
- In reviewing the number of actual land sales available in a given community, as well as the number of specific residential resale transactions, the necessity to utilize the equalized assessment data for consistent analysis becomes clearly evident. This is the only body of data that is of sufficient sample size and reasonably equalized to provide a comprehensive value-based analysis for the Highlands Region.
- Integra's cross-category analysis also confirmed relative consistency across all lot size categories by municipality. Based on our sample analysis, we would conclude that the relative tiers as established by the Highlands Council staff are supported by market data, and are reasonably consistent with market value variations between various municipalities within the Highlands Region.
- Accordingly, the use of the LF's as a reasonable basis for adjusting value differences within the Highlands Region for purposes of Highlands Development Credit allocation appears sound and credible based on the data provided by the Highlands Council Staff.

NON-RESIDENTIAL CREDIT ALLOCATION PROPOSAL

As part of our scope of assignment, Integra was requested to develop a non-residential conversion allocation to assist in awarding credits to non-residential land owners where residential uses were not permitted.

Integra developed an initial set of recommendations based on non-residentially acceptable corridors which rated and ranked the relative desirability of vacant land for non-residential development. These corridors were assigned Tier levels (1-3) using objective criteria such as proximity to major highways, proximity to population centers, proximity to areas of high employment or disposable income, and other characteristics which drive underlying land value.

After subsequent revisions to the underlying criteria, and attempts to develop a uniform classification, the physical alignment on corridors was problematic due to high variations in zoning type and permitted uses, coupled with the irregular boundary lines of relevant non-residential zones.

Given these significant difficulties, the Highlands Council staff requested that Integra develop and propose an alternative approach based on values and ratios experienced in the non-residential sector, but recognizing a more uniform treatment of non-residential land properties independent of their specific characteristics such as size, road frontage, and other factors.

Highlands Staff reset these parameters in recognition that:

- There are less than 3,500 discreet acres of undeveloped non-residentially zoned land in the Preservation Area likely to be affected by the Highlands Act.
- Near-term non-residential value impacts are likely to be significantly less given the demand for non-residential property.
- Consolidation of non-residential parcels further reduces the number of discreet property owners affected, and relative to the overall scale of the residential impacts, the non-residential formula is likely to be applied in far less instances, and is unlikely to be immediately required for hardship.
- Notwithstanding the above parameters, the Highlands Council staff specifically acknowledges that undeveloped non-residential properties do not have an applicable Highlands Act exemption, and therefore, their formula must be broadly applicable, even though the non-residential property may not be considered “prime” in terms of location and physical characteristics.

Integra proposes to recognize that the functional variables typically used to value non-residential property is the potential building square footage that a specific property can yield. This is generally calculable within the context of local zoning requirements, adjusted for all ordinary physical constraints, and specifically with parking ratios and lot coverage requirements considered.

Unlike the residential uses, which demonstrate a high degree of variation in the underlying land values due to a high disparity in end unit housing prices (driven by schools, taxes, existing development patterns, etc.) non-residential uses are primarily affected by demand for non-residential space, and across the region, the non-residential unit values on a \$ per FAR (buildable square foot) basis tend to bracket a relatively tight range.

Therefore, market adjustment factors are not inherently required when one considers that general non-residential rent levels will be a function of demand, and the Highlands Staff parameters set forth a recognition that relative demand be considered a constant given the limited number of non-residential property owner’s affected.

Integra undertook a study of their existing non-residential land database, land records within public and subscription comparable services, and based on the broad non-residential experience of the Integra professionals who specialize in non-residential valuation, Integra proposes the Highlands Staff adopt an understanding of the land values on a \$/SF FAR basis generally in accordance with the following matrix:

Industrial Land Values (\$/FAR):	\$10 - \$20 FAR	MidPoint (\$15)
Office Land Values (\$/FAR)	\$20 - \$40 FAR	MidPoint (\$30)
Retail Land Values (\$/FAR)	\$25 - \$60 FAR	MidPoint (\$42.50)

As opposed to establishing tiers based on physical geographic locations (i.e. the Location Factors), Integra proposes using the comparative mid-point by use to assign a multiple where:

Industrial SF =	1X
Office SF =	2X
Retail SF	2.83X

The conversion of a non-residential use into reasonably comparable credits as established by the residential schema will require the owner and the Highlands Council staff to undertake an analysis of the site’s specific building yield as of August 2004.

A “conversion factor” should then be applied based on the type of non-residential use. Industrial uses tend to support employees at a ratio of 1 per 1,500 SF. This becomes the “Base-1” given the relative value mid-point.

The office building conversion factor becomes $1,500 / 2.00 = 750$ SF.

The retail building conversion factor becomes $1,500 / 2.83 = 530$ SF.

The allocation of non-residential credits will be developed by the property owner based on the highest yielding use which is permitted by zone, consistent with typical concepts of maximal productivity, and recognizing the base acreage factor.

The above parameters used as the basis for determination of HDC's should consider a factored adjustment to recognize that the "value" of building FAR is only achieved whereby approvals and entitlements are sought and achieved. Integra proposes a 30% discount be considered against the HDC calculation to recognize the lack of approvals as well as accounting for other frictional factors such as successful tenant identification, feasible building configuration, etc, all of which tends to limit the overall achieved yield on sites. We will refer to this as an "approval" factor.

The non-residential allocation for a 10,000 SF building yield for an industrial building would then be calculated as follows:

$$10,000 \text{ SF FAR} / 1,500 \text{ SF} \times .70 = 4.6 \text{ HDC's} - \text{rounded to } 5 \text{ HDC's}$$

The non-residential allocation for a 10,000 SF building yield for an office building would then be calculated as follows:

$$10,000 \text{ SF FAR} / 750 \text{ SF} \times .70 = 9.33 \text{ HDC's} - \text{rounded to } 9 \text{ HDC's}$$

The non-residential allocation for a 10,000 SF building yield for a retail building would then be calculated as follows:

$$10,000 \text{ SF FAR} / 530 \text{ SF} \times .70 = 13.2 \text{ HDC's} - \text{rounded to } 13 \text{ HDC's}$$

An analysis of the final HDC ratios by use type reflect a consistent ratio against the typical underlying land values. Office land with the same building yield as industrial will result in nearly a 2x factor consistent with value differenced in FAR. Retail land with the same building yield as industrial will result in nearly a 2.6 factor.

The example above considers identical building yields to validate the method's effectiveness in the award of credits relative to FAR, and a balancing of the relative value differences between asset classes.

In reality, the parking and design criteria for the different asset classes generally results in widely diverging building yields on the same size parcel. Industrial uses require less parking support, and tend to maximize the building yield, but are limited to one story. Office buildings have higher parking and site requirements, but have the benefit of market-adaptable multi-story construction. Retail buildings have the highest market parking requirements, are generally limited to a single story, but have the broadest array of potential users/demand. The factors developed under this proposal balance the competing forces of yield versus supply-demand.

Non-residential property owners where multiple use types are permitted will likely opt for the most favorable development plan that maximizes their credit yield.

The “approval factor” reduces the overall number of credits awarded to account for supply-demand and long term stability in credit values. However, considering that the non-residential property owners do not receive any development exemptions upon which to recapture some residual use or value, and their only mechanism for appreciation rests in the appreciation of credits, Highlands Staff should consider the overall impact of the approval factor on the supply and demand of credits after initial inception of the program.

In the subsequent section of the report, Integra discusses the validity of the initial HDC price of \$16,000 per HDC.

However, using this as a base estimate on the above credit allocations results in the following calculations per FAR:

Land Asset Class	HDC Award	Value @ Minimum HDC Price (\$16,000)	Value per FAR of 10,000 SF
Industrial	5	\$80,000	\$8.00 per FAR
Office	9	\$144,000	\$14.40 per FAR
Retail	13	\$208,000	\$20.80 per FAR

The above calculations are reflective of “as-is” land values since the landowner is not required to process approvals or wait while the buyer processes approvals (“subject to”). Further, these calculations presume the minimum credit values, and higher credit prices could increase the value of this award.

The HDC allocation also contemplates that the landowner retains the underlying land title, although lacking 100% of all development potential after non-residential HDC award (no exemptions), the residual land values and appreciation potential of the non-residential residual is less clear.

MINIMUM CREDIT PRICE:

Integra was provided with base data and a subsequent memorandum dated May 15, 2008, detailing the process for initial HDC price at program inception.

The initial HDC price is currently proposed at \$16,000 per HDC.

Significant to the development of this price allocation is that sending owner's allocation of credits and resulting "credit values" are appropriately priced to facilitate the use of the credits in currently voluntary receiving zones.

As detailed within Integra's prior work product, the ultimate price paid for HDC's will be determined by the utility of using the HDC's and will not directly relate to the sending owner's property value. Through segregation of the property interest into tangible development units, the ultimate price of the credits will be dictated by the feasible utility of the credits for a receiving project.

Significant elements to consider in the final determination of minimum credit price:

- The HDC price must be balanced against a receiving zones rights to assess impact fees (the receiving developer will solve for the aggregate cost of the HDC's plus any relevant impact fees relative to the effective additional yield);
- The HDC price should consider the impact of voluntary zones, versus mandatory receiving zones in other TDR programs;
- The HDC price should be set at a reasonably conservative minimum so as not to impair the private market for trade of credits. In a well conceived framework, the minimum price (paid by the TDR Bank) should always be less than the private market for credits in an attempt to support the private market transfer at higher prices;
- The use of HDC's within the receiving zone municipalities should consider local development values in setting the HDC requirement for additional density; and
- The overall TDR program would benefit significantly by expanding the potential uses for HDC's. Examples might include participating municipalities allowing HDC's to be used for bulk variances or waivers on existing development. Allowing HDC's to preserve existing rights on developed (already disturbed) properties in the preservation zone in the event of destruction may also expand the private market for HDC's.

The definition of "reasonable" HDC price will ultimately relate to whether, over time, the private market embraces the use and deployment of the HDC's in development practice. This will depend largely on the receiving municipality's requirements to achieve additional marginal density relative to the receiving local land values.

By example, if one additional lot in Receiving Town A is worth \$90,000 (approved); and Town A assesses a \$15,000 impact fee per additional unit, the “feasible” HDC requirement would be something less than 4 HDC’s ($\$90,000 - \$15,000 = \$70,000 / \$16,000$ per HDC = 4.375 at 1:1: ratio).

Developer’s will not reasonably increase density to achieve a dollar for dollar trade, so in the above example, a sensible allocation would require 2-3 HDC’s to achieve the additional unit density, thereby allowing the developer a “profit” on the use of HDC’s. Analysis such as this must recognize that as density increases, the size and configuration of the “by-right” lots/units will also be reduced, so there is an inherent loss of value associated with the “by-right” units which must be accounted for.

Alternatively, if Town B demonstrates lot values at \$150,000 per lot, and assesses a \$10,000 impact fee, and only requires (1) HDC per additional unit, a willing developer could feasible justify an HDC price up to \$140,000 ($\$150,000$ less \$10,000 impact fee).

Naturally, in a competitive market, the developer would seek the “least-cost” HDC’s available, and profit on the spread. This example is also counter to the TDR programs goal of increasing the absorption of credits since retiring credits makes all remaining credits more valuable. The TDR program must be aggressive in counseling receiving zone municipalities to balance their minimum HDC requirements against local land and project value to a feasible level of development profit and economic motivation, while not “under-utilizing” credits.

RELATIONSHIP TO OTHER PROGRAM CREDIT VALUES:

By way of public record, the Pinelands Development Credit Program (with mandatory receiving zones but substantially lower demand and land values) established their minimum credit price at \$2,500 per ¼ credit at the initial program inception in the early 1980’s. It took more than 10 years before the private market transaction of credits exceeded (by % and \$ totals) the transactions from the Pinelands Program. Subsequent this 10-year period, and as the private market began to recognize the utility and value of the credits, ¼ prices in the private market escalated from \$2,500 to \$5,000 per ¼ credit, and at the height of the residential market in early 2000-2003 timeframe, credits were privately trading at upwards of \$30,000 per ¼ credit. These credit prices have retreated more recently, but reflect appreciation rates at 5% per year (doubling over 20 years), with stable appreciation as the private market trades increased. The \$30,000+ ¼ price was also enhanced by a waiver/variance exemption program put into place in the late 1990’s.

Recognizing the significant divergence in market demand and residual land values in Southern NJ versus the Highlands region, the HDC price as developed at \$16,000 per HDC appears imminently reasonable in relationship to area land values. At the very minimum, requiring 2 HDC’s (plus impact fees) for (1) additional unit yield will equate to a minimum developer cost of \$47,000 per lot.

In Southern NJ, there is ample supply of lots in this price range on the private market. In the Highlands Region, this price range is equivalent to feasible unit values for multi-family product. Additional unit yield on single family lots starting at \$47,000 will almost certainly be attractive for significant use of the HDC's by the private development market.

Overall, the initial price appears to be sufficient to facilitate the use and absorption of HDC's. The ultimate feasibility and use will be subject to the receiving zones appropriate setting of the minimum number of HDC's required based on local land values. However, the price reflects significant flexibility and price-setting flexibility as a minimum to be deemed credible.

The price will facilitate an understanding of the minimum, and will be permitted to fluctuate with the private market.

Given the validated relationship of the initial HDC price to unit values in the Highlands Region, and against the non-residential sending properties, and in light of the HDC price relationship to historical Pineland Development Credits (PDC's), Integra believes the initial HDC price as recommended by the Highlands is reasonable, and will facilitate private use of the HDC's subject to receiving zone participation.

**ASSUMPTIONS AND LIMITING CONDITIONS
CONSULTING REPORT**

This Consulting Report is subject to the following limiting conditions:

1. This consulting report is made for the client to which it is addressed and is to be used by said client only for the purpose stated in the report. No reliance is to be placed on this report for any other purpose nor shall it be published, distributed or shown to other parties except to the party to whom the report is addressed.
2. No responsibility is assumed for matters legal in character. The consultant renders no opinion as to the title, but assumes that it is marketable. The property is evaluated as though free and clear of all liens and encumbrances, except as otherwise indicated. Management and ownership are presumed to be competent and responsible.
3. All drawings and diagrams in this report are included to assist the reader in visualizing the property. These drawings do not represent the product of any professional survey made by this office. The consultant is not a professional engineer, and no engineering survey of the property has been made, nor is the consultant reporting on structural adequacy.
4. No right to expect testimony, attendance in court, or publication is indicated with possession of this report.
5. The consultant has no present or contemplated future interest in the property.
6. Any rentals and other income have been supplied by the owner and have not been subject to independent verification, unless otherwise noted. Expenses are based either on data supplied by the owner or are the consultant's own estimate. Other factors stated in this report are correct to the best of the consultant's knowledge and belief.
7. The opinions reported herein assume any proposed development complies with building and zoning codes of the municipality in which it is located.
8. Proposed or under construction programs frequently require changes in design, layout, dimensions or use. Should the premises under review, as described in this report, necessitate such changes, the final estimate of value is not applicable. In order to obtain a fair evaluation of any report, it must be considered in its entirety, including the above limiting and contingent conditions.
9. In the current market, real estate price levels for income producing properties are dictated by the present value of future expectations. Under the circumstances, the consultant must quantify market projections which are, by their character, imprecise. Property earnings and financial projections contained in this report represent an informed judgment as to present and anticipated market trends.

10. Any cash flow analysis implemented for valuation purposes represents an orderly financial process superimposed on a market which is typically erratic in behavior. Any aberrations and/or dramatic changes in the local and national economy may impact the property's capacity to generate the earnings set forth herein with a concomitant impact on value.

This report assumes that the property is free of all hazardous materials or toxic wastes. The presence of hazardous materials or toxic wastes on the property can substantially impact the value of the property. A variety of materials, including chemicals, metals and minerals have been determined to be hazardous or toxic under local, state and/or federal laws and regulations and can be required to be specially handled and removed from the property at the expense of the property owner.

If applicable, certain materials which may have been used in the construction of the premises or in building components may be hazardous. Asbestos, for example, can be hazardous and has been included in a number of building components such as fire proofing, insulation, linoleum, floor tiles, ceiling panels and acoustical ceiling coatings.

The consultant is not experienced in identifying potential toxic waste and hazardous material problems nor estimating the cost of resolving such problems. In order to identify the nature and extent, if any, of the toxic waste and hazardous material problems on the property, the appropriate experts should be selected and retained.

11. This consulting report is made with the understanding that the subject can obtain a negative declaration from the New Jersey Department of Environmental Protection (NJDEP) pursuant to the regulations and requirements of the Environmental Cleanup Responsibility Act of 1983 (ECRA), as amended including the Industrial Site Recovery Act (ISRA) amendments of June 16, 1993.

These Acts require as a pre-condition of any cessation of operation or the transfer of real property, which used or stored regulated hazardous substances, the testing, cleanup and disposal of any such material.

The consultant is not qualified to determine the existence of any such hazardous material and, therefore, has expressed a value of the subject property as if free and clear of any such substances.

12. In conjunction with the preceding paragraph, the consultant has not been apprised or is qualified to ascertain the existence of radon, a radioactive gas which occurs naturally in the soil of certain identified areas. This gas in concentrated form has been shown to be detrimental and its existence would create a negative impact on value. As in the above instance, the value estimate assumes the subject is free and clear of radon gas.

CERTIFICATION:

I certify that, to the best of my knowledge and belief:

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report and I have no personal interest or bias with respect to the parties involved.
4. My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.
5. This appraisal was not based on a requested minimum valuation, a specific valuation, or the approval of a loan.
6. My analyses, opinions and conclusions were developed, and this report has been prepared in conformity with the Uniform Standards of Professional Appraisal Practice.
7. I have made a personal inspection of the property that is the subject of this report.
8. No one provided significant professional assistance to the person signing this report.
9. The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Practice of the Appraisal Institute.
10. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
11. As of the date of this report, I have completed the requirements of the continuing education program of the Appraisal Institute.



Anthony M. Graziano
NJ State Certified General Real
Estate Appraiser RG001261



Matthew S. Krauser
NJ State Certified General Real
Estate Appraiser RG01912

ANTHONY M. GRAZIANO
DIRECTOR – INVESTMENT AND DEVELOPMENT SERVICES

EXPERIENCE:	<p>Director –Investment and Development Services for INTEGRA REALTY RESOURCES - ATLANTIC COAST, NJ.</p> <p>Mr. Graziano has been involved in the real estate field since 1986. Since joining the firm on a full-time basis in May of 1992, Mr. Graziano has actively counseled and advised clients on the sale, leasing, valuation, management, and development of non-residential real estate assets throughout New Jersey and the northeast U.S.</p> <p>Mr. Graziano’s experience encompasses a wide array of specializations including significant experience with multi-family government-assistance programs throughout the United States. Mr. Graziano was a guest speaker at the 1998 multi-family housing conference in Chicago, and served as a valuation advisor to numerous owners between 1992 and 1996 on the recapitalization of equity and debt during Congressional restructuring of HUD’s Section 8 program. Mr. Graziano continues to provide select consulting services to owners and managers of assisted and conventional multi-family housing.</p> <p>Mr. Graziano’s unique professional perspective is a blend of his educational background which includes formal training in architecture, urban planning, macro and micro economics, geography, and development. His market experience in sales, leasing, management, and valuation disciplines combine to bring practical real-world answers to complex planning and development projects. He has been actively involved as a consultant and/or member of consultant team on various redevelopment and land use projects for public and private clients over the past 10 years.</p> <p>Mr. Graziano's responsibilities also include the development of in-house research tools for advanced real estate research. The firm maintains an active proprietary database of land transactions from 1978 to present, and supports improved non-residential transactions (lease and sale) from 1985 to present. Current projects include implementation of a Geographic Information Systems (GIS) engine to integrate spatial land use information and primary research affecting the use and value of real estate.</p> <p>Mr. Graziano served as Chairman of Integra Realty Resources’ Information Technology (IT) Division from 1999-2002, overseeing the development of valuation and research tools for the parent corporation. Major technology initiatives completed under his leadership include advance valuation model development (Marketpoint™) and development of a web-based Real Estate Project Management and CRM in use in all 52 Integra offices nationwide (Interconnect™).</p>
PROFESSIONAL ACTIVITIES and STATE LICENSES	<p>Candidate: MAI Designation of the Appraisal Institute Member: AI Young Advisory Council (YAC) – 1998-2000 Member: National Association of Realtors and Ocean County Board of Realtors Licensed: Certified General Real Estate Appraiser #RG01261, New Jersey Licensed: Licensed Real Estate Salesperson, State of New Jersey</p>
PROFESSIONAL AFFILIATIONS:	<p>Institute for Responsible Housing Preservation Urban Land Institute (ULI) American Planning Association (APA) International Association of Assessing Officers (IAAO) International Right of Way Association (IRWA)</p>
EDUCATION:	<p>Graduate of University of Miami, Coral Gables, Florida 1988-1992 Degree: Bachelor of Science in Land Development and Planning University of Miami School of Architecture</p> <p>Graduate of New York University, New York, New York 1993-1996 Degree: Master of Science in Real Estate Development and Investment New York University Real Estate Institute</p> <p>Completed Real Estate Appraisal Courses sponsored by the Appraisal Institute: Introduction to Appraising Real Property (101) \ Basic and Advanced Income Capitalization (310/510)\ Standards of Professional Appraisal Practice (Part A&B) (USPAP) Report Writing (540) \Condemnation Course (720)</p>
QUALIFIED EXPERT:	<p>Ocean and Atlantic County Board of Taxation, various municipal planning and zoning boards. Qualified and accepted as an expert by NJ State Tax Court.</p>

**PROFESSIONAL QUALIFICATIONS OF
MATTHEW S. KRAUSER**

EXPERIENCE:	Director in the firm of INTEGRA REALTY RESOURCES-NORTHERN NEW JERSEY , 110 S. Jefferson Road, 2 nd Floor, Whippany, New Jersey, actively engaged in a wide range of commercial, industrial, and vacant land assignments. Specializes in tax appeal, condemnation, and litigation oriented appraisals, as well as open space/land preservation.
PROFESSIONAL ACTIVITIES:	Associate Member - The Appraisal Institute Licensed: New Jersey Real Estate Salesperson. Licensed: New Jersey State Certified General Real Estate Appraiser Lic. # RG01912 Member: Morris County Assessors Association Morris County Chamber of Commerce – Leadership Program, Class of 1998 Board of Directors – Metro Chapter-The Appraisal Institute Metro Chapter-Princeton Conference-Co Chairman-2001 Metro Chapter-Program Chair-2003
EDUCATION:	Masters of Science – Real Estate, New York University, NY (1999) B.A. Degree, Speech Communication, Ithaca College, NY (1994) Appraisal Institute courses: <ul style="list-style-type: none">- Principles of Real Estate Appraisal- Procedures of Real Estate Appraisal- Uniform Standards of Professional Appraisal Practice- Ethics of Real Estate Appraisal- Basic Income Capitalization- Report Writing As well as continually attending seminars, lectures and classes related to the appraisal field and real estate industry, in general.

Appendix Index

Appendix A:	Marginal Lot Value Analysis Final Allocation Methods
Appendix B:	Regional Zoning Factors
Appendix C:	Location Factors
Appendix D:	Sample Residential Calculations TDR Allocation Methods Memo

Highlands Transfer of Development Rights Program Residential Allocation Formula

(Net Yield) x (Zoning Factor) x (Location Factor) = HDC Allocation

$$U_{NET} \times K_{ZF} \times K_{LF} = \text{HDC Allocation}$$

Zoning Yield (“Z_{UNITS}”)	Number of units permitted under municipal zoning subject to other applicable regulatory limitations
Existing/Retained Exemption (“E_{UNITS}”)	Existing residential structures or statutory exemption, if any
U_{NET}	Net units lost from Worksheet 1 where exemption is retained or Worksheet 2 where exemption not retained
Zoning Factor (“K_{ZF}”)	Relative regional average equalized assessed value of lot less than 2x zoning yield by Composite Zone
Location Factor (“K_{LF}”)	Relative average equalized assessed value of parcels by observed lot size and by location

Worksheet 1 – Where Existing Residential Structure or Exemption will be Retained

1. Enter the Zoning Yield (“Z_{UNITS}”) for the Subject Parcel. 1. _____
2. Enter the Existing/Retained Exemption (“E_{UNITS}”) for the Subject Parcel. 2. _____
3. Subtract Line 2 from Line 1. 3. _____
4. Multiply Line 3 by appropriate Zoning Factor from Appendix B (“K_{ZF}”) and Location Factor from Appendix C (“K_{LF}”). 4. _____

APPENDIX A

Worksheet 2 – Where Exemption will not be Exercised

1. Enter the Zoning Yield (“Z_{UNITS}”) for the Subject Parcel. 1. _____
2. (a) If parcel located in High Priority Area (Conservation or Agricultural)
Multiply Zoning Yield (“Z_{UNITS}”) by 1.25 for determining bonus allocation 2(a). _____
(b) If parcel located in Moderate Priority Area (Conservation or Agricultural)
Multiply Zoning Yield (“Z_{UNITS}”) by 1.15 for determining bonus allocation 2(b). _____

Highlands Transfer of Development Rights Program Non-Residential Allocation Formula

(Permitted Square Footage) ÷ (Non-Residential SF for Specified Use) x 0.70 = HDC Allocation

<u>Use</u>	<u>\$/SF FAR Range</u>	<u>Average \$/SF</u>	<u>Ratio</u>
Industrial	\$10 - \$20 FAR	\$15/SF	1.0
Office	\$20 - \$40 FAR	\$30/SF	2.0
Retail	\$25 - \$60 FAR	\$42.50/SF	2.83

A “conversion factor” should be applied based on the type of non-residential use. Industrial uses tend to support employees at a ratio of 1 per 1,500 SF. This becomes the basis for establishing the conversion factors to account for value/price variations in the end use. Consequently, HDCs are allocated to the above uses at the following square foot intervals:

Industrial Use = (1,500/1 = 1,500)	= 1,500 SF
Office Use = (1,500/2 = 750)	= 750 SF
Retail Use = (1,500/2.83 = 530)	= 530 SF

Importantly, because the parcels to be allocated HDCs are undeveloped, a discount must be applied that recognizes that the above conversion ratios are based on typical prices of approved non-residential development, or development subject to approvals. Therefore, a 30% discount is applied to adjust for lack of approvals. Thus, an allocation of HDCs to an undeveloped lot zoned for non-residential use would be as follows:

10,000 SF industrial building ÷ 1,500 SF x 0.70 = 4.66 HDCs
10,000 SF office building ÷ 750 SF x 0.70 = 9.33 HDCs
10,000 SF retail building ÷ 530 SF x 0.70 = 13.2 HDCs

APPENDIX A
MARGINAL LOT VALUE ANALYSIS

County	Township	Marginal Value (from 4 to 5 lots/acre)	Marginal Value (from 4 to 5 lots/acre)	Marginal Value (from 4 to 5 lots/acre)	Marginal Value (from 4 to 5 lots/acre)	Lowest Value w/ Best Fit	30% Reduction
		Quadratic Polynomial Marginal Revenue	Cubic Polynomial Marginal Revenue	Linear Log Marginal Revenue	Polynomial Inverse First Order Marginal Revenue		
Bergen	Mahwah	\$ 79,185	\$ 41,233	\$ 197,008	\$ 284,864	\$ 41,233.00	\$ 28,863.10
Bergen	Oakland	\$ 1,024,656	\$ (1,744,351)	\$ 128,175	\$ 243,537	\$ 128,175.00	\$ 89,722.50
Hunterdon	Alexandria	\$ 122,222	\$ (116,539)	\$ 81,916	\$ 131,319	\$ 81,916.00	\$ 57,341.20
Hunterdon	Bethlehem	\$ 82,400	\$ 52,258	\$ 87,827	\$ 112,606	\$ 82,400.00	\$ 57,680.00
Hunterdon	Bloomsbury	\$ 91,069	\$ (37,293)	\$ 62,818	\$ 87,309	\$ 62,818.00	\$ 43,972.60
Hunterdon	Califon	\$ 202,008	\$ (463,665)	\$ 66,875	\$ 92,521	\$ 92,521.00	\$ 64,764.70
Hunterdon	CLINTON TOWN	\$ 21,301	\$ 17,257	\$ 71,246	\$ 82,613	\$ 17,257.00	\$ 12,079.90
Hunterdon	CLINTON TOWNSHIP	\$ 202,008	\$ 46,949	\$ 104,703	\$ 135,810	\$ 104,703.00	\$ 73,292.10
Hunterdon	GLEN GARDNER BOROUGH	\$ 56,192	\$ 120,658	\$ 64,394	\$ 92,751	\$ 56,192.00	\$ 39,334.40
Hunterdon	HAMPTON BOROUGH	\$ 17,025	\$ 163,114	\$ 40,729	\$ 67,018	\$ 17,025.00	\$ 11,917.50
Hunterdon	HIGH BRIDGE BOROUGH	\$ 242,573	\$ 12,776	\$ 110,802	\$ 130,128	\$ 110,802.00	\$ 77,561.40
Hunterdon	HOLLAND TOWNSHIP	\$ 171,563	\$ (58,494)	\$ 87,933	\$ 105,776	\$ 105,776.00	\$ 74,043.20
Hunterdon	LEBANON BOROUGH	\$ 106,060	\$ 104,875	\$ 128,966	\$ 133,517	\$ 104,875.00	\$ 73,412.50
Hunterdon	LEBANON TOWNSHIP	\$ 180,830	\$ (42,283)	\$ 102,906	\$ 137,717	\$ 102,906.00	\$ 72,034.20
Hunterdon	MILFORD BOROUGH	\$ 92,625	\$ (75,644)	\$ 88,013	\$ 98,447	\$ 88,013.00	\$ 61,609.10
Hunterdon	TEWKSBURY TOWNSHIP	\$ 659,816	\$ (213,726)	\$ 157,676	\$ 239,460	\$ 157,676.00	\$ 110,373.20
Hunterdon	UNION TOWNSHIP	\$ 251,173	\$ (124,994)	\$ 98,815	\$ 132,458	\$ 98,815.00	\$ 69,170.50
Morris	BOONTON TOWN	\$ 90,424	\$ 102,712	\$ 110,182	\$ 126,712	\$ 90,424.00	\$ 63,296.80
Morris	BOONTON TOWNSHIP	\$ 285,929	\$ (106,225)	\$ 84,380	\$ 158,486	\$ 84,380.00	\$ 59,066.00
Morris	BUTLER BOROUGH	\$ 78,350	\$ 96,181	\$ 112,447	\$ 135,973	\$ 78,350.00	\$ 54,845.00
Morris	CHESTER BOROUGH	\$ 215,898	\$ 67,306	\$ 146,992	\$ 181,751	\$ 146,992.00	\$ 102,894.40
Morris	CHESTER TOWNSHIP	\$ 510,166	\$ (991,450)	\$ 85,267	\$ 165,310	\$ 85,267.00	\$ 59,686.90
Morris	DENVILLE TOWNSHIP	\$ 159,180	\$ 128,604	\$ 150,040	\$ 190,489	\$ 150,040.00	\$ 105,028.00
Morris	HANOVER TOWNSHIP	\$ 101,746	\$ 179,058	\$ 138,614	\$ 169,413	\$ 101,746.00	\$ 71,222.20
Morris	HARDING TOWNSHIP	\$ 1,472,247	\$ (3,455,006)	\$ 110,228	\$ 288,264	\$ 110,228.00	\$ 77,159.60
Morris	JEFFERSON TOWNSHIP	\$ 161,680	\$ (155,961)	\$ 94,970	\$ 111,706	\$ 111,706.00	\$ 78,194.20
Morris	KINNELON BOROUGH	\$ 221,646	\$ 250,304	\$ 129,442	\$ 182,128	\$ 129,442.00	\$ 90,609.40
Morris	MENDHAM BOROUGH	\$ 1,031,510	\$ (2,045,347)	\$ 80,523	\$ 188,542	\$ 80,523.00	\$ 56,366.10
Morris	MENDHAM TOWNSHIP	\$ 219,948	\$ (1,892,707)	\$ 179,164	\$ 346,242	\$ 179,164.00	\$ 125,414.80
Morris	MINE HILL TOWNSHIP	\$ 96,290	\$ 110,730	\$ 88,827	\$ 95,795	\$ 88,827.00	\$ 62,178.90
Morris	MONTVILLE TOWNSHIP	\$ (45,602)	\$ (362,755)	\$ 124,442	\$ 216,717	\$ 124,442.00	\$ 87,109.40
Morris	MORRIS PLAINS BOROUGH	\$ 117,767	\$ 178,305	\$ 167,789	\$ 183,306	\$ 117,767.00	\$ 82,436.90
Morris	MORRIS TOWNSHIP	\$ 217,081	\$ (602,671)	\$ 142,941	\$ 240,963	\$ 142,941.00	\$ 100,058.70
Morris	MORRISTOWN TOWN	\$ 192,181	\$ 220,254	\$ 184,900	\$ 207,742	\$ 184,900.00	\$ 129,430.00
Morris	MOUNT ARLINGTON BOROUGH	\$ 161,929	\$ 81,851	\$ 121,161	\$ 148,517	\$ 121,161.00	\$ 84,812.70
Morris	MOUNT OLIVE TOWNSHIP	\$ 126,331	\$ (22,838)	\$ 68,823	\$ 90,856	\$ 68,823.00	\$ 48,176.10
Morris	MOUNTAIN LAKES BOROUGH	\$ 256,038	\$ 326,886	\$ 182,008	\$ 269,883	\$ 182,008.00	\$ 127,405.60
Morris	NETCONG BOROUGH	\$ -	\$ -	\$ 69,050	\$ -	\$ 69,050.00	\$ 48,335.00
Morris	PARSIPPANY TROY HILLS TOWNSHIP	\$ 40,365	\$ (112,847)	\$ 143,579	\$ 188,293	\$ 40,365.00	\$ 28,255.50
Morris	PEQUANNOCK TOWNSHIP	\$ 101,485	\$ (318,410)	\$ 146,745	\$ 173,666	\$ 101,485.00	\$ 71,039.50
Morris	RANDOLPH TOWNSHIP	\$ 71,234	\$ 313,531	\$ 146,003	\$ 186,750	\$ 71,234.00	\$ 49,863.80
Morris	RIVERDALE BOROUGH	\$ 250,333	\$ 149,538	\$ 187,997	\$ 210,410	\$ 210,410.00	\$ 147,287.00
Morris	ROCKAWAY BOROUGH	\$ 104,906	\$ 115,486	\$ 132,078	\$ 149,698	\$ 104,906.00	\$ 73,434.20
Morris	ROCKAWAY TOWNSHIP	\$ 172,545	\$ 171,020	\$ 142,000	\$ 182,402	\$ 142,000.00	\$ 99,400.00
Morris	ROXBURY TOWNSHIP	\$ 163,014	\$ (331,295)	\$ 92,026	\$ 124,215	\$ 92,026.00	\$ 64,418.20
Morris	WASHINGTON TOWNSHIP	\$ 91,470	\$ 78,825	\$ 83,254	\$ 124,813	\$ 91,470.00	\$ 64,029.00
Morris	WHARTON BOROUGH	\$ 65,913	\$ 56,968	\$ 73,801	\$ 89,209	\$ 65,913.00	\$ 46,139.10
Passaic	BLOOMINGDALE BOROUGH	\$ 121,803	\$ (143,917)	\$ 129,591	\$ 133,837	\$ 121,803.00	\$ 85,262.10
Passaic	POMPTON LAKES BOROUGH	\$ 123,729	\$ 54,562	\$ 92,270	\$ 112,867	\$ 92,270.00	\$ 64,589.00
Passaic	RINGWOOD BOROUGH	\$ 143,092	\$ 116,679	\$ 153,526	\$ 168,258	\$ 143,092.00	\$ 100,164.40
Passaic	WANAUKE BOROUGH	\$ 53,112	\$ 10,659	\$ 133,695	\$ 133,734	\$ 53,112.00	\$ 37,178.40
Passaic	WEST MILFORD TOWNSHIP	\$ 101,080	\$ (21,706)	\$ 80,617	\$ 106,979	\$ 80,617.00	\$ 56,431.90
Somerset	BEDMINSTER TOWNSHIP	\$ 1,077,145	\$ (2,971,658)	\$ 103,457	\$ 221,140	\$ 221,140.00	\$ 154,798.00
Somerset	BERNARDS TOWNSHIP	\$ 321,469	\$ (30,033)	\$ 253,917	\$ 313,414	\$ 253,917.00	\$ 177,741.90
Somerset	BERNARDSVILLE BOROUGH	\$ 1,052,251	\$ (2,385,779)	\$ 86,104	\$ 253,348	\$ 86,104.00	\$ 60,272.80
Somerset	FAR HILLS BOROUGH	\$ 1,293,386	\$ (3,271,783)	\$ 75,423	\$ 233,937	\$ 75,423.00	\$ 52,796.10
Somerset	PEAPACK GLADSTONE BOROUGH	\$ 1,464,706	\$ (3,426,494)	\$ 91,317	\$ 212,662	\$ 212,662.00	\$ 148,863.40
Sussex	BYRAM TOWNSHIP	\$ 121,700	\$ (45,809)	\$ 88,932	\$ 104,016	\$ 88,932.00	\$ 62,252.40
Sussex	FRANKLIN BOROUGH	\$ 58,834	\$ 30,534	\$ 44,339	\$ 62,564	\$ 30,534.00	\$ 21,373.80
Sussex	GREEN TOWNSHIP	\$ 134,429	\$ (21,615)	\$ 116,970	\$ 136,197	\$ 116,970.00	\$ 81,879.00
Sussex	HAMBURG BOROUGH	\$ 66,641	\$ 77,220	\$ 52,375	\$ 57,628	\$ 52,375.00	\$ 36,662.50
Sussex	HARDYSTON TOWNSHIP	\$ 160,568	\$ (233,974)	\$ 57,665	\$ 79,986	\$ 79,986.00	\$ 55,990.20
Sussex	OGDENSBURG BOROUGH	\$ 51,508	\$ 134,762	\$ 82,032	\$ 90,460	\$ 51,508.00	\$ 36,055.60
Sussex	SPARTA TOWNSHIP	\$ 153,624	\$ 475	\$ 134,839	\$ 148,429	\$ 134,839.00	\$ 94,387.30
Sussex	STANHOPE BOROUGH	\$ 100,170	\$ 95,831	\$ 71,944	\$ 85,410	\$ 95,831.00	\$ 67,081.70
Sussex	VERNON TOWNSHIP	\$ 84,056	\$ 48,066	\$ 77,018	\$ 91,117	\$ 48,066.00	\$ 33,646.20
Warren	ALLAMUCHY TOWNSHIP	\$ 86,519	\$ (156,243)	\$ 124,031	\$ 132,156	\$ 86,519.00	\$ 60,563.30
Warren	ALPHA BOROUGH	\$ 51,770	\$ 37,414	\$ 63,726	\$ 65,525	\$ 63,726.00	\$ 44,608.20
Warren	BELVIDERE TOWNSHIP	\$ 33,023	\$ 27,327	\$ 59,192	\$ 60,844	\$ 27,327.00	\$ 19,128.90
Warren	FRANKLIN TOWNSHIP	\$ 93,313	\$ 110,464	\$ 61,456	\$ 85,506	\$ 61,456.00	\$ 43,019.20
Warren	FREHLINGHUYSEN TOWNSHIP	\$ 61,487	\$ 71,138	\$ 37,539	\$ 64,209	\$ 37,539.00	\$ 26,277.30
Warren	GREENWICH TOWNSHIP	\$ 40,659	\$ (156,573)	\$ 55,419	\$ 80,165	\$ 40,659.00	\$ 28,461.30
Warren	HACKETTSTOWN TOWN	\$ 69,071	\$ 50,883	\$ 72,159	\$ 75,345	\$ 50,883.00	\$ 35,618.10
Warren	HARMONY TOWNSHIP	\$ 80,306	\$ (97,141)	\$ 35,326	\$ 62,054	\$ 35,326.00	\$ 24,728.20
Warren	HOPE TOWNSHIP	\$ 63,433	\$ (62,116)	\$ 37,828	\$ 51,920	\$ 37,828.00	\$ 26,479.60
Warren	INDEPENDENCE TOWNSHIP	\$ 82,282	\$ 12,814	\$ 87,899	\$ 108,830	\$ 82,282.00	\$ 57,597.40
Warren	LIBERTY TOWNSHIP	\$ 50,230	\$ (2,936)	\$ 66,004	\$ 83,619	\$ 50,230.00	\$ 35,161.00
Warren	LOPATCONG TOWNSHIP	\$ 85,652	\$ 32,391	\$ 52,708	\$ 62,878	\$ 52,708.00	\$ 36,895.60
Warren	MANSFIELD TOWNSHIP	\$ (51,524)	\$ (217,470)	\$ 52,420	\$ 95,755	\$ 52,420.00	\$ 36,694.00
Warren	OXFORD TOWNSHIP	\$ 20,452	\$ (75,476)	\$ 40,781	\$ 56,917	\$ 20,452.00	\$ 14,316.40
Warren	PHILLIPSBURG TOWNSHIP	\$ 30,051	\$ 40,521	\$ 26,569	\$ 33,055	\$ 30,051.00	\$ 21,035.70
Warren	POHATCONG TOWNSHIP	\$ 137,398	\$ (52,360)	\$ 58,315	\$ 76,260	\$ 76,260.00	\$ 53,382.00
Warren	WASHINGTON BOROUGH	\$ 52,473	\$ 58,792	\$ 49,167	\$ 53,922	\$ 49,167.00	\$ 34,416.90
Warren	WASHINGTON TOWNSHIP	\$ 114,726	\$ 71,434	\$ 65,167	\$ 81,279	\$ 65,167.00	\$ 45,616.90
Warren	WHITE TOWNSHIP	\$ 118,803	\$ 22,956	\$ 70,963	\$ 91,449	\$ 70,963.00	\$ 49,674.10
Regional Lot Avg = \$ 64,657.25						\$ 16,164.31	HDC Value

APPENDIX B - REGIONAL ZONING FACTORS

County Average	High Density	Medium Density	Suburban Density	Low Density	Rural Residential	Resource Residential	Estate Residential
Bergen	\$237,667.27	\$285,374.81	\$338,897.49	\$352,199.77	\$575,894.82	\$846,059.46	
Hunterdon	\$108,696.17	\$115,496.94	\$131,543.41	\$140,167.08	\$162,574.92	\$188,682.53	\$270,813.47
Morris	\$152,044.21	\$192,841.96	\$218,457.77	\$249,673.88	\$335,014.28	\$442,019.33	\$683,370.26
Passaic	\$123,412.48	\$140,623.06	\$142,547.56	\$142,259.61	\$164,498.83	\$135,321.47	
Somerset	\$196,561.30	\$219,949.99	\$266,556.45	\$304,130.45	\$447,472.80	\$663,145.23	\$1,185,355.60
Sussex	\$89,415.93	\$100,333.54	\$106,102.90	\$115,277.64	\$118,179.77	\$134,287.17	\$174,915.74
Warren	\$65,950.22	\$78,848.25	\$86,026.88	\$97,196.94	\$110,408.81	\$126,272.99	\$123,977.84
Regional Average	\$139,106.80	\$161,924.08	\$184,304.63	\$200,129.34	\$273,434.89	\$362,255.46	\$487,686.58
Regional ZFs	0.70	0.81	0.92	1.00	1.37	1.81	2.44

BERGEN COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Bergen	MAHWAH TOWNSHIP Municipal EUFs	\$228,432.45	\$316,405.59	\$382,682.36	\$397,319.35	\$457,122.35		
Bergen	OAKLAND BOROUGH Municipal EUFs	\$246,902.08	\$254,344.04	\$295,112.61	\$307,080.19	\$694,667.30	\$846,059.46	
	Average	\$237,667.27	\$285,374.81	\$338,897.49	\$352,199.77	\$575,894.82	\$846,059.46	

HUNTERDON COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Hunterdon	ALEXANDRIA TOWNSHIP	\$89,375.73	\$114,015.35	\$139,645.50	\$161,738.27	\$171,353.99	\$201,868.73	\$235,688.55
Hunterdon	BETHLEHEM TOWNSHIP	\$94,095.53	\$111,344.78	\$122,502.63	\$137,530.77	\$142,788.15	\$154,632.55	
Hunterdon	BLOOMSBURY BOROUGH	\$79,976.25	\$97,750.72	\$113,147.58	\$125,937.20	\$157,314.39		
Hunterdon	CALIFON BOROUGH	\$99,872.32	\$104,834.78	\$108,487.52	\$112,860.43	\$153,961.21	\$246,055.23	
Hunterdon	CLINTON TOWN	\$93,022.50	\$118,329.12	\$120,939.85				
Hunterdon	CLINTON TOWNSHIP	\$128,423.31	\$128,403.56	\$150,145.19	\$162,134.16	\$186,443.82	\$216,456.80	
Hunterdon	GLEN GARDNER BOROUGH	\$66,710.55	\$75,944.10	\$103,878.23	\$127,280.66	\$102,808.30	\$123,260.07	\$147,374.85
Hunterdon	HAMPTON BOROUGH	\$43,706.67	\$54,219.35	\$84,454.94	\$84,930.82	\$109,976.66	\$89,931.66	
Hunterdon	HIGH BRIDGE BOROUGH	\$117,959.71	\$140,975.56	\$143,788.62	\$154,988.61	\$163,556.69		
Hunterdon	HOLLAND TOWNSHIP	\$106,705.08	\$107,026.00	\$112,736.14	\$118,662.75	\$134,029.81	\$167,271.43	
Hunterdon	LEBANON BOROUGH	\$136,498.32	\$145,785.73	\$145,536.56				
Hunterdon	LEBANON TOWNSHIP	\$117,374.31	\$126,370.86	\$134,432.57	\$151,377.79	\$169,224.24	\$189,645.60	\$206,023.90
Hunterdon	MILFORD BOROUGH	\$92,091.72	\$99,182.79	\$113,201.09	\$73,457.39	\$138,127.11	\$108,499.29	
Hunterdon	TEWKSBURY TOWNSHIP	\$237,705.34	\$190,831.79	\$231,009.81	\$260,777.43	\$327,098.53	\$395,770.52	\$498,606.44
Hunterdon	UNION TOWNSHIP	\$126,925.25	\$117,439.69	\$149,244.84	\$150,495.75	\$156,790.99	\$182,115.97	\$266,373.60
	Average	\$108,696.17	\$115,496.94	\$131,543.41	\$140,167.08	\$162,574.92	\$188,682.53	\$270,813.47

MORRIS COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Morris	BOONTON TOWN	\$148,988.71	\$183,588.11	\$198,737.98				
Morris	BOONTON TOWNSHIP	\$123,038.48	\$142,594.95	\$192,689.32	\$250,485.29	\$304,299.95	\$383,999.08	
Morris	BUTLER BOROUGH	\$170,933.00	\$225,370.04	\$249,077.16				
Morris	CHESTER BOROUGH	\$176,792.98	\$191,667.19	\$216,645.03	\$232,487.58	\$277,574.65		
Morris	CHESTER TOWNSHIP	\$131,755.84	\$148,781.03	\$165,242.83	\$218,730.76	\$253,376.58	\$350,342.21	\$547,426.15
Morris	DENVILLE TOWNSHIP	\$174,815.01	\$199,000.19	\$240,569.04	\$240,099.20	\$285,208.25		
Morris	DOVER TOWN	\$91,651.24	\$114,080.52	\$92,827.83				
Morris	HANOVER TOWNSHIP	\$163,754.98	\$197,987.88	\$218,788.16	\$233,314.40			
Morris	HARDING TOWNSHIP	\$243,128.50	\$341,277.36	\$352,255.21	\$513,497.99	\$1,056,849.10	\$1,416,258.10	
Morris	JEFFERSON TOWNSHIP	\$111,419.21	\$120,840.69	\$119,901.19	\$132,341.77	\$125,280.96	\$188,740.46	
Morris	KINNELON BOROUGH	\$169,225.73	\$190,355.67	\$225,745.79	\$283,247.20	\$309,031.31		
Morris	MENDHAM BOROUGH	\$182,323.24	\$198,675.24	\$268,379.21	\$294,839.31	\$677,381.43	\$922,193.47	
Morris	MENDHAM TOWNSHIP	\$178,785.05	\$365,805.03	\$383,827.14	\$419,529.44	\$488,909.47	\$608,287.89	\$819,314.37
Morris	MINE HILL TOWNSHIP	\$96,634.60	\$101,157.02	\$106,586.72	\$112,243.68			
Morris	MONTVILLE TOWNSHIP	\$122,089.78	\$232,459.31	\$262,434.57	\$276,698.80	\$351,573.29	\$344,372.80	
Morris	MORRIS PLAINS BOROUGH	\$175,890.93	\$197,060.84	\$205,277.59	\$204,569.24			

MORRIS COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

Morris	MORRIS TOWNSHIP	\$171,708.90	\$255,996.52	\$286,838.14	\$318,236.71	\$422,080.24	\$486,199.09
Morris	MORRISTOWN TOWN	\$241,499.48	\$285,806.24	\$312,735.98			
Morris	MOUNT ARLINGTON BOROUGH	\$154,315.85	\$178,512.26	\$196,095.83	\$232,695.45		
Morris	MOUNT OLIVE TOWNSHIP	\$84,163.98	\$88,431.66	\$106,735.76	\$115,431.63	\$117,765.49	\$163,351.85
Morris	MOUNTAIN LAKES BOROUGH	\$282,393.05	\$375,012.28	\$460,226.12	\$569,348.97		
Morris	NETCONG BOROUGH	\$74,057.25	\$77,530.86				
Morris	PARSIPPANY TROY HILLS TOWNSHIP	\$153,882.36	\$214,941.48	\$228,237.63	\$239,445.60	\$264,156.37	
Morris	PEQUANNOCK TOWNSHIP	\$157,713.92	\$200,663.81	\$209,911.30	\$186,778.94	\$252,622.81	
Morris	RANDOLPH TOWNSHIP	\$145,967.15	\$174,763.55	\$205,726.29	\$230,673.43	\$232,037.64	\$220,588.75
Morris	RIVERDALE BOROUGH	\$218,914.79	\$232,609.02	\$245,485.29	\$279,904.50		
Morris	ROCKAWAY BOROUGH	\$171,712.60	\$207,745.26	\$221,817.36			
Morris	ROCKAWAY TOWNSHIP	\$156,015.39	\$178,108.34	\$177,969.87	\$226,633.09	\$245,194.76	\$232,153.03
Morris	ROXBURY TOWNSHIP	\$110,529.31	\$137,582.10	\$136,137.00	\$140,904.15	\$185,493.43	\$222,355.77
Morris	VICTORY GARDENS BOROUGH	\$97,850.26					
Morris	WASHINGTON TOWNSHIP	\$95,502.99	\$114,798.29	\$153,385.39	\$164,385.18	\$181,421.38	\$207,408.82
Morris	WHARTON BOROUGH	\$87,960.13	\$104,897.93	\$113,446.22	\$125,324.81		
	Average	\$152,044.21	\$192,841.96	\$218,457.77	\$249,673.88	\$335,014.28	\$442,019.33

\$683,370.26

PASSAIC COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Passaic	BLOOMINGDALE BOROUGH	\$126,228.16	\$145,508.86	\$125,781.96	\$99,264.41	\$185,056.53	\$114,221.50	
Passaic	POMPTON LAKES BOROUGH	\$117,355.48	\$135,719.23	\$148,478.64	\$176,635.98			
Passaic	RINGWOOD BOROUGH	\$160,754.13	\$173,545.53	\$182,006.52	\$184,864.55	\$195,321.30		
Passaic	WANAQUE BOROUGH	\$122,255.39	\$140,923.61	\$141,333.50	\$123,288.63	\$127,865.98		
Passaic	WEST MILFORD TOWNSHIP	\$90,469.24	\$107,418.05	\$115,137.17	\$127,244.48	\$149,751.50	\$156,421.45	
	Average	\$123,412.48	\$140,623.06	\$142,547.56	\$142,259.61	\$164,498.83	\$135,321.47	

SOMERSET COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Somerset	BEDMINSTER TOWNSHIP	\$189,490.52	\$227,237.18	\$239,834.66	\$254,693.45	\$412,626.10	\$596,969.99	\$1,080,323.44
Somerset	BERNARDS TOWNSHIP	\$276,686.77	\$310,132.06	\$350,343.31	\$359,201.21	\$419,281.56	\$460,703.90	
Somerset	BERNARDSVILLE BOROUGH	\$156,472.75	\$194,714.39	\$239,790.68	\$297,652.22	\$538,437.67	\$721,622.46	\$1,042,985.28
Somerset	FAR HILLS BOROUGH	\$156,970.13	\$174,875.52	\$260,168.55	\$297,537.34	\$427,381.91	\$868,711.50	\$1,226,823.51
Somerset	PEAPACK GLADSTONE BOROUGH	\$203,186.34	\$192,790.81	\$242,645.04	\$311,568.01	\$439,636.78	\$667,718.29	\$1,391,290.18
	Average	\$196,561.30	\$219,949.99	\$266,556.45	\$304,130.45	\$447,472.80	\$663,145.23	\$1,185,355.60

SUSSEX COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Sussex	BYRAM TOWNSHIP	\$99,912.30	\$108,894.24	\$114,159.51	\$130,846.82	\$106,045.62	\$168,413.77	
Sussex	FRANKLIN BOROUGH	\$50,816.21	\$60,080.92	\$67,239.27	\$79,955.40	\$91,636.36	\$93,545.45	
Sussex	GREEN TOWNSHIP	\$125,870.95	\$139,847.48	\$143,672.88	\$147,538.99	\$164,120.96	\$177,272.24	
Sussex	HAMBURG BOROUGH	\$66,630.02	\$75,732.84	\$84,239.93				
Sussex	HARDYSTON TOWNSHIP	\$74,754.34	\$79,866.20	\$80,940.37	\$89,182.77	\$98,327.61	\$110,661.70	\$174,915.74
Sussex	HOPATCONG BOROUGH	\$81,074.16	\$103,140.54	\$126,351.47	\$97,521.71	\$112,631.20	\$101,647.40	
Sussex	OGDENSBURG BOROUGH	\$81,632.09	\$92,003.51	\$94,514.77	\$105,203.94	\$92,827.00		
Sussex	SPARTA TOWNSHIP	\$141,757.33	\$155,688.15	\$143,195.36	\$159,364.71	\$168,761.55	\$173,174.07	
Sussex	STANHOPE BOROUGH	\$89,268.08	\$98,195.41	\$109,339.09	\$126,472.36			
Sussex	VERNON TOWNSHIP	\$82,443.79	\$89,886.12	\$97,376.31	\$101,412.07	\$111,087.85	\$115,295.58	
	Average	\$89,415.93	\$100,333.54	\$106,102.90	\$115,277.64	\$118,179.77	\$134,287.17	\$174,915.74

WARREN COUNTY - AVERAGE LOT VALUE PER MUNICIPALITY

COUNTY	MUNI	High Density Residential	Medium Density Residential	Suburban Residential	Low Density Residential	Rural Residential	Resource Residential	Estate Residential
Warren	ALLAMUCHY TOWNSHIP	\$122,545.54	\$145,018.53	\$146,226.67	\$123,987.63	\$140,566.26	\$158,766.77	
Warren	ALPHA BOROUGH	\$71,219.06	\$76,489.13					
Warren	BELVIDERE TOWNSHIP	\$60,216.88	\$65,185.82	\$61,853.70				
Warren	FRANKLIN TOWNSHIP	\$72,489.93	\$78,246.86	\$93,489.81	\$114,551.42	\$117,847.40	\$131,642.94	
Warren	FREHLINGHUYSEN TOWNSHIP	\$46,820.22	\$55,676.67	\$78,891.62	\$95,215.79	\$104,024.45	\$120,741.75	
Warren	GREENWICH TOWNSHIP	\$54,595.14	\$79,778.55	\$86,244.78	\$85,702.82	\$100,971.67	\$113,998.07	\$123,977.84
Warren	HACKETTSTOWN TOWN	\$74,862.72	\$78,815.22	\$79,162.01	\$81,799.48			
Warren	HARMONY TOWNSHIP	\$46,172.52	\$61,241.70	\$74,885.66	\$90,449.68	\$111,040.04	\$137,172.55	
Warren	HOPE TOWNSHIP	\$45,361.72	\$53,359.10	\$59,565.08	\$64,833.16	\$72,922.03	\$93,466.38	
Warren	INDEPENDENCE TOWNSHIP	\$93,351.84	\$109,544.90	\$119,003.51	\$125,603.74	\$135,879.95	\$146,236.75	
Warren	LIBERTY TOWNSHIP	\$68,506.25	\$85,423.58	\$90,099.91	\$97,241.38	\$107,812.11	\$109,597.23	
Warren	LOPATCONG TOWNSHIP	\$63,129.63	\$65,915.52	\$69,072.63	\$80,556.25	\$90,464.21		
Warren	MANSFIELD TOWNSHIP	\$49,034.81	\$107,788.07	\$119,070.55	\$131,113.24	\$144,120.30	\$162,575.55	
Warren	OXFORD TOWNSHIP	\$41,954.81	\$62,000.70	\$62,101.95	\$69,464.88	\$78,869.57	\$83,739.13	
Warren	PHILLIPSBURG TOWNSHIP	\$45,975.58	\$62,325.06	\$72,929.22				
Warren	POHATCONG TOWNSHIP	\$74,807.52	\$76,575.06	\$77,881.43	\$91,204.22	\$110,487.45	\$128,956.25	
Warren	WASHINGTON BOROUGH	\$60,751.83	\$69,365.75	\$74,985.38				
Warren	WASHINGTON TOWNSHIP	\$77,087.61	\$77,389.34	\$81,794.93	\$97,071.28	\$108,052.97	\$112,869.67	
Warren	WHITE TOWNSHIP	\$84,170.47	\$87,977.12	\$101,224.95	\$109,159.05	\$122,664.95	\$141,785.71	
	Average	\$65,950.22	\$78,848.25	\$86,026.88	\$97,196.94	\$110,408.81	\$126,272.95	\$123,977.84

Appendix C - Location Factors
>10 Acre Lot Size

COUNTY_ID	MUNI_ID	MUNI_CODE	COMP_ZONE_PSC	CountOfPIN	MinOfELV_Per_Acre	MaxOfELV_Per_Acre	AvgOfELV_Per_Acre	Tier	Weighted Avg/Tier
Warren	POHATCONG TOWNSHIP	2120	ER PSC	3	\$1,377.59	\$8,816.23	\$4,277.95	1	\$4,277.95
				3					\$4,277.95
Warren	HOPE TOWNSHIP	2111	ER PSC	15	\$1,080.80	\$10,506.11	\$6,815.16	2	\$2,377.38
Sussex	FRANKLIN BOROUGH	1906	ER PSC	3	\$5,373.95	\$8,144.48	\$6,844.15	2	\$477.50
Sussex	BYRAM TOWNSHIP	1904	ER PSC	12	\$1,208.89	\$15,064.40	\$7,586.44	2	\$2,117.15
Sussex	HOPATCONG BOROUGH	1912	ER PSC	5	\$5,776.02	\$12,371.72	\$8,449.33	2	\$982.48
Warren	WASHINGTON TOWNSHIP	2122	ER PSC	8	\$5,768.83	\$12,225.88	\$9,250.27	2	\$1,720.98
				43					\$7,675.49
Warren	ALLAMUCHY TOWNSHIP	2101	ER PSC	8	\$3,133.37	\$15,099.42	\$9,627.40	3	\$300.86
Sussex	VERNON TOWNSHIP	1922	ER PSC	20	\$1,423.48	\$15,865.96	\$10,143.74	3	\$792.48
Sussex	HARDYSTON TOWNSHIP	1911	ER PSC	10	\$7,475.19	\$12,433.40	\$10,282.33	3	\$401.65
Warren	HARMONY TOWNSHIP	2110	ER PSC	8	\$6,991.00	\$14,875.74	\$10,395.34	3	\$324.85
Warren	FREHLINGHUYSEN TOWNSHIP	2106	ER PSC	25	\$1,941.64	\$14,797.13	\$10,759.85	3	\$1,050.77
Warren	WHITE TOWNSHIP	2123	ER PSC	29	\$4,679.03	\$15,709.74	\$10,977.08	3	\$1,243.50
Warren	LIBERTY TOWNSHIP	2114	ER PSC	15	\$3,949.06	\$13,630.49	\$11,000.49	3	\$644.56
Passaic	WEST MILFORD TOWNSHIP	1615	ER PSC	26	\$3,113.66	\$17,435.64	\$11,462.33	3	\$1,164.14
Warren	FRANKLIN TOWNSHIP	2105	ER PSC	11	\$6,278.52	\$14,697.99	\$11,508.90	3	\$494.52
Morris	MOUNT OLIVE TOWNSHIP	1427	ER PSC	12	\$7,773.32	\$17,712.14	\$11,964.27	3	\$560.83
Warren	INDEPENDENCE TOWNSHIP	2112	ER PSC	12	\$6,618.69	\$16,234.83	\$12,105.83	3	\$567.46
Hunterdon	BETHLEHEM TOWNSHIP	1002	ER PSC	20	\$6,340.86	\$16,690.43	\$12,377.78	3	\$967.01
Warren	MANSFIELD TOWNSHIP	2116	ER PSC	23	\$6,808.52	\$18,796.41	\$13,065.37	3	\$1,173.84
Sussex	SPARTA TOWNSHIP	1918	ER PSC	37	\$5,698.65	\$32,855.78	\$13,628.77	3	\$1,969.78
				256					\$11,656.26
Hunterdon	HOLLAND TOWNSHIP	1015	ER PSC	40	\$7,544.33	\$18,993.48	\$14,477.26	4	\$2,060.82
Sussex	GREEN TOWNSHIP	1908	ER PSC	15	\$8,273.93	\$17,976.07	\$15,186.70	4	\$810.68
Passaic	RINGWOOD BOROUGH	1611	ER PSC	5	\$8,114.91	\$21,531.82	\$15,254.10	4	\$271.43
Hunterdon	LEBANON TOWNSHIP	1019	ER PSC	35	\$4,987.53	\$22,491.00	\$15,604.66	4	\$1,943.64
Hunterdon	CLINTON TOWNSHIP	1006	ER PSC	15	\$8,037.34	\$25,249.82	\$16,428.60	4	\$876.97
Morris	ROCKAWAY TOWNSHIP	1435	ER PSC	28	\$7,487.36	\$24,331.26	\$16,561.03	4	\$1,650.21
Morris	RANDOLPH TOWNSHIP	1432	ER PSC	6	\$2,194.84	\$25,519.88	\$16,609.43	4	\$354.65
Hunterdon	UNION TOWNSHIP	1025	ER PSC	14	\$8,542.40	\$24,337.29	\$16,671.73	4	\$830.62
Morris	JEFFERSON TOWNSHIP	1414	ER PSC	15	\$6,847.02	\$34,802.15	\$17,573.29	4	\$938.08
Hunterdon	ALEXANDRIA TOWNSHIP	1001	ER PSC	59	\$8,605.83	\$26,895.58	\$17,579.05	4	\$3,690.98
Morris	WASHINGTON TOWNSHIP	1438	ER PSC	40	\$9,755.83	\$23,936.40	\$17,866.96	4	\$2,543.34
Morris	ROXBURY TOWNSHIP	1436	ER PSC	9	\$7,870.17	\$41,108.94	\$20,641.94	4	\$661.13
				281					\$16,632.53
Morris	KINNELON BOROUGH	1415	ER PSC	21	\$4,796.10	\$46,555.65	\$24,835.15	5	\$5,113.12
Morris	MONTVILLE TOWNSHIP	1421	ER PSC	8	\$13,023.08	\$34,163.70	\$25,109.07	5	\$1,969.34
Morris	BOONTON TOWNSHIP	1402	ER PSC	18	\$11,928.83	\$36,187.86	\$25,416.53	5	\$4,485.27
Morris	DENVILLE TOWNSHIP	1408	ER PSC	5	\$9,168.05	\$47,569.17	\$26,615.87	5	\$1,304.70
Morris	CHESTER TOWNSHIP	1407	ER PSC	50	\$9,388.08	\$50,919.14	\$30,997.20	5	\$15,194.70
				102					\$28,067.13
Somerset	PEAPACK GLADSTONE BOROUGH	1815	ER PSC	3	\$14,975.71	\$74,668.05	\$35,907.15	6	\$1,538.88
Hunterdon	TEWKSBURY TOWNSHIP	1024	ER PSC	38	\$10,146.36	\$55,969.20	\$37,034.15	6	\$20,104.25
Morris	MORRIS TOWNSHIP	1422	ER PSC	5	\$5,627.79	\$62,440.58	\$39,036.50	6	\$2,788.32
Somerset	BERNARDS TOWNSHIP	1802	ER PSC	15	\$23,636.52	\$54,587.11	\$40,208.87	6	\$8,616.19
Bergen	MAHWAH TOWNSHIP	0233	ER PSC	9	\$8,803.46	\$82,031.14	\$44,688.17	6	\$5,745.62
				70					\$38,793.26
Morris	RIVERDALE BOROUGH	1433	ER PSC	3	\$46,939.10	\$60,186.80	\$51,728.52	7	\$3,167.05
Morris	MENDHAM BOROUGH	1418	ER PSC	7	\$30,195.67	\$98,508.43	\$54,602.88	7	\$7,800.41
Morris	MENDHAM TOWNSHIP	1419	ER PSC	39	\$53,224.67	\$89,394.22	\$66,961.47	7	\$53,295.86
				49					\$64,263.32
Somerset	BEDMINSTER TOWNSHIP	1801	ER PSC	26	\$38,210.29	\$112,508.95	\$80,318.33	8	\$19,888.35
Somerset	BERNARDSVILLE BOROUGH	1803	ER PSC	29	\$44,283.91	\$103,505.06	\$80,781.03	8	\$22,310.95
Somerset	FAR HILLS BOROUGH	1807	ER PSC	50	\$47,519.53	\$160,412.03	\$97,659.74	8	\$46,504.64
				105					\$88,703.94
Morris	HARDING TOWNSHIP	1413	ER PSC	30	\$34,374.70	\$264,851.68	\$173,368.67	10	\$173,368.67
				30			\$27,311.16		

Tier	Range Per Tier	Weighted Avg ELVA Per Tier	LF Per Tier
1	\$4,277.95	\$6,416.92	1.00
2	\$6,416.92	\$9,625.38	1.79
3	\$9,625.38	\$14,438.07	2.72
4	\$14,438.07	\$21,657.11	3.89
5	\$21,657.11	\$32,485.67	6.56
6	\$32,485.67	\$48,728.51	9.07
7	\$48,728.51	\$73,092.77	15.02
8	\$73,092.77	\$109,639.16	20.74
9	\$109,639.16	\$164,458.74	0.00
10	\$164,458.74	\$246,688.11	40.53

\$546,223.19

Appendix C - Location Factors

->5 to 10 Acre Lot Size

COUNTY_ID	MUNI_ID	MUNI_CODE	COMP_ZONE_PSC	CountOFPIN	MinOfELV_Per_Acre	MaxOfELV_Per_Acre	AvgOfELV_Per_Acre	Tier	Weighted Avg Per Tier
Warren	OXFORD TOWNSHIP	2117	RESR PSC	7	\$10,261.96	\$16,281.57	\$13,087.10	1	\$416.41
Sussex	FRANKLIN BOROUGH	1906	RESR PSC	5	\$9,942.38	\$18,148.51	\$14,408.64	1	\$327.47
Warren	HOPE TOWNSHIP	2111	RESR PSC	44	\$11,140.88	\$17,179.81	\$14,457.04	1	\$2,891.41
Hunterdon	HAMPTON BOROUGH	1013	RESR PSC	4	\$10,467.25	\$21,869.95	\$15,078.70	1	\$274.16
Sussex	HARDYSTON TOWNSHIP	1911	RESR PSC	37	\$10,333.19	\$20,620.10	\$16,171.12	1	\$2,719.69
Sussex	HOPATCONG BOROUGH	1912	RESR PSC	7	\$10,270.30	\$30,472.24	\$16,863.33	1	\$536.56
Hunterdon	GLEN GARDNER BOROUGH	1012	RESR PSC	5	\$11,704.44	\$19,777.26	\$17,244.00	1	\$391.91
Warren	GREENWICH TOWNSHIP	2107	RESR PSC	8	\$12,429.39	\$21,669.66	\$18,231.74	1	\$662.97
Warren	WASHINGTON TOWNSHIP	2122	RESR PSC	25	\$14,080.27	\$25,949.30	\$18,525.56	1	\$2,105.18
Passaic	WANAQUE BOROUGH	1613	RESR PSC	6	\$7,551.43	\$26,922.58	\$19,036.15	1	\$519.17
Warren	FREHLINGHUYSEN TOWNSHIP	2106	RESR PSC	72	\$12,265.84	\$24,254.12	\$19,070.76	1	\$6,241.34
				220					\$17,086.26
Sussex	VERNON TOWNSHIP	1922	RESR PSC	53	\$11,887.30	\$27,364.10	\$19,767.35	2	\$1,031.17
Warren	LOPATCONG TOWNSHIP	2115	RESR PSC	9	\$13,773.32	\$25,240.69	\$19,858.47	2	\$175.91
Warren	LIBERTY TOWNSHIP	2114	RESR PSC	17	\$15,873.91	\$24,161.03	\$20,009.22	2	\$334.80
Warren	POHATCONG TOWNSHIP	2120	RESR PSC	18	\$12,493.46	\$25,254.43	\$20,031.08	2	\$354.88
Warren	HARMONY TOWNSHIP	2110	RESR PSC	47	\$15,058.70	\$26,241.72	\$21,162.42	2	\$978.97
Warren	FRANKLIN TOWNSHIP	2105	RESR PSC	25	\$14,074.97	\$25,389.14	\$21,232.35	2	\$522.45
Warren	WHITE TOWNSHIP	2123	RESR PSC	49	\$15,425.04	\$27,486.63	\$21,892.71	2	\$1,055.85
Warren	ALLAMUCHY TOWNSHIP	2101	RESR PSC	12	\$11,507.78	\$28,038.75	\$21,990.97	2	\$259.74
Passaic	WEST MILFORD TOWNSHIP	1615	RESR PSC	55	\$15,805.18	\$32,910.31	\$23,284.49	2	\$1,260.48
Warren	INDEPENDENCE TOWNSHIP	2112	RESR PSC	45	\$17,554.87	\$28,742.10	\$23,836.40	2	\$1,055.75
Warren	MANFIELD TOWNSHIP	2116	RESR PSC	60	\$14,926.67	\$31,644.45	\$24,780.10	2	\$1,463.39
Hunterdon	HOLLAND TOWNSHIP	1015	RESR PSC	95	\$17,655.11	\$30,816.97	\$24,885.03	2	\$2,326.85
Hunterdon	BETHLEHEM TOWNSHIP	1002	RESR PSC	179	\$18,159.54	\$31,659.64	\$25,040.91	2	\$4,411.73
Hunterdon	CALIFON BOROUGH	1004	RESR PSC	3	\$20,500.62	\$28,766.45	\$25,158.85	2	\$74.29
Sussex	BYRAM TOWNSHIP	1904	RESR PSC	24	\$11,029.79	\$38,702.33	\$25,315.82	2	\$598.01
Morris	PEQUANNOCK TOWNSHIP	1431	RESR PSC	5	\$1,962.14	\$37,014.43	\$26,043.47	2	\$128.17
Sussex	SPARTA TOWNSHIP	1918	RESR PSC	80	\$15,936.74	\$37,960.99	\$26,660.29	2	\$2,099.24
Morris	MOUNT OLIVE TOWNSHIP	1427	RESR PSC	37	\$14,111.54	\$49,673.74	\$26,756.11	2	\$974.39
Morris	JEFFERSON TOWNSHIP	1414	RESR PSC	31	\$16,258.65	\$56,464.35	\$27,777.23	2	\$847.53
Sussex	GREEN TOWNSHIP	1908	RESR PSC	59	\$20,169.03	\$35,648.67	\$27,974.41	2	\$1,624.50
Hunterdon	HIGH BRIDGE BOROUGH	1014	RESR PSC	3	\$23,524.18	\$31,467.33	\$28,133.43	2	\$83.07
Hunterdon	UNION TOWNSHIP	1025	RESR PSC	92	\$19,224.83	\$39,253.28	\$28,486.76	2	\$2,579.51
Morris	ROXBURY TOWNSHIP	1436	RESR PSC	18	\$14,870.75	\$51,862.34	\$28,765.88	2	\$509.63
				1016					\$24,750.30
Hunterdon	ALEXANDRIA TOWNSHIP	1001	RESR PSC	143	\$23,316.73	\$40,277.90	\$31,048.00	3	\$4,815.47
Hunterdon	LEBANON TOWNSHIP	1019	RESR PSC	324	\$23,424.89	\$39,296.04	\$31,925.60	3	\$11,218.98
Morris	WASHINGTON TOWNSHIP	1438	RESR PSC	207	\$21,873.73	\$43,295.81	\$32,631.02	3	\$7,326.05
Morris	RANDOLPH TOWNSHIP	1432	RESR PSC	46	\$21,787.00	\$53,301.64	\$34,755.73	3	\$1,734.02
Hunterdon	CLINTON TOWNSHIP	1006	RESR PSC	127	\$24,328.15	\$48,223.73	\$35,231.48	3	\$4,852.93
Passaic	RINGWOOD BOROUGH	1611	RESR PSC	16	\$25,727.65	\$45,035.56	\$37,976.34	3	\$659.03
Morris	ROCKAWAY TOWNSHIP	1435	RESR PSC	48	\$24,805.52	\$57,852.53	\$39,481.86	3	\$2,055.45
Morris	HANOVER TOWNSHIP	1412	RESR PSC	3	\$25,416.70	\$74,472.69	\$41,768.70	3	\$135.91
Morris	PARSIPPANY TROY HILLS TOWNSHIP	1429	RESR PSC	8	\$30,327.28	\$54,254.50	\$42,528.83	3	\$369.01
				922					\$33,166.84
Morris	MONTVILLE TOWNSHIP	1421	RESR PSC	30	\$33,112.63	\$67,740.48	\$51,327.91	4	\$2,789.56
Morris	CHESTER TOWNSHIP	1407	RESR PSC	167	\$30,700.65	\$84,216.25	\$51,930.67	4	\$15,710.91
Bergen	OAKLAND BOROUGH	0242	RESR PSC	9	\$38,963.48	\$73,362.71	\$53,505.02	4	\$872.36
Morris	DENVILLE TOWNSHIP	1408	RESR PSC	22	\$29,035.11	\$88,389.34	\$55,131.11	4	\$2,197.25
Morris	BOONTON TOWNSHIP	1402	RESR PSC	41	\$29,194.48	\$102,368.89	\$56,611.53	4	\$4,204.84
Morris	KINNELON BOROUGH	1415	RESR PSC	59	\$31,209.44	\$108,990.83	\$60,512.73	4	\$6,467.85
Hunterdon	TEWKSBURY TOWNSHIP	1024	RESR PSC	224	\$37,418.06	\$91,660.47	\$62,644.94	4	\$25,421.14
				552					\$57,663.91
Somerset	BERNARDS TOWNSHIP	1802	RESR PSC	68	\$48,569.14	\$94,382.01	\$71,061.45	5	\$22,165.96
Bergen	MAHWAH TOWNSHIP	0233	RESR PSC	17	\$15,811.62	\$124,471.17	\$76,924.16	5	\$5,998.67
Morris	MORRIS TOWNSHIP	1422	RESR PSC	28	\$64,696.75	\$105,898.12	\$82,058.94	5	\$10,539.68
Somerset	PEAPACK GLADSTONE BOROUGH	1815	RESR PSC	24	\$34,405.65	\$131,018.71	\$95,692.72	5	\$10,534.98
Somerset	BEDMINSTER TOWNSHIP	1801	RESR PSC	81	\$55,306.89	\$148,326.57	\$98,020.06	5	\$36,420.30
				218					\$85,659.58
Morris	MENDHAM TOWNSHIP	1419	RESR PSC	309	\$69,621.27	\$144,259.66	\$102,783.64	6	\$43,867.60
Somerset	FAR HILLS BOROUGH	1807	RESR PSC	26	\$59,431.67	\$147,262.06	\$104,954.31	6	\$3,769.08
Somerset	BERNARDSVILLE BOROUGH	1803	RESR PSC	314	\$77,719.08	\$159,949.29	\$118,884.79	6	\$51,560.53
Morris	MENDHAM BOROUGH	1418	RESR PSC	75	\$88,717.07	\$215,345.26	\$147,714.83	6	\$15,301.95
				724					\$114,499.16
Morris	HARDING TOWNSHIP	1413	RESR PSC	133	\$70,685.38	\$337,605.03	\$221,543.74	7	\$221,543.74
				133			\$42,994		\$221,543.74

Tier	Range Per Tier	Weighted Avg ELVA F	LF Per Tier	
1	\$13,087.10	\$19,630.65	\$17,068.26	1.00
2	\$19,630.65	\$29,445.98	\$24,750.30	1.45
3	\$29,445.98	\$44,168.97	\$33,166.85	1.94
4	\$44,168.97	\$66,253.46	\$57,663.91	3.38
5	\$66,253.46	\$99,380.19	\$85,659.58	5.02
6	\$99,380.19	\$149,070.29	\$114,499.16	6.71
7	\$149,070.29	\$223,605.44	\$221,543.74	12.98
				\$307,103.33

Appendix C - Location Factors
>2 to 5 Acre Lot Size

COUNTY_ID	MUNI_ID	MUNI_CODE	COMP_ZONE_PSC	CountOPIN	MinOFELV_Per_Acre	MaxOFELV_Per_Acre	AvgOFELV_Per_Acre	Tier	Weighted Avg Per Tier
Warren	BELVIDERE TOWNSHIP	2103	RURR PSC	4	\$7,577.40	\$35,100.48	\$23,718.32	1	\$231.40
Warren	HOPE TOWNSHIP	2111	RURR PSC	140	\$17,574.34	\$33,270.08	\$25,461.27	1	\$8,694.09
Warren	WASHINGTON BOROUGH	2121	RURR PSC	3	\$23,732.30	\$28,536.99	\$26,293.53	1	\$192.39
Warren	OXFORD TOWNSHIP	2117	RURR PSC	29	\$19,056.38	\$35,933.25	\$28,954.98	1	\$2,048.04
Sussex	FRANKLIN BOROUGH	1906	RURR PSC	27	\$21,015.62	\$43,655.87	\$31,012.25	1	\$2,042.27
Warren	LOPATCONG TOWNSHIP	2115	RURR PSC	41	\$21,356.93	\$43,745.09	\$33,470.75	1	\$3,347.08
Sussex	HARDYSTON TOWNSHIP	1911	RURR PSC	97	\$21,180.19	\$47,350.71	\$34,770.79	1	\$8,226.26
Warren	POHATCONG TOWNSHIP	2120	RURR PSC	61	\$24,086.37	\$49,541.96	\$34,872.67	1	\$5,188.37
Morris	MINE HILL TOWNSHIP	1420	RURR PSC	8	\$26,056.53	\$45,423.11	\$35,224.77	1	\$687.31
				410					\$30,657.21
Warren	FREHLINGHUYSEN TOWNSHIP	2106	RURR PSC	201	\$21,659.49	\$49,149.76	\$35,796.90	2	\$1,704.61
Sussex	OGDENSBURG BOROUGH	1916	RURR PSC	6	\$25,622.53	\$50,090.35	\$36,192.90	2	\$51.45
Hunterdon	BLOOMSBURY BOROUGH	1003	RURR PSC	4	\$23,253.91	\$48,668.98	\$37,668.45	2	\$35.70
Warren	HARMONY TOWNSHIP	2110	RURR PSC	153	\$25,247.01	\$50,341.31	\$37,931.00	2	\$1,374.90
Warren	WASHINGTON TOWNSHIP	2122	RURR PSC	290	\$22,498.90	\$53,588.79	\$38,433.73	2	\$2,640.55
Warren	FRANKLIN TOWNSHIP	2105	RURR PSC	133	\$25,011.03	\$56,176.46	\$38,898.13	2	\$1,225.65
Warren	LIBERTY TOWNSHIP	2114	RURR PSC	179	\$24,757.72	\$51,261.35	\$39,334.62	2	\$1,668.06
Hunterdon	GLEN GARDNER BOROUGH	1012	RURR PSC	26	\$21,713.24	\$53,403.64	\$39,885.42	2	\$245.68
Warren	GREENWICH TOWNSHIP	2107	RURR PSC	77	\$26,476.86	\$48,701.88	\$39,907.19	2	\$727.99
Warren	HACKETTSTOWN	2108	RURR PSC	7	\$22,927.52	\$53,261.03	\$40,625.20	2	\$67.37
Sussex	VERNON TOWNSHIP	1922	RURR PSC	311	\$24,018.52	\$64,035.26	\$40,631.55	2	\$2,993.70
Hunterdon	CALIFON BOROUGH	1004	RURR PSC	27	\$33,340.13	\$71,992.99	\$42,803.83	2	\$273.80
Sussex	HAMBURG BOROUGH	1909	RURR PSC	7	\$33,909.28	\$56,162.22	\$43,115.03	2	\$71.50
Warren	WHITE TOWNSHIP	2123	RURR PSC	225	\$28,624.69	\$57,933.17	\$43,138.65	2	\$2,299.50
Warren	ALLAMUCHY TOWNSHIP	2101	RURR PSC	49	\$32,069.65	\$59,808.62	\$45,493.83	2	\$528.12
Hunterdon	HOLLAND TOWNSHIP	1015	RURR PSC	406	\$31,107.36	\$61,668.29	\$45,719.62	2	\$4,397.58
Passaic	WEST MILFORD TOWNSHIP	1615	RURR PSC	367	\$29,627.47	\$66,021.53	\$45,817.28	2	\$3,983.64
Morris	MOUNT OLIVE TOWNSHIP	1427	RURR PSC	193	\$27,410.15	\$67,028.96	\$45,930.95	2	\$2,100.14
Warren	MANSFIELD TOWNSHIP	2116	RURR PSC	205	\$25,665.14	\$65,564.88	\$46,238.34	2	\$2,245.64
Warren	INDEPENDENCE TOWNSHIP	2112	RURR PSC	207	\$29,559.67	\$64,019.57	\$47,482.70	2	\$2,328.58
Hunterdon	BETHLEHEM TOWNSHIP	1002	RURR PSC	309	\$30,148.15	\$74,425.07	\$47,860.20	2	\$3,503.63
Sussex	STANHOPE BOROUGH	1919	RURR PSC	5	\$37,490.70	\$56,166.89	\$48,100.91	2	\$56.98
Sussex	BYRAM TOWNSHIP	1904	RURR PSC	78	\$20,656.48	\$87,969.74	\$49,248.73	2	\$910.07
Hunterdon	HAMPTON BOROUGH	1013	RURR PSC	10	\$27,634.25	\$77,547.17	\$49,294.52	2	\$116.78
Passaic	BLOOMINGDALE BOROUGH	1601	RURR PSC	5	\$38,461.18	\$58,963.19	\$49,493.14	2	\$58.63
Morris	JEFFERSON TOWNSHIP	1414	RURR PSC	166	\$23,697.61	\$88,738.97	\$49,522.10	2	\$1,947.56
Hunterdon	MILFORD BOROUGH	1020	RURR PSC	12	\$27,938.27	\$60,895.90	\$49,796.72	2	\$141.57
Hunterdon	LEBANON TOWNSHIP	1019	RURR PSC	529	\$35,118.86	\$73,153.02	\$51,512.70	2	\$6,455.87
Passaic	WANAUKE BOROUGH	1613	RURR PSC	34	\$34,757.98	\$66,945.97	\$51,974.72	2	\$418.65
				4221					\$44,573.89
Sussex	GREEN TOWNSHIP	1908	RURR PSC	309	\$34,486.73	\$78,414.48	\$56,405.53	3	\$4,762.11
Hunterdon	UNION TOWNSHIP	1025	RURR PSC	340	\$35,500.85	\$82,771.28	\$57,570.75	3	\$5,348.10
Hunterdon	HIGH BRIDGE BOROUGH	1014	RURR PSC	22	\$37,347.62	\$86,839.74	\$58,438.29	3	\$351.27
Hunterdon	ALEXANDRIA TOWNSHIP	1001	RURR PSC	380	\$39,039.30	\$85,211.13	\$59,217.39	3	\$6,148.25
Sussex	SPARTA TOWNSHIP	1918	RURR PSC	380	\$32,579.05	\$94,492.95	\$59,577.30	3	\$6,185.62
Morris	WASHINGTON TOWNSHIP	1438	RURR PSC	1372	\$38,136.22	\$95,764.68	\$62,875.59	3	\$23,569.76
Morris	ROXBURY TOWNSHIP	1436	RURR PSC	101	\$32,202.49	\$102,021.64	\$63,380.54	3	\$1,749.03
Passaic	POMPTON LAKES BOROUGH	1609	RURR PSC	4	\$53,769.03	\$72,996.65	\$63,467.52	3	\$69.36
Hunterdon	CLINTON TOWNSHIP	1006	RURR PSC	571	\$41,806.80	\$96,105.12	\$65,858.84	3	\$10,274.70
Sussex	HOPATCONG BOROUGH	1912	RURR PSC	31	\$22,871.47	\$165,168.62	\$66,984.23	3	\$67.35
Passaic	RINGWOOD BOROUGH	1611	RURR PSC	150	\$45,673.66	\$100,413.56	\$72,522.55	3	\$2,972.24
				3660					\$61,997.78
Morris	RANDOLPH TOWNSHIP	1432	RURR PSC	277	\$42,535.60	\$134,963.12	\$82,891.96	4	\$6,118.06
Morris	PARSIPPANY TROY HILLS TOWNSHIP	1429	RURR PSC	62	\$47,707.49	\$123,120.41	\$88,218.10	4	\$1,457.37
Morris	CHESTER TOWNSHIP	1407	RURR PSC	1120	\$49,457.61	\$152,290.39	\$90,238.62	4	\$26,929.72
Morris	ROCKAWAY TOWNSHIP	1435	RURR PSC	292	\$49,927.41	\$136,508.96	\$90,542.88	4	\$7,044.64
Morris	PEQUANNOCK TOWNSHIP	1431	RURR PSC	41	\$51,328.53	\$189,800.77	\$93,114.44	4	\$1,017.24
Morris	DENVILLE TOWNSHIP	1408	RURR PSC	134	\$54,314.97	\$172,381.20	\$95,143.01	4	\$3,397.06
Morris	MOUNT ARLINGTON BOROUGH	1426	RURR PSC	6	\$41,772.35	\$224,972.75	\$97,116.29	4	\$155.26
Morris	MORRIS PLAINS BOROUGH	1423	RURR PSC	5	\$56,753.09	\$143,030.96	\$98,222.83	4	\$130.86
Morris	CHESTER BOROUGH	1406	RURR PSC	17	\$73,660.21	\$144,214.17	\$100,358.40	4	\$454.59
Morris	BOONTON TOWN	1401	RURR PSC	7	\$67,218.24	\$118,100.96	\$101,733.81	4	\$189.75
Hunterdon	TEWKSBURY TOWNSHIP	1024	RURR PSC	881	\$67,213.42	\$164,018.26	\$104,725.79	4	\$24,583.91
Morris	HANOVER TOWNSHIP	1412	RURR PSC	19	\$70,878.73	\$151,484.01	\$111,568.73	4	\$564.83
Morris	BOONTON TOWNSHIP	1402	RURR PSC	236	\$66,745.40	\$158,576.72	\$112,114.45	4	\$7,050.10
Somerset	FAR HILLS BOROUGH	1807	RURR PSC	7	\$48,912.51	\$143,557.57	\$112,124.30	4	\$209.13
Morris	MONTVILLE TOWNSHIP	1421	RURR PSC	247	\$63,524.86	\$162,778.30	\$113,682.31	4	\$7,481.89
Morris	ROCKAWAY BOROUGH	1434	RURR PSC	3	\$103,394.28	\$127,003.31	\$114,435.41	4	\$91.48
Morris	KINNELON BOROUGH	1415	RURR PSC	399	\$61,632.30	\$182,070.41	\$115,385.90	4	\$12,267.25
				3,753					\$99,143.13
Somerset	BEDMINSTER TOWNSHIP	1801	RURR PSC	93	\$71,598.50	\$189,567.70	\$120,667.00	5	\$5,209.86
Bergen	OAKLAND BOROUGH	0242	RURR PSC	41	\$58,212.53	\$179,838.55	\$123,928.83	5	\$2,358.91
Somerset	BERNARDSVILLE BOROUGH	1803	RURR PSC	240	\$80,450.25	\$197,181.03	\$133,038.21	5	\$14,823.20
Morris	MORRIS TOWNSHIP	1422	RURR PSC	276	\$95,820.13	\$216,435.00	\$139,581.74	5	\$17,885.12
Somerset	BERNARDS TOWNSHIP	1802	RURR PSC	589	\$94,114.14	\$207,040.26	\$145,727.10	5	\$39,848.31
Somerset	PEAPACK GLADSTONE BOROUGH	1815	RURR PSC	117	\$84,149.69	\$226,092.63	\$146,874.22	5	\$7,977.85
Morris	MENDHAM TOWNSHIP	1419	RURR PSC	583	\$102,534.09	\$216,149.31	\$151,239.68	5	\$40,934.42
Morris	BUTLER BOROUGH	1403	RURR PSC	4	\$63,673.21	\$385,000.40	\$155,623.49	5	\$288.99
Bergen	MAHWAH TOWNSHIP	0233	RURR PSC	126	\$75,106.42	\$231,291.55	\$158,609.28	5	\$9,277.98
Morris	MENDHAM BOROUGH	1418	RURR PSC	85	\$104,645.87	\$231,712.65	\$160,978.94	5	\$6,352.47
				2,154					\$144,957.10
Morris	MORRISTOWN TOWN	1424	RURR PSC	5	\$132,691.27	\$251,334.89	\$197,854.27	6	\$70,662.24
Morris	MOUNTAIN LAKES BOROUGH	1425	RURR PSC	9	\$160,331.45	\$235,673.50	\$206,622.98	6	\$132,829.06
				14					\$203,491.30
Morris	HARDING TOWNSHIP	1413	RURR PSC	618	\$128,921.77	\$486,905.08	\$297,189.36	7	\$297,189.36
				618			\$77,183.28		

Tier	Range Per Tier	Average ELVA Per Tier	LF Per Tier
1	\$23,718.32	\$35,577.48	1.00
2	\$35,577.48	\$53,366.22	1.45
3	\$53,366.22	\$80,049.33	2.02
4	\$80,049.33	\$120,074.00	3.23
5	\$120,074.00	\$180,111.00	4.73
6	\$180,111.00	\$270,166.50	6.64
7	\$270,166.50	\$405,249.75	9.69

\$233,888.73

Appendix C - Location Factors
1 to 2 Acre Lot Size

COUNTY_ID	MUNI_ID	MUNI_CODE	COMP_ZONE_PSC	Count	OPIN	MinOFLV_Per_Acre	MaxOFLV_Per_Acre	AvgOFLV_Per_Acre	Tier	Weighted Avg Per Tier
Warren	BELVIDERE TOWNSHIP	2103	LDR PSC	6		\$35,360.12	\$56,962.74	\$46,490.59	1	\$190.41
Warren	HOPE TOWNSHIP	2111	LDR PSC	149		\$34,731.87	\$61,006.86	\$47,411.86	1	\$4,822.09
Warren	OXFORD TOWNSHIP	2117	LDR PSC	37		\$36,395.20	\$66,605.18	\$51,777.53	1	\$1,307.69
Warren	PHILLIPSBURG TOWNSHIP	2119	LDR PSC	6		\$35,870.35	\$78,374.37	\$54,027.15	1	\$221.27
Sussex	FRANKLIN BOROUGH	1906	LDR PSC	58		\$44,932.31	\$77,434.68	\$61,277.65	1	\$2,426.01
Warren	LOPATCONG TOWNSHIP	2115	LDR PSC	54		\$42,579.98	\$78,765.94	\$61,920.78	1	\$2,282.40
Warren	WASHINGTON TOWNSHIP	2122	LDR PSC	422		\$46,470.19	\$86,067.92	\$61,952.59	1	\$17,845.73
Warren	WASHINGTON BOROUGH	2121	LDR PSC	11		\$47,938.18	\$81,344.09	\$63,174.31	1	\$474.35
Warren	POHATCONG TOWNSHIP	2120	LDR PSC	62		\$39,594.32	\$91,839.36	\$64,758.21	1	\$2,740.62
Warren	FREHLINGHUYSEN TOWNSHIP	2106	LDR PSC	131		\$46,725.10	\$90,948.75	\$65,077.63	1	\$5,819.23
Warren	HARMONY TOWNSHIP	2110	LDR PSC	190		\$45,100.04	\$87,093.42	\$66,264.87	1	\$8,594.08
Warren	HACKETTSTOWN	2108	LDR PSC	17		\$54,485.84	\$81,188.24	\$67,435.15	1	\$782.52
Warren	GREENWICH TOWNSHIP	2107	LDR PSC	322		\$46,841.73	\$90,590.92	\$68,650.12	1	\$15,088.97
				1465						\$62,595.37
Sussex	HARDYSTON TOWNSHIP	1911	LDR PSC	312		\$45,733.63	\$90,492.28	\$69,999.60	2	\$2,976.68
Sussex	HAMBURG BOROUGH	1909	LDR PSC	8		\$59,659.23	\$84,216.05	\$72,646.04	2	\$79.21
Hunterdon	HAMPTON BOROUGH	1013	LDR PSC	23		\$37,563.02	\$113,790.24	\$73,051.27	2	\$29.00
Sussex	VERNON TOWNSHIP	1922	LDR PSC	899		\$46,354.17	\$106,383.58	\$74,743.09	2	\$9,158.24
Warren	LIBERTY TOWNSHIP	2114	LDR PSC	310		\$52,927.74	\$100,676.96	\$75,551.84	2	\$3,192.19
Sussex	OGDENSBURG BOROUGH	1916	LDR PSC	14		\$46,362.26	\$103,492.31	\$78,374.43	2	\$149.55
Warren	ALPHA BOROUGH	2102	LDR PSC	3		\$70,209.74	\$86,547.55	\$78,831.12	2	\$32.23
Warren	WHITE TOWNSHIP	2123	LDR PSC	419		\$57,637.59	\$105,184.68	\$81,090.00	2	\$4,630.87
Warren	FRANKLIN TOWNSHIP	2105	LDR PSC	308		\$57,910.74	\$107,768.62	\$81,784.04	2	\$3,433.21
Hunterdon	HOLLAND TOWNSHIP	1015	LDR PSC	324		\$61,719.22	\$114,874.45	\$85,978.24	2	\$3,796.78
Morris	MINE HILL TOWNSHIP	1420	LDR PSC	49		\$52,934.25	\$120,981.07	\$86,149.13	2	\$575.35
Hunterdon	MILFORD BOROUGH	1020	LDR PSC	25		\$57,609.55	\$114,213.94	\$89,049.22	2	\$303.43
Hunterdon	CALIFON BOROUGH	1004	LDR PSC	26		\$68,708.71	\$106,582.22	\$90,479.23	2	\$320.63
Passaic	WANAQUE BOROUGH	1613	LDR PSC	76		\$58,381.27	\$131,248.17	\$91,718.51	2	\$950.06
Hunterdon	BETHEHEM TOWNSHIP	1002	LDR PSC	534		\$68,088.30	\$140,211.89	\$92,992.72	2	\$6,768.18
Passaic	WEST MILFORD TOWNSHIP	1615	LDR PSC	548		\$59,551.27	\$124,156.37	\$94,044.16	2	\$7,024.15
Morris	WHARTON BOROUGH	1439	LDR PSC	16		\$61,390.29	\$115,266.50	\$94,743.68	2	\$206.61
Morris	MOUNT OLIVE TOWNSHIP	1427	LDR PSC	647		\$52,296.22	\$132,653.10	\$94,977.37	2	\$8,375.41
Warren	ALLAMUCHY TOWNSHIP	2101	LDR PSC	113		\$67,351.64	\$122,546.12	\$95,077.19	2	\$1,464.32
Morris	DOVER TOWN	1409	LDR PSC	13		\$77,066.63	\$120,526.24	\$95,688.74	2	\$169.55
Warren	MANFIELD TOWNSHIP	2116	LDR PSC	313		\$54,176.28	\$141,128.54	\$96,291.78	2	\$4,107.85
Hunterdon	UNION TOWNSHIP	1025	LDR PSC	381		\$69,199.51	\$124,180.43	\$96,701.00	2	\$5,021.55
Passaic	BLOOMINGDALE BOROUGH	1601	LDR PSC	17		\$70,235.53	\$148,367.35	\$97,810.19	2	\$226.63
Sussex	GREEN TOWNSHIP	1908	LDR PSC	183		\$77,984.67	\$134,391.35	\$97,877.92	2	\$2,441.28
Hunterdon	GLEN GARDNER BOROUGH	1012	LDR PSC	92		\$54,003.15	\$145,505.76	\$98,683.31	2	\$1,237.41
Morris	JEFFERSON TOWNSHIP	1414	LDR PSC	507		\$54,446.37	\$178,109.25	\$99,102.85	2	\$6,848.19
Sussex	STANHOPE BOROUGH	1919	LDR PSC	35		\$69,028.94	\$130,371.51	\$99,925.79	2	\$476.68
Warren	INDEPENDENCE TOWNSHIP	2112	LDR PSC	427		\$64,787.26	\$141,005.20	\$101,524.59	2	\$5,908.55
Hunterdon	LEBANON TOWNSHIP	1019	LDR PSC	502		\$76,884.99	\$134,721.13	\$102,267.52	2	\$6,997.18
Sussex	BYRAM TOWNSHIP	1904	LDR PSC	213		\$59,895.25	\$165,411.19	\$104,416.93	2	\$3,031.32
				7337						\$90,132.26
Hunterdon	HIGH BRIDGE BOROUGH	1014	LDR PSC	37		\$76,007.31	\$144,519.97	\$105,320.80	3	\$762.15
Hunterdon	CLINTON TOWN	1005	LDR PSC	8		\$58,088.35	\$134,062.69	\$106,313.46	3	\$166.34
Hunterdon	ALEXANDRIA TOWNSHIP	1001	LDR PSC	474		\$75,922.31	\$174,086.16	\$107,526.83	3	\$9,968.26
Morris	WASHINGTON TOWNSHIP	1438	LDR PSC	1116		\$75,518.30	\$154,633.47	\$111,320.50	3	\$24,297.61
Sussex	HOPATCONG BOROUGH	1912	LDR PSC	64		\$55,150.58	\$294,993.37	\$111,476.13	3	\$1,395.36
Morris	ROXBURY TOWNSHIP	1436	LDR PSC	393		\$67,731.48	\$170,170.88	\$111,787.64	3	\$8,592.32
Hunterdon	BLOOMSBURY BOROUGH	1003	LDR PSC	5		\$84,107.42	\$134,392.53	\$113,053.78	3	\$110.56
Sussex	SPARTA TOWNSHIP	1918	LDR PSC	685		\$69,440.25	\$165,953.28	\$117,501.01	3	\$15,741.87
Hunterdon	LEBANON BOROUGH	1018	LDR PSC	9		\$68,300.84	\$174,267.04	\$119,250.49	3	\$209.91
Hunterdon	CLINTON TOWNSHIP	1006	LDR PSC	1102		\$85,990.49	\$159,073.50	\$125,880.89	3	\$27,130.99
Passaic	POMPTON LAKES BOROUGH	1609	LDR PSC	20		\$100,752.93	\$174,030.22	\$128,920.84	3	\$50.29
Morris	CHESTER TOWNSHIP	1407	LDR PSC	570		\$83,076.72	\$246,427.11	\$140,625.95	3	\$15,677.06
Passaic	RINGWOOD BOROUGH	1611	LDR PSC	522		\$88,392.21	\$212,565.90	\$149,015.78	3	\$15,213.42
Morris	PEQUANNOCK TOWNSHIP	1431	LDR PSC	108		\$97,731.81	\$209,997.53	\$152,590.15	3	\$3,223.11
				5113						\$122,993.24
Morris	BOONTON TOWNSHIP	1402	LDR PSC	333		\$122,074.80	\$217,683.97	\$163,043.85	4	\$8,926.93
Morris	ROCKAWAY TOWNSHIP	1435	LDR PSC	421		\$94,876.50	\$500,768.16	\$164,211.79	4	\$11,366.85
Hunterdon	TEWKSBURY TOWNSHIP	1024	LDR PSC	215		\$101,455.08	\$266,717.49	\$177,225.52	4	\$6,264.96
Morris	BUTLER BOROUGH	1403	LDR PSC	25		\$57,406.44	\$261,794.64	\$180,349.13	4	\$741.32
Somerset	BEDMINSTER TOWNSHIP	1801	LDR PSC	117		\$98,206.57	\$238,734.24	\$182,195.87	4	\$3,504.92
Morris	MOUNT ARLINGTON BOROUGH	1426	LDR PSC	22		\$127,368.30	\$352,708.17	\$183,909.43	4	\$665.24
Morris	ROCKAWAY BOROUGH	1434	LDR PSC	12		\$124,789.57	\$254,123.67	\$184,492.16	4	\$364.01
Morris	MORRIS PLAINS BOROUGH	1423	LDR PSC	28		\$123,009.10	\$249,508.53	\$185,662.94	4	\$854.75
Morris	CHESTER BOROUGH	1406	LDR PSC	56		\$120,982.44	\$253,545.15	\$186,423.83	4	\$1,716.50
Morris	RANDOLPH TOWNSHIP	1432	LDR PSC	1,516		\$97,365.33	\$264,286.81	\$187,382.94	4	\$46,707.09
Morris	HANOVER TOWNSHIP	1412	LDR PSC	113		\$122,139.24	\$264,108.10	\$188,134.28	4	\$3,495.42
Morris	PARSIPPANY TROY HILLS TOWNSHIP	1429	LDR PSC	301		\$122,824.79	\$258,563.10	\$189,645.76	4	\$9,385.63
Somerset	FAR HILLS BOROUGH	1807	LDR PSC	4		\$91,460.73	\$297,351.64	\$195,601.34	4	\$128.64
Morris	BOONTON TOWN	1401	LDR PSC	20		\$148,443.06	\$233,619.98	\$197,550.08	4	\$649.62
Morris	KINNELON BOROUGH	1415	LDR PSC	1,303		\$139,165.92	\$292,371.80	\$202,303.11	4	\$43,341.16
Morris	RIVERDALE BOROUGH	1423	LDR PSC	23		\$131,300.08	\$269,714.47	\$210,631.12	4	\$796.53
Morris	MONTVILLE TOWNSHIP	1431	LDR PSC	677		\$112,762.91	\$317,649.62	\$215,574.68	4	\$23,996.06
Somerset	PEAPACK GLADSTONE BOROUGH	1815	LDR PSC	155		\$153,953.17	\$291,604.56	\$223,539.71	4	\$5,696.92
Bergen	OAKLAND BOROUGH	0242	LDR PSC	143		\$137,285.52	\$328,621.51	\$229,743.93	4	\$5,401.74
Somerset	BERNARDSVILLE BOROUGH	1803	LDR PSC	295		\$156,462.86	\$292,632.34	\$230,092.24	4	\$11,160.34
Morris	MENDHAM BOROUGH	1418	LDR PSC	303		\$161,953.27	\$369,389.87	\$230,874.93	4	\$11,501.99
				6,082						\$196,666.63
Morris	MORRIS TOWNSHIP	1422	LDR PSC	387		\$153,689.28	\$381,079.20	\$249,708.22	5	\$32,970.69
Morris	MORRISTOWN TOWN	1424	LDR PSC	12		\$220,994.71	\$306,750.41	\$259,174.29	5	\$1,061.10
Morris	DENVILLE TOWNSHIP	1408	LDR PSC	547		\$109,018.07	\$1,484,999.50	\$274,246.36	5	\$51,181.43
Somerset	BERNARDS TOWNSHIP	1802	LDR PSC	938		\$181,647.73	\$377,048.42	\$292,164.46	5	\$93,500.60
Morris	MENDHAM TOWNSHIP	1419	LDR PSC	352		\$177,549.57	\$644,538.73	\$307,627.73	5	\$36,944.72
Bergen	MAHWAH TOWNSHIP	0233	LDR PSC	624		\$203,288.77	\$484,364.36	\$324,360.21	5	\$69,055.19
Morris	HARDING TOWNSHIP	1413	LDR PSC	71		\$182,886.08	\$509,644.95	\$351,699.28	5	\$8,519.50
				2,931						\$293,233.22
Morris	MOUNTAIN LAKES BOROUGH	1425	LDR PSC	51		\$270,335.54	\$800,007.73	\$448,326.17	6	\$448,326.17
				51				\$137,072.90		

Tier	Range Per Tier	Weighted Avg ELVA Per Tie	LF Per Tier
1	\$46,490.59	\$69,735.89	1.00
2	\$69,735.89	\$104,603.84	1.44
3	\$104,603.84	\$156,905.76	1.96
4	\$156,905.76	\$235,358.64	3.14
5	\$235,358.64	\$353,037.96	4.68
6	\$353,037.96	\$529,556.94	7.16

Appendix C - Location Factors

1/2 to <1 Acre Lot Size

COUNTY_ID	MUNI_ID	MUNI_CODE	COMP_ZONE_PSC	Count	OFPIN	MinOFLV_Per_Acre	MaxOFLV_Per_Acre	AvgOFLV_Per_Acre	Tier	Weighted Avg Per Tier
Warren	HOPE TOWNSHIP	2111	SR PSC	50		\$62,470.52	\$107,634.53	\$79,285.66	1	\$2,843.82
Warren	OXFORD TOWNSHIP	2117	SR PSC	106		\$57,027.64	\$133,721.51	\$92,000.05	1	\$6,995.70
Sussex	FRANKLIN BOROUGH	1906	SR PSC	157		\$73,650.02	\$128,848.66	\$97,413.33	1	\$10,971.23
Warren	LOPATCONG TOWNSHIP	2115	SR PSC	225		\$73,851.51	\$131,041.61	\$97,761.77	1	\$15,779.34
Warren	HARMONY TOWNSHIP	2110	SR PSC	169		\$70,825.53	\$135,068.92	\$99,441.34	1	\$12,055.66
Warren	FREHLINGHUYSEN TOWNSHIP	2106	SR PSC	48		\$66,898.95	\$147,050.88	\$99,908.44	1	\$3,440.18
Warren	BELVIDERE TOWNSHIP	2103	SR PSC	48		\$61,752.25	\$154,515.19	\$106,032.65	1	\$3,651.05
Warren	WASHINGTON BOROUGH	2121	SR PSC	76		\$62,198.99	\$146,282.78	\$109,831.77	1	\$5,987.96
Sussex	HARDYSTON TOWNSHIP	1911	SR PSC	276		\$77,996.81	\$168,044.82	\$113,176.49	1	\$22,407.97
Warren	LIBERTY TOWNSHIP	2114	SR PSC	108		\$81,108.13	\$169,172.74	\$114,090.14	1	\$8,839.12
Hunterdon	HAMPTON BOROUGH	1013	SR PSC	97		\$67,141.94	\$164,876.36	\$114,907.30	1	\$7,995.70
Warren	PHILLIPSBURG TOWNSHIP	2119	SR PSC	34		\$78,631.56	\$144,542.99	\$115,516.61	1	\$2,817.48
				1394						\$103,785.20
Warren	WASHINGTON TOWNSHIP	2122	SR PSC	450		\$78,485.66	\$166,313.33	\$118,986.21	2	\$6,099.77
Warren	POHATCONG TOWNSHIP	2120	SR PSC	99		\$82,155.74	\$162,084.04	\$119,672.19	2	\$1,349.69
Warren	GREENWICH TOWNSHIP	2107	SR PSC	395		\$73,939.97	\$192,018.36	\$120,457.55	2	\$5,420.45
Warren	WHITE TOWNSHIP	2123	SR PSC	130		\$79,195.04	\$166,363.32	\$123,613.27	2	\$1,830.68
Hunterdon	GLEN GARDNER BOROUGH	1012	SR PSC	81		\$81,008.57	\$171,220.60	\$124,690.51	2	\$1,150.60
Warren	FRANKLIN TOWNSHIP	2105	SR PSC	142		\$83,980.48	\$186,200.39	\$125,935.31	2	\$2,037.23
Warren	HACKETTSTOWN	2108	SR PSC	109		\$78,226.18	\$176,382.25	\$127,281.83	2	\$1,580.51
Warren	ALPHA BOROUGH	2102	SR PSC	16		\$81,301.45	\$156,287.17	\$130,199.01	2	\$237.32
Sussex	VERNON TOWNSHIP	1922	SR PSC	1173		\$86,104.83	\$196,643.09	\$133,095.68	2	\$17,785.51
Sussex	HAMBURG BOROUGH	1909	SR PSC	48		\$78,378.82	\$166,619.44	\$135,395.48	2	\$740.37
Warren	INDEPENDENCE TOWNSHIP	2112	SR PSC	245		\$112,496.77	\$207,361.84	\$142,981.30	2	\$3,990.71
Hunterdon	BETHLEHEM TOWNSHIP	1002	SR PSC	57		\$118,253.63	\$202,175.27	\$148,697.00	2	\$965.56
Morris	MOUNT OLIVE TOWNSHIP	1427	SR PSC	1156		\$92,565.55	\$212,806.61	\$150,124.80	2	\$19,770.37
Sussex	ODGENSBURG BOROUGH	1916	SR PSC	87		\$93,613.36	\$190,161.52	\$152,468.92	2	\$1,511.14
Morris	NETCONG BOROUGH	1428	SR PSC	20		\$118,764.73	\$187,717.58	\$155,874.67	2	\$355.15
Sussex	STANHOPE BOROUGH	1919	SR PSC	72		\$106,959.20	\$227,531.08	\$160,503.77	2	\$1,316.50
Morris	MINE HILL TOWNSHIP	1420	SR PSC	153		\$105,737.74	\$217,688.52	\$161,429.64	2	\$2,813.71
Hunterdon	BLOOMSBURY BOROUGH	1003	SR PSC	21		\$135,147.82	\$193,064.56	\$162,865.65	2	\$389.63
Morris	DOVER TOWN	1409	SR PSC	62		\$109,991.02	\$216,311.43	\$163,628.45	2	\$1,155.73
Hunterdon	HOLLAND TOWNSHIP	1015	SR PSC	480		\$113,565.71	\$232,975.61	\$164,286.51	2	\$8,983.54
Sussex	BYRAM TOWNSHIP	1904	SR PSC	577		\$105,053.32	\$263,725.45	\$166,124.69	2	\$10,919.79
Morris	JEFFERSON TOWNSHIP	1414	SR PSC	1234		\$99,155.04	\$264,819.93	\$169,098.94	2	\$23,771.71
Passaic	WEST MILFORD TOWNSHIP	1615	SR PSC	1307		\$103,459.48	\$252,911.02	\$170,953.96	2	\$25,454.18
Morris	WHARTON BOROUGH	1439	SR PSC	44		\$124,779.98	\$216,156.72	\$171,532.12	2	\$859.81
Hunterdon	ALEXANDRIA TOWNSHIP	1001	SR PSC	68		\$127,680.82	\$229,577.84	\$173,005.24	2	\$1,340.21
Warren	MANSFIELD TOWNSHIP	2116	SR PSC	454		\$86,434.13	\$238,090.58	\$175,086.09	2	\$9,055.49
Hunterdon	CALIFON BOROUGH	1004	SR PSC	98		\$116,221.86	\$209,923.72	\$175,416.43	2	\$1,958.40
				8778						\$152,843.77
Hunterdon	MILFORD BOROUGH	1020	SR PSC	88		\$111,367.84	\$234,900.07	\$178,828.36	3	\$2,111.20
Hunterdon	LEBANON TOWNSHIP	1019	SR PSC	208		\$132,959.26	\$275,814.52	\$183,383.79	3	\$5,117.23
Morris	ROXBURY TOWNSHIP	1436	SR PSC	1534		\$124,289.19	\$301,835.39	\$193,209.89	3	\$39,761.74
Hunterdon	CLINTON TOWNSHIP	1006	SR PSC	884		\$139,771.90	\$266,406.19	\$193,643.19	3	\$22,964.93
Hunterdon	CLINTON TOWN	1005	SR PSC	77		\$128,525.25	\$251,288.61	\$194,127.45	3	\$2,005.34
Sussex	HOPATCONG BOROUGH	1912	SR PSC	291		\$97,074.20	\$479,829.92	\$198,608.35	3	\$7,753.56
Morris	CHESTER TOWNSHIP	1407	SR PSC	127		\$130,641.56	\$328,262.76	\$200,378.27	3	\$3,414.01
Passaic	BLOOMINGDALE BOROUGH	1601	SR PSC	69		\$125,468.25	\$309,317.57	\$203,899.31	3	\$1,887.45
Passaic	WANAGUE BOROUGH	1613	SR PSC	155		\$112,916.85	\$345,107.64	\$204,808.65	3	\$4,258.83
Sussex	SPARTA TOWNSHIP	1918	SR PSC	671		\$122,182.74	\$445,753.25	\$208,073.51	3	\$18,730.52
Sussex	GREEN TOWNSHIP	1908	SR PSC	136		\$142,728.40	\$323,105.79	\$212,470.57	3	\$3,876.58
Morris	WASHINGTON TOWNSHIP	1438	SR PSC	1574		\$146,023.77	\$284,498.36	\$213,068.62	3	\$44,991.95
Hunterdon	UNION TOWNSHIP	1025	SR PSC	107		\$124,787.33	\$278,160.27	\$215,471.14	3	\$3,093.03
Hunterdon	LEBANON BOROUGH	1018	SR PSC	60		\$142,676.86	\$311,954.39	\$218,934.00	3	\$1,762.28
Hunterdon	HIGH BRIDGE BOROUGH	1014	SR PSC	137		\$137,340.31	\$290,388.23	\$221,771.15	3	\$4,076.02
Passaic	POMPTON LAKES BOROUGH	1609	SR PSC	107		\$171,576.60	\$288,685.01	\$241,448.23	3	\$3,465.92
Warren	ALLAMUCHY TOWNSHIP	2101	SR PSC	163		\$125,983.19	\$305,945.38	\$253,054.18	3	\$5,533.65
Morris	ROCKAWAY TOWNSHIP	1435	SR PSC	713		\$155,603.00	\$485,837.23	\$262,134.46	3	\$25,074.04
Morris	BOONTON TOWNSHIP	1402	SR PSC	346		\$176,997.95	\$357,260.35	\$262,771.58	3	\$12,197.34
Somerset	FAR HILLS BOROUGH	1807	SR PSC	7		\$122,373.97	\$394,134.62	\$265,062.62	3	\$248.92
				7,454						\$212,324.53
Hunterdon	TEWKSBURY TOWNSHIP	1024	SR PSC	122		\$105,049.59	\$405,416.31	\$282,934.70	4	\$3,698.89
Morris	MOUNT ARLINGTON BOROUGH	1426	SR PSC	104		\$177,307.98	\$538,694.61	\$287,895.58	4	\$3,208.44
Passaic	RINGWOOD BOROUGH	1611	SR PSC	772		\$158,224.28	\$392,203.94	\$288,873.95	4	\$23,897.42
Morris	PEQUANNOCK TOWNSHIP	1431	SR PSC	510		\$18,696.27	\$424,440.92	\$290,017.30	4	\$15,849.64
Morris	KINNELON BOROUGH	1415	SR PSC	407		\$212,484.22	\$390,546.32	\$300,349.83	4	\$13,099.27
Morris	DENVILLE TOWNSHIP	1408	SR PSC	1,012		\$193,977.39	\$441,756.17	\$310,851.05	4	\$33,709.95
Morris	BOONTON TOWN	1401	SR PSC	153		\$201,492.61	\$422,242.10	\$313,682.91	4	\$5,142.89
Morris	RANDOLPH TOWNSHIP	1432	SR PSC	2,468		\$182,118.34	\$425,798.27	\$319,490.28	4	\$84,494.43
Somerset	BERNARDSVILLE BOROUGH	1803	SR PSC	266		\$228,116.07	\$455,673.02	\$326,110.92	4	\$9,295.49
Morris	PARSIPPANY TROY HILLS TOWNSHIP	1429	SR PSC	1,067		\$224,480.42	\$465,299.33	\$327,380.39	4	\$37,431.94
Somerset	PEAPACK GLADSTONE BOROUGH	1815	SR PSC	117		\$192,840.60	\$472,260.15	\$334,163.74	4	\$4,189.58
Morris	MORRIS PLAINS BOROUGH	1423	SR PSC	304		\$234,856.85	\$421,332.27	\$340,336.94	4	\$11,086.84
Somerset	BEDMINSTER TOWNSHIP	1801	SR PSC	116		\$215,694.88	\$545,719.48	\$342,724.38	4	\$4,260.18
Morris	RIVERDALE BOROUGH	1433	SR PSC	71		\$243,552.93	\$464,713.06	\$346,074.65	4	\$2,633.02
Morris	ROCKAWAY BOROUGH	1434	SR PSC	105		\$237,760.15	\$436,241.87	\$346,502.14	4	\$3,898.71
Morris	HANOVER TOWNSHIP	1412	SR PSC	1,033		\$234,979.61	\$454,892.99	\$347,356.59	4	\$38,450.42
Morris	CHESTER BOROUGH	1406	SR PSC	170		\$215,651.11	\$510,811.06	\$347,424.90	4	\$6,329.00
Morris	MENDHAM BOROUGH	1418	SR PSC	418		\$257,061.55	\$442,774.37	\$369,967.57	4	\$16,571.63
Morris	BUTLER BOROUGH	1403	SR PSC	117		\$239,833.08	\$514,306.17	\$377,517.48	4	\$4,733.13
				9,332						\$321,980.86
Morris	MONTVILLE TOWNSHIP	1421	SR PSC	2,284		\$230,224.66	\$534,865.42	\$401,849.80	5	\$105,388.10
Morris	MORRIS TOWNSHIP	1422	SR PSC	1,865		\$265,870.38	\$630,379.63	\$406,782.96	5	\$87,111.06
Bergen	MAHWAH TOWNSHIP	0233	SR PSC	1,177		\$323,741.89	\$655,624.49	\$455,064.21	5	\$61,500.81
Somerset	BERNARDS TOWNSHIP	1802	SR PSC	2,010		\$336,790.11	\$675,244.55	\$456,601.13	5	\$105,381.59
Bergen	OAKLAND BOROUGH	0242	SR PSC	833		\$305,192.23	\$618,512.35	\$485,001.18	5	\$46,389.48
Morris	MORRISTOWN TOWN	1424	SR PSC	126		\$323,220.62	\$674,991.68	\$494,370.00	5	\$7,152.44
Morris	HARDING TOWNSHIP	1413	SR PSC	119		\$354,226.95	\$901,698.32	\$535,145.96	5	\$7,312.25
Morris	MENDHAM TOWNSHIP	1419	SR PSC	295		\$329,596.23	\$827,018.12	\$551,488.60	5	\$18,680.58
				8,709						\$438,916.31
Morris	MOUNTAIN LAKES BOROUGH	1425	SR PSC	430		\$407,885.65	\$1,255,004.00	\$682,128.62	6	\$682,128.62
				430				\$232,827.65		

Tier	Range Per Tier	Average ELVA Per Tie	LF Per Tier	
1	\$79,285.66	\$118,928.49	\$103,785.20	1.00
2	\$118,928.49	\$178,392.74	\$152,843.77	1.47
3	\$178,392.74	\$267,589.11	\$212,324.53	2.05
4	\$267,589.11	\$401,383.67	\$321,980.86	3.10
5	\$401,383.67	\$602,075.51	\$438,916.31	4.23

Appendix C - Location Factors
1/3 to <1/2 Acre Lot Size

COUNTY_ID	MUNI_ID	MUNI_CODE	COMP_ZONE_PSC	Count/OPIN	MinOFLV_Per_Acre	MaxOFLV_Per_Acre	AvgOFLV_Per_Acre	Tier	Weighted Avg Per Tier
Warren	HOPE TOWNSHIP	2111	MDR PSC	34	\$100,755.12	\$150,338.42	\$127,930.51	1	\$1,923.77
Warren	FREHLINGHUYSEN TOWNSHIP	2106	MDR PSC	18	\$76,709.97	\$162,821.82	\$135,635.29	1	\$1,079.80
Hunterdon	HAMPTON BOROUGH	1013	MDR PSC	79	\$73,745.39	\$192,558.53	\$135,948.09	1	\$4,750.07
Warren	HARMONY TOWNSHIP	2110	MDR PSC	100	\$108,017.96	\$195,081.74	\$145,405.36	1	\$6,431.02
Sussex	FRANKLIN BOROUGH	1906	MDR PSC	202	\$120,508.63	\$186,777.58	\$153,875.90	1	\$13,747.43
Warren	PHILLIPSBURG TOWNSHIP	2119	MDR PSC	90	\$117,076.23	\$195,766.38	\$157,359.37	1	\$6,263.75
Warren	OXFORD TOWNSHIP	2117	MDR PSC	239	\$94,018.65	\$204,121.47	\$161,580.93	1	\$17,079.98
Warren	BELVIDERE TOWNSHIP	2103	MDR PSC	108	\$105,657.18	\$209,809.62	\$166,069.84	1	\$7,932.57
Warren	GREENWICH TOWNSHIP	2107	MDR PSC	168	\$96,791.67	\$238,123.15	\$166,805.97	1	\$12,394.25
Warren	WASHINGTON BOROUGH	2121	MDR PSC	287	\$108,639.29	\$207,386.91	\$169,056.13	1	\$21,459.14
Warren	LOPATCONG TOWNSHIP	2115	MDR PSC	421	\$137,471.84	\$200,923.06	\$174,415.38	1	\$32,476.28
Warren	WASHINGTON TOWNSHIP	2122	MDR PSC	368	\$141,948.65	\$219,473.23	\$177,379.79	1	\$28,870.31
Warren	FRANKLIN TOWNSHIP	2105	MDR PSC	97	\$131,804.83	\$257,969.54	\$187,840.97	1	\$8,058.64
Hunterdon	GLEN GARDNER BOROUGH	1012	MDR PSC	50	\$136,205.47	\$232,702.71	\$189,751.13	1	\$4,196.18
				2261					\$166,663.18
Warren	POHATCONG TOWNSHIP	2120	MDR PSC	146	\$126,346.14	\$244,449.88	\$192,863.94	2	\$3,200.88
Sussex	HAMBURG BOROUGH	1909	MDR PSC	151	\$161,622.70	\$227,823.82	\$200,813.76	2	\$3,446.96
Sussex	HARDYSTON TOWNSHIP	1911	MDR PSC	224	\$145,348.04	\$259,477.98	\$201,766.74	2	\$5,137.63
Warren	HACKETTSTOWN	2108	MDR PSC	330	\$143,482.82	\$295,660.79	\$203,476.04	2	\$7,632.95
Warren	ALPHA BOROUGH	2102	MDR PSC	108	\$167,110.49	\$233,477.53	\$203,882.65	2	\$2,503.05
Morris	MOUNT OLIVE TOWNSHIP	1427	MDR PSC	945	\$148,234.37	\$286,415.15	\$211,076.35	2	\$22,674.45
Warren	LIBERTY TOWNSHIP	2114	MDR PSC	44	\$99,682.25	\$268,579.90	\$211,238.55	2	\$1,056.55
Warren	WHITE TOWNSHIP	2123	MDR PSC	36	\$159,414.79	\$262,398.38	\$214,870.31	2	\$879.31
Sussex	VERNON TOWNSHIP	1922	MDR PSC	1072	\$163,154.13	\$298,255.78	\$216,465.64	2	\$26,378.44
Warren	MANSFIELD TOWNSHIP	2116	MDR PSC	207	\$104,692.30	\$264,177.10	\$234,971.44	2	\$5,529.05
Morris	NETCONG BOROUGH	1428	MDR PSC	62	\$178,706.95	\$274,358.85	\$238,521.69	2	\$1,681.07
Sussex	HOPATCONG BOROUGH	1912	MDR PSC	667	\$163,641.78	\$606,835.33	\$243,866.51	2	\$18,490.28
Hunterdon	MILFORD BOROUGH	1020	MDR PSC	68	\$160,313.13	\$319,945.38	\$243,965.57	2	\$1,885.83
Morris	MINE HILL TOWNSHIP	1420	MDR PSC	169	\$177,508.27	\$317,421.26	\$246,372.64	2	\$4,733.09
Hunterdon	HOLLAND TOWNSHIP	1015	MDR PSC	156	\$193,332.14	\$325,951.93	\$246,980.73	2	\$4,379.79
Hunterdon	BELLEVILLE TOWNSHIP	1002	MDR PSC	19	\$173,208.61	\$304,841.62	\$248,131.77	2	\$535.92
Warren	INDEPENDENCE TOWNSHIP	2112	MDR PSC	62	\$197,228.52	\$298,622.12	\$249,296.81	2	\$1,757.01
Sussex	OGDENSBURG BOROUGH	1916	MDR PSC	319	\$192,272.60	\$277,663.00	\$251,618.81	2	\$9,124.29
Sussex	STANHOPE BOROUGH	1919	MDR PSC	160	\$175,853.81	\$316,818.20	\$252,917.50	2	\$4,600.07
Passaic	WEST MILFORD TOWNSHIP	1615	MDR PSC	1931	\$173,188.15	\$394,086.80	\$257,145.85	2	\$56,445.22
Sussex	BYRAM TOWNSHIP	1904	MDR PSC	539	\$155,968.74	\$365,270.51	\$257,827.60	2	\$15,797.33
Hunterdon	CALIFON BOROUGH	1004	MDR PSC	99	\$221,319.87	\$294,330.26	\$260,172.53	2	\$2,927.94
Hunterdon	BLOOMSBURY BOROUGH	1003	MDR PSC	24	\$225,652.72	\$308,002.80	\$260,856.15	2	\$711.67
Morris	DOVER TOWN	1409	MDR PSC	116	\$180,414.30	\$355,434.35	\$264,190.03	2	\$3,483.69
Morris	WHARTON BOROUGH	1439	MDR PSC	182	\$194,924.70	\$310,840.85	\$268,741.07	2	\$5,559.95
Hunterdon	ALEXANDRIA TOWNSHIP	1001	MDR PSC	27	\$207,099.77	\$357,003.82	\$278,803.75	2	\$855.71
Hunterdon	UNION TOWNSHIP	1025	MDR PSC	22	\$220,148.61	\$341,615.35	\$284,131.51	2	\$710.57
Morris	WASHINGTON TOWNSHIP	1438	MDR PSC	148	\$192,998.16	\$396,452.12	\$284,736.06	2	\$4,790.38
Morris	JEFFERSON TOWNSHIP	1414	MDR PSC	764	\$157,320.40	\$517,282.37	\$284,777.33	2	\$24,732.28
				8797					\$241,641.37
Hunterdon	CLINTON TOWN	1005	MDR PSC	249	\$200,984.10	\$351,884.33	\$289,464.18	3	\$12,982.09
Hunterdon	CLINTON TOWNSHIP	1006	MDR PSC	161	\$178,390.45	\$423,519.38	\$300,701.68	3	\$8,719.92
Hunterdon	LEBANON TOWNSHIP	1019	MDR PSC	117	\$251,944.67	\$368,864.41	\$313,095.71	3	\$6,598.02
Sussex	SPARTA TOWNSHIP	1918	MDR PSC	693	\$212,599.08	\$935,510.83	\$331,356.08	3	\$41,359.83
Sussex	GREEN TOWNSHIP	1908	MDR PSC	118	\$262,052.84	\$472,037.22	\$331,966.47	3	\$7,055.48
Warren	ALLAMUCHY TOWNSHIP	2101	MDR PSC	76	\$199,868.51	\$419,287.88	\$336,281.80	3	\$4,603.28
Passaic	WANAUKE BOROUGH	1613	MDR PSC	232	\$239,213.47	\$445,443.97	\$341,819.12	3	\$14,283.51
Passaic	POMPTON LAKES BOROUGH	1609	MDR PSC	242	\$256,395.74	\$427,363.21	\$346,966.55	3	\$15,123.54
Morris	BOONTON TOWNSHIP	1402	MDR PSC	115	\$267,798.27	\$475,029.11	\$351,408.18	3	\$7,278.81
Morris	ROXBURY TOWNSHIP	1436	MDR PSC	1719	\$217,399.69	\$516,189.44	\$353,323.75	3	\$109,395.45
Morris	CHESTER TOWNSHIP	1407	MDR PSC	29	\$259,279.09	\$463,735.21	\$355,026.43	3	\$1,854.42
Hunterdon	HIGH BRIDGE BOROUGH	1014	MDR PSC	278	\$265,214.88	\$422,859.64	\$355,429.26	3	\$17,797.07
Passaic	BLOOMINGDALE BOROUGH	1601	MDR PSC	101	\$226,087.34	\$573,170.97	\$359,645.10	3	\$6,542.54
Morris	VICTORY GARDENS BOROUGH	1437	MDR PSC	18	\$274,901.03	\$431,509.21	\$366,957.51	3	\$1,189.70
Hunterdon	LEBANON BOROUGH	1018	MDR PSC	62	\$293,666.82	\$499,615.21	\$373,634.02	3	\$4,172.43
Somerset	FAR HILLS BOROUGH	1807	MDR PSC	5	\$368,930.99	\$419,700.07	\$390,798.95	3	\$351.94
Morris	ROCKAWAY TOWNSHIP	1435	MDR PSC	1,232	\$270,451.55	\$637,494.84	\$408,253.86	3	\$90,592.35
Morris	CHESTER BOROUGH	1406	MDR PSC	105	\$358,261.56	\$543,431.15	\$430,326.61	3	\$8,138.38
				5,552					\$358,038.76
Passaic	RINGWOOD BOROUGH	1611	MDR PSC	836	\$305,541.04	\$565,807.23	\$431,990.36	4	\$24,466.09
Morris	MOUNT ARLINGTON BOROUGH	1426	MDR PSC	268	\$279,822.21	\$816,921.26	\$435,111.14	4	\$7,899.86
Morris	RANDOLPH TOWNSHIP	1432	MDR PSC	1,349	\$294,411.90	\$614,166.32	\$444,625.09	4	\$40,634.05
Morris	BOONTON TOWN	1401	MDR PSC	265	\$323,507.99	\$559,944.91	\$451,314.28	4	\$8,102.32
Somerset	BERNARDSVILLE BOROUGH	1803	MDR PSC	314	\$329,634.46	\$586,947.26	\$464,442.10	4	\$9,879.74
Morris	MORRIS PLAINS BOROUGH	1423	MDR PSC	545	\$366,220.06	\$568,200.45	\$467,319.61	4	\$17,254.20
Morris	DESVILLE TOWNSHIP	1408	MDR PSC	488	\$337,818.28	\$679,239.58	\$470,894.80	4	\$15,567.82
Somerset	PEAPACK GLADSTONE BOROUGH	1815	MDR PSC	90	\$320,786.28	\$697,010.80	\$475,662.26	4	\$2,900.18
Hunterdon	TEWKSBURY TOWNSHIP	1024	MDR PSC	49	\$52,316.27	\$714,255.36	\$480,584.02	4	\$1,595.33
Morris	KINNELON BOROUGH	1415	MDR PSC	332	\$383,323.58	\$592,242.43	\$481,469.99	4	\$10,829.08
Morris	MENDHAM BOROUGH	1418	MDR PSC	167	\$410,386.85	\$565,899.08	\$483,043.13	4	\$5,464.96
Morris	HANOVER TOWNSHIP	1412	MDR PSC	1,459	\$399,723.37	\$604,152.38	\$499,527.43	4	\$49,374.06
Morris	ROCKAWAY BOROUGH	1434	MDR PSC	279	\$379,349.12	\$671,886.16	\$508,126.93	4	\$9,604.19
Morris	PEQUANNOCK TOWNSHIP	1431	MDR PSC	1,322	\$375,278.29	\$629,568.92	\$520,110.99	4	\$46,581.31
Morris	MONTVILLE TOWNSHIP	1421	MDR PSC	1,124	\$351,130.50	\$670,847.18	\$532,701.17	4	\$40,563.38
Morris	BUTLER BOROUGH	1403	MDR PSC	393	\$391,260.19	\$690,324.03	\$557,111.72	4	\$14,832.66
Morris	PARSIPPANY TROY HILLS TOWNSHIP	1429	MDR PSC	3,749	\$428,433.98	\$702,250.78	\$573,637.63	4	\$145,692.53
Morris	RIVERDALE BOROUGH	1433	MDR PSC	109	\$370,312.29	\$675,681.96	\$577,800.88	4	\$4,266.67
Somerset	BEDMINSTER TOWNSHIP	1801	MDR PSC	84	\$405,115.16	\$875,915.26	\$579,482.02	4	\$3,297.64
Morris	MORRIS TOWNSHIP	1422	MDR PSC	1,539	\$400,135.49	\$937,473.89	\$639,257.95	4	\$66,649.82
				14,761					\$525,455.89
Bergen	OAKLAND BOROUGH	0242	MDR PSC	861	\$490,270.59	\$825,546.13	\$663,023.52	5	\$211,666.02
Morris	MORRISTOWN TOWN	1424	MDR PSC	182	\$447,987.55	\$878,275.10	\$676,146.80	5	\$45,628.00
Somerset	BERNARDS TOWNSHIP	1802	MDR PSC	500	\$538,529.66	\$916,499.63	\$727,237.36	5	\$134,823.39
Bergen	MAHWAH TOWNSHIP	0233	MDR PSC	517	\$432,708.41	\$949,092.84	\$732,331.21	5	\$140,383.85
Morris	MENDHAM TOWNSHIP	1419	MDR PSC	96	\$575,595.91	\$993,155.83	\$815,639.42	5	\$29,032.77
Morris	HARDING TOWNSHIP	1413	MDR PSC	81	\$475,346.98	\$1,185,482.89	\$867,554.29	5	\$26,055.58
Morris	MOUNTAIN LAKES BOROUGH	1425	MDR PSC	460	\$607,964.97	\$1,594,165.43	\$872,862.42	5	\$148,875.31
				2,697			\$352,602.25		\$736,464.92

Tier	Range Per Tier	Weighted Avg ELVA P	LF Per Tier	
1	\$127,930.51	\$191,895.77	\$166,663.18	1.00
2	\$191,895.77	\$287,843.66	\$241,641.37	1.45
3	\$287,843.66	\$431,765.49	\$358,038.76	2.15
4	\$431,765.49	\$647,648.24	\$525,455.89	3.15
5	\$647,648.24	\$971,472.36	\$736,464.92	4.42

Appendix C - Location Factors
1/8 to <1/3 Acre Lot Size

COUNTY_ID	MUNI_ID	MUNI_CODE	COMP_ZONE_PSC	CountOPIIN	MinOFLV_Per_Acre	MaxOFLV_Per_Acre	AvgOFLV_Per_Acre	Tier	Weighted Avg Per Tier
Hunterdon	HAMPTON BOROUGH	1013	HDR PSC	157	\$135,621.17	\$289,763.27	\$195,740.90	1	\$8,828.30
Warren	OXFORD TOWNSHIP	2117	HDR PSC	236	\$117,382.97	\$321,087.61	\$209,246.92	1	\$14,186.23
Warren	FREHLINGHUYSEN TOWNSHIP	2106	HDR PSC	14	\$28,340.87	\$310,991.26	\$217,779.87	1	\$875.87
Warren	MANFIELD TOWNSHIP	2116	HDR PSC	128	\$123,729.30	\$377,132.91	\$227,946.63	1	\$8,381.84
Warren	HARMONY TOWNSHIP	2110	HDR PSC	132	\$45,568.38	\$397,325.06	\$229,040.62	1	\$8,685.25
Warren	HOPPE TOWNSHIP	2111	HDR PSC	88	\$134,157.32	\$393,199.24	\$232,900.42	1	\$5,887.74
Warren	PHILLIPSBURG TOWNSHIP	2119	HDR PSC	1613	\$175,194.13	\$352,438.35	\$263,339.10	1	\$122,024.12
Warren	BELVIDERE TOWNSHIP	2103	HDR PSC	512	\$155,212.71	\$437,155.61	\$271,676.55	1	\$39,959.32
Sussex	FRANKLIN BOROUGH	1906	HDR PSC	601	\$180,725.61	\$372,127.46	\$282,239.82	1	\$48,729.14
				3481					\$257,557.82
Warren	GREENWICH TOWNSHIP	2107	HDR PSC	503	\$165,600.63	\$427,444.94	\$300,969.27	2	\$7,185.66
Warren	LOPATCONG TOWNSHIP	2115	HDR PSC	915	\$189,486.21	\$401,511.85	\$303,018.91	2	\$13,160.35
Warren	WASHINGTON BOROUGH	2121	HDR PSC	1053	\$177,527.31	\$502,586.30	\$311,194.40	2	\$15,553.81
Sussex	HAMBURG BOROUGH	1909	HDR PSC	96	\$228,253.57	\$477,339.73	\$315,920.48	2	\$4,693.52
Warren	FRANKLIN TOWNSHIP	2105	HDR PSC	96	\$195,240.11	\$564,608.48	\$318,616.10	2	\$1,451.83
Hunterdon	GLEN GARDNER BOROUGH	1012	HDR PSC	75	\$199,076.93	\$538,753.28	\$331,652.15	2	\$1,180.65
Warren	WHITE TOWNSHIP	2123	HDR PSC	59	\$168,411.25	\$602,041.16	\$331,790.39	2	\$929.16
Warren	HACKETSTOWN	2108	HDR PSC	1343	\$191,108.12	\$632,634.75	\$337,890.68	2	\$21,539.17
Hunterdon	BETHLEHEM TOWNSHIP	1002	HDR PSC	12	\$8,225.45	\$450,243.64	\$338,081.31	2	\$192.57
Warren	WASHINGTON TOWNSHIP	2122	HDR PSC	239	\$210,112.65	\$587,057.21	\$352,341.68	2	\$3,997.04
Warren	POHATCONG TOWNSHIP	2120	HDR PSC	659	\$196,875.87	\$540,277.97	\$353,958.94	2	\$11,071.72
Warren	ALPHA BOROUGH	2102	HDR PSC	494	\$243,689.31	\$540,271.67	\$358,896.82	2	\$8,415.37
Warren	LIBERTY TOWNSHIP	2114	HDR PSC	187	\$193,628.76	\$545,891.33	\$366,312.68	2	\$3,251.40
Sussex	ODGENSBURG BOROUGH	1916	HDR PSC	274	\$269,173.00	\$569,324.63	\$367,022.99	2	\$4,773.32
Sussex	VERNON TOWNSHIP	1922	HDR PSC	2941	\$218,085.31	\$735,312.53	\$367,960.79	2	\$51,365.71
Sussex	HARDYSTON TOWNSHIP	1911	HDR PSC	709	\$231,533.30	\$566,473.75	\$373,460.05	2	\$12,568.03
Morris	MOUNT OLIVE TOWNSHIP	1427	HDR PSC	2047	\$232,683.31	\$486,478.64	\$381,474.41	2	\$37,064.65
Morris	WASHINGTON TOWNSHIP	1438	HDR PSC	169	\$265,450.58	\$736,801.34	\$383,409.61	2	\$3,075.58
Hunterdon	CLINTON TOWN	1005	HDR PSC	241	\$261,287.60	\$640,731.38	\$384,971.63	2	\$4,403.75
Sussex	STANHOPE BOROUGH	1919	HDR PSC	513	\$272,052.54	\$637,153.30	\$395,039.30	2	\$9,619.10
Passaic	WEST MILFORD TOWNSHIP	1615	HDR PSC	3441	\$237,011.71	\$751,401.21	\$397,819.09	2	\$64,975.10
Sussex	HOPATCONG BOROUGH	1912	HDR PSC	3829	\$250,414.64	\$847,349.21	\$405,409.88	2	\$73,681.15
Morris	NETCONG BOROUGH	1428	HDR PSC	601	\$289,054.72	\$597,965.95	\$419,052.78	2	\$11,954.18
Hunterdon	BLOOMSBURY BOROUGH	1003	HDR PSC	209	\$271,861.77	\$614,220.74	\$419,687.37	2	\$4,163.41
Hunterdon	CALIFON BOROUGH	1004	HDR PSC	84	\$319,276.07	\$713,728.64	\$425,115.39	2	\$1,694.97
Hunterdon	HOLLAND TOWNSHIP	1015	HDR PSC	62	\$237,049.31	\$800,583.82	\$432,371.61	2	\$1,272.41
				21068					\$373,233.60
Morris	WHARTON BOROUGH	1439	HDR PSC	996	\$294,464.23	\$692,241.07	\$465,324.37	3	\$27,077.77
Sussex	BYRAM TOWNSHIP	1904	HDR PSC	1034	\$255,158.07	\$857,455.50	\$468,305.18	3	\$28,290.93
Hunterdon	MILFORD BOROUGH	1020	HDR PSC	143	\$251,130.00	\$764,404.19	\$468,397.86	3	\$3,913.35
Hunterdon	ALEXANDRIA TOWNSHIP	1001	HDR PSC	75	\$291,587.06	\$748,926.98	\$468,463.38	3	\$2,052.74
Morris	MINE HILL TOWNSHIP	1420	HDR PSC	660	\$315,952.87	\$749,903.81	\$473,424.75	3	\$18,255.45
Hunterdon	LEBANON TOWNSHIP	1019	HDR PSC	71	\$214,568.06	\$854,062.93	\$479,645.63	3	\$1,989.65
Morris	ROXBURY TOWNSHIP	1436	HDR PSC	2455	\$326,460.68	\$738,153.78	\$509,420.06	3	\$73,067.67
Sussex	GREEN TOWNSHIP	1908	HDR PSC	140	\$382,946.50	\$659,951.33	\$535,223.58	3	\$4,377.85
Hunterdon	CLINTON TOWNSHIP	1006	HDR PSC	152	\$286,544.80	\$811,387.44	\$535,884.75	3	\$4,758.97
Morris	JEFFERSON TOWNSHIP	1414	HDR PSC	3353	\$263,217.87	\$1,029,969.26	\$548,898.75	3	\$107,528.48
Morris	RANDOLPH TOWNSHIP	1432	HDR PSC	350	\$364,321.05	\$826,257.70	\$549,533.85	3	\$11,237.25
Morris	CHESTER TOWNSHIP	1407	HDR PSC	26	\$383,121.31	\$866,720.41	\$559,899.48	3	\$850.51
Morris	BOONTON TOWNSHIP	1402	HDR PSC	133	\$366,149.72	\$851,624.39	\$561,175.24	3	\$4,360.62
Hunterdon	LEBANON BOROUGH	1018	HDR PSC	79	\$436,633.23	\$833,903.42	\$570,714.67	3	\$2,634.17
Morris	VICTORY GARDENS BOROUGH	1437	HDR PSC	164	\$400,759.79	\$772,017.14	\$573,608.51	3	\$5,496.13
Hunterdon	DOVER BRIDGE BOROUGH	1014	HDR PSC	398	\$376,323.74	\$970,587.59	\$588,813.70	3	\$13,691.74
Morris	HIGHER TOWN	1409	HDR PSC	2510	\$344,708.38	\$855,843.11	\$609,370.33	3	\$89,361.97
Warren	INDEPENDENCE TOWNSHIP	2112	HDR PSC	107	\$287,404.57	\$885,988.66	\$612,584.10	3	\$3,829.55
Passaic	POMPTON LAKES BOROUGH	1609	HDR PSC	2120	\$410,512.37	\$971,323.33	\$648,030.74	3	\$80,265.55
Sussex	SPARTA TOWNSHIP	1918	HDR PSC	2150	\$320,225.30	\$1,791,001.43	\$660,540.77	3	\$82,972.81
				17116					\$566,013.17
Morris	MONTVILLE TOWNSHIP	1421	HDR PSC	285	\$437,540.49	\$1,000,165.84	\$663,020.90	4	\$7,681.96
Morris	HANOVER TOWNSHIP	1412	HDR PSC	831	\$517,684.40	\$970,377.47	\$664,712.15	4	\$22,456.13
Passaic	WANAEQUE BOROUGH	1613	HDR PSC	1756	\$396,102.00	\$1,028,961.20	\$677,772.37	4	\$48,384.76
Morris	PEQUANNOCK TOWNSHIP	1431	HDR PSC	1670	\$473,312.07	\$1,050,960.23	\$678,954.11	4	\$46,095.35
Warren	ALLAMUCHY TOWNSHIP	2101	HDR PSC	256	\$368,788.39	\$1,313,515.75	\$694,255.27	4	\$7,225.36
Morris	KINNELON BOROUGH	1415	HDR PSC	384	\$515,871.95	\$1,138,592.09	\$697,467.10	4	\$10,888.18
Hunterdon	UNION TOWNSHIP	1025	HDR PSC	57	\$335,375.17	\$955,403.91	\$730,230.19	4	\$1,692.13
Morris	ROCKAWAY TOWNSHIP	1435	HDR PSC	3,404	\$450,681.27	\$1,234,864.35	\$731,322.61	4	\$101,204.25
Somerset	BERNARDSVILLE BOROUGH	1803	HDR PSC	613	\$466,903.77	\$1,113,773.54	\$731,766.57	4	\$18,236.15
Passaic	BLOOMINGDALE BOROUGH	1601	HDR PSC	674	\$439,240.08	\$1,068,062.41	\$738,288.39	4	\$20,229.55
Morris	MOUNT ARLINGTON BOROUGH	1426	HDR PSC	544	\$365,053.70	\$1,623,188.69	\$766,259.08	4	\$16,946.29
Morris	CHESTER BOROUGH	1406	HDR PSC	30	\$576,015.74	\$1,297,348.07	\$816,251.34	4	\$995.51
Morris	BOONTON TOWN	1401	HDR PSC	1,413	\$531,206.56	\$1,141,915.91	\$821,884.17	4	\$47,212.06
Morris	BUTLER BOROUGH	1403	HDR PSC	1,245	\$573,171.73	\$1,137,250.19	\$826,739.48	4	\$4,844.49
Passaic	RINGWOOD BOROUGH	1611	HDR PSC	1,479	\$463,781.04	\$1,418,389.82	\$833,467.01	4	\$50,113.74
Somerset	PEAPACK GLADSTONE BOROUGH	1815	HDR PSC	117	\$565,283.99	\$1,348,972.58	\$858,140.54	4	\$4,081.73
Somerset	FAR HILLS BOROUGH	1807	HDR PSC	57	\$554,443.75	\$1,359,965.64	\$876,394.94	4	\$2,030.84
Morris	PARSIPPANY TROY HILLS TOWNSHIP	1429	HDR PSC	4,114	\$577,671.68	\$1,231,216.55	\$880,168.22	4	\$147,207.58
Morris	MORRIS TOWNSHIP	1422	HDR PSC	1,501	\$462,430.32	\$1,504,916.77	\$886,143.61	4	\$54,073.57
Morris	MORRIS PLAINS BOROUGH	1423	HDR PSC	652	\$588,469.90	\$1,288,569.57	\$888,138.68	4	\$23,541.20
Morris	DENVILLE TOWNSHIP	1408	HDR PSC	2,224	\$528,285.72	\$1,633,661.06	\$929,317.02	4	\$84,023.13
Morris	MENDHAM BOROUGH	1418	HDR PSC	192	\$595,097.96	\$1,462,185.36	\$961,544.32	4	\$7,505.35
Morris	ROCKAWAY BOROUGH	1434	HDR PSC	1,100	\$568,061.10	\$1,613,473.76	\$989,665.82	4	\$44,256.95
				24,598					\$807,926.25
Somerset	BEDMINSTER TOWNSHIP	1801	HDR PSC	174	\$680,149.09	\$1,246,664.58	\$994,001.13	5	\$25,356.43
Morris	MENDHAM TOWNSHIP	1419	HDR PSC	18	\$803,015.37	\$1,176,663.31	\$1,029,357.77	5	\$2,716.38
Morris	RIVERDALE BOROUGH	1433	HDR PSC	466	\$699,113.12	\$1,594,656.90	\$1,060,172.05	5	\$72,429.29
Bergen	OAKLAND BOROUGH	0242	HDR PSC	1,816	\$745,405.36	\$1,896,124.22	\$1,094,093.39	5	\$291,287.73
Bergen	MAHWAH TOWNSHIP	0233	HDR PSC	1,105	\$548,844.19	\$2,029,677.81	\$1,114,027.20	5	\$180,472.08
Morris	MOUNTAIN LAKES BOROUGH	1425	HDR PSC	239	\$775,710.08	\$1,757,213.19	\$1,148,872.43	5	\$40,255.17
Hunterdon	TEWKSBURY TOWNSHIP	1024	HDR PSC	133	\$504,243.23	\$2,311,411.05	\$1,155,948.75	5	\$22,539.39
Morris	MORRISTOWN TOWN	1424	HDR PSC	1,613	\$683,551.05	\$1,976,937.38	\$1,226,349.20	5	\$290,001.65
Somerset	BERNARDS TOWNSHIP	1802	HDR PSC	1,117	\$896,436.26	\$2,043,108.65	\$1,374,349.96	5	\$225,062.15
Morris	HARDING TOWNSHIP	1413	HDR PSC	140	\$758,080.98	\$1,909,583.78	\$1,388,676.28	5	\$28,502.37
				6,821			\$595,663.20		\$1,178,622.64

Tier	Range Per Tier	Weighted Avg ELVA Per Tie	LF Per Tier	
1	\$195,740.90	\$293,611.35	\$257,557.82	1.00
2	\$293,611.35	\$440,417.03	\$373,233.60	1.45
3	\$440,417.03	\$660,625.55	\$566,013.17	2.20
4	\$660,625.55	\$990,938.33	\$807,926.25	3.14
5	\$990,938.33	\$1,486,407.50	\$1,178,622.64	4.58

Appendix D
Sample Residential Allocation Calculations (Revised October 2010)

Parcel Example	Municipality	Parcel Size (Acres)	Net Yield (Potential Lots)	Applicable ZF (see Appendix A)	Applicable LF (see Appendices B & C)		Value of HDC Allocation*		Per Lot Cost	Per Acre Cost
					HDC Allocation					
A	Chester Twp 3 acre lots	20	6	1.37	3.23	26.55	\$ 496,496.22	\$ 82,749.37	\$ 24,824.81	
B	Bethlehem 3 acre lots	16	4	1.37	1.45	7.95	\$ 148,590.20	\$ 37,147.55	\$ 9,286.89	
C	Tewksbury 12 acre lots	84	6	2.44	9.07	132.78	\$ 2,483,075.76	\$ 413,845.96	\$ 29,560.43	
D	West Milford 2 acre lots	12	6	1.00	1.45	8.70	\$ 162,690.00	\$ 27,115.00	\$ 13,557.50	
E	Chester Twp 3 acre lots; 5 acres wet (High Conservation Value)	20	6.25 reflects 25% bonus	1.37	3.23	27.66	\$ 517,183.56	\$ 82,749.37	\$ 25,859.18	

Examples A through D assume no pre-Highlands Act environmental constraints

Example E assumes that parcel located in High Value Conservation Priority Area

* HDC Price = \$16,000 per HDC (see Initial HDC Price Memo dated May 9, 2008)



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MEMORANDUM

Highlands TDR Program Allocation Methods
May 15, 2008

An essential component of any TDR program is the method by which transferrable development rights¹ will be allocated to sending zone property owners. Allocation consists of defining what these rights are and how many rights should be given to a particular lot. For purposes of the Highlands TDR Program, staff is recommending two allocation methods: one for residentially zoned properties and another for non-residentially zoned parcels. **Appendix A** sets forth the formulas for these allocation methods. This memorandum discusses the bases for these recommended allocation methods.

Residential Allocation Method

How TDR credits are allocated to residentially zoned property varies among TDR programs. Some programs allocate on the basis of gross acres of a given land type. For example, one transferrable development right is allocated for every five acres of non-environmentally constrained land. Other programs look solely to the lost development potential of a sending zone parcel. Thus, if ten homes could have been developed on a sending zone parcel consistent with local development regulations prior to establishment of the TDR program, and after program implementation only one home could be built, then the property is allocated nine credits reflecting the nine homes that cannot be built.

In the context of establishing a Highlands TDR Program allocation method, the distinct and uneven real estate markets that exist within the Highlands Region present a challenge to uniformly allocating credits. From north to south and from east to west in the Highlands Region, land values and real estate development markets vary significantly. Whereas New Jersey based TDR programs in the Pinelands and in Chesterfield Township assigned credits uniformly, based primarily on the land based development potential of a given parcel, such an approach is problematic in the Highlands. The Highlands Region does not enjoy the relatively uniform land values that existed in the Pinelands

¹ Under the Highlands TDR Program, transferrable development rights are called Highlands Development Credits ("HDCs").

Preservation Area in the 1980's or the generally similar values that can exist within a single municipality.

Within the vast Highlands Region, a development right in one county may vary significantly from the value of a development right in another. So, while assigning credits on a uniform basis, tied to the development potential of the land (soils, building constraints, underlying pre-Highlands zoning, etc.) is attractive for its simplicity, such an approach does not provide a means to reflect the influence of varied markets on the value of credits. This creates a level of inequity and it also creates a real market imbalance. In a TDR market where the value of a credit to a developer is the same wherever it is used, credit buyers will tend to seek out sending zone credits in lower land-value markets.

In light of this challenge, staff proposes that the allocation of Highlands Development Credits ("HDCs") for residentially zoned property use a hybrid approach. Specifically, staff recommends that HDCs be allocated on the basis of lost development potential but adjusted for relative differences in land value occasioned by property location and the type of development that could have been constructed onsite prior to enactment of the Highlands Act. Consequently, the formula for allocating HDCs to residentially zoned eligible parcels is expressed as: **(Net Yield) x (Zoning Factor) x (Location Factor) = HDC Allocation**. Each element of this method is discussed below.

Net Yield

The starting point for allocating HDCs to eligible parcels begins with a determination of a parcel's lost development potential (Net Yield). Lost development potential is determined by first examining the land use and environmental regulations applicable to the subject parcel in light of the size of the parcel and what development may already exist there (pre-Highlands Act development yield). Then, the determination of lost development potential must also account for what development potential remains after applying the provisions of the Highlands Act, the Department of Environmental Protection's Preservation Area rules, and the standards of the Highlands Regional Master Plan.

An example illustrates this determination. Assume prior to passage of the Highlands Act, an undeveloped five-acre lot in the Preservation Area is residentially zoned at one single family house per acre. Assume further that, due to wetlands present on the lot, one acre cannot be developed. This results in four acres being available for development prior to enactment of the Highlands Act. After passage of the Highlands Act, only one single family house may be built on the lot under the exemption for construction of a single family house on a lawfully existing lot that was in existence on August 10, 2004. In this example, the lot would have lost 3 single family housing opportunities as a result of the Highlands Act (4 acres at 1 unit/acre minus 1 unit under exemption = 3 lost units).

Net Yield Bonus

An important consideration in allocating HDCs to an eligible sending zone parcel is determining whether the parcel will receive a bonus. Under the Highlands TDR Program policies, a sending zone parcel is eligible to receive a bonus where a landowner chooses not to exercise an applicable Highlands Act exemption. The purpose of providing a bonus to the allocation is to encourage property owners not to exercise an applicable exemption.

Staff recommends that parcels located in a High Value conservation priority area or agricultural priority area receive a 25% bonus to their net yield when not exercising an exemption. Thus, if a parcel has a net yield of 10 lots, and is located in a High Value conservation priority area, the resulting net yield increases to 12.5 lots. For parcels located in a Moderate Value conservation priority area or agricultural priority area, staff recommends that they receive a 15% bonus to their net yield where the landowner chooses not to exercise an applicable exemption.

Zoning Factors and Location Factors

Next, to account for the Highlands Region's real estate market variability and differences in value of unit types, staff developed two market adjustment factors for use in HDC allocations to residential properties: Zoning Factors and Location Factors. The Zoning Factors (ZF) serve as regional adjustment factors recognizing that the value of the land varies according to the type of residential development that could have been constructed on the property prior to the Highlands Act consistent with municipal zoning. The Location Factors (LF) recognize that the per unit value of land varies by location within the Highlands Region.

Staff developed the Zoning Factors by first calculating the average equalized assessed lot value for seven of the residential composite zones for each municipality in the Highlands Region.² These municipal values are reflected on the county worksheets listed in **Appendix B** titled "**Regional Zoning Factors.**" Next, using these municipal values, staff then determined the average lot value for each county. From this data, staff then calculated a regional lot value for a given residential composite zone. The regional lot values per residential composite zone are reflected on the first worksheet of Appendix A. To establish the regional Zoning Factors based upon the regional composite zone lot values, staff identified the most prevalent residential zoning type in the Highlands Region, which is the Low Density Residential Composite Zone.³ The average density within this composite zone is 0.76 units per acre representing minimum lot sizes that range between 1 to 2 acres. Staff set the Zoning Factor for this composite zone at 1.00. Staff then determined the relative differences in regional lot value for each of the other six residential composite zones by dividing the regional lot value for a given composite zone by the regional lot value of the Low Density Residential Composite Zone, which is \$200,129.34. The resulting regional Zoning Factors are shown on the first worksheet of **Appendix B**.

Staff developed the Location Factors by first calculating the average equalized assessed land value per acre for residentially developed parcels in the Highlands Region.⁴ To start this process, staff

² For purposes of establishing the Zoning Factors, Highlands Council staff used 2005 MOD-IV tax assessment data for Class 2 parcels (residentially developed parcels) received from the New Jersey Treasury Department, Division of Taxation. The data is derived from real property tax assessment information submitted by municipal tax assessors to the Division of Taxation. Information contained in the 2005 MOD-IV data is for the period January 10, 2004 through January 9, 2005.

³ The average density within this composite zone is 0.76 units per acre representing minimum lot sizes that range between 1 to 2 acres.

⁴ For purposes of establishing the Location Factors, Highlands Council staff also used 2005 MOD-IV tax assessment data for Class 2 parcels (residentially developed parcels) received from the New Jersey Treasury Department, Division of Taxation.

separated the residential parcels into seven distinct density types based upon observed lot size ranges consistent with the residential composite zones developed by Highlands Council staff. The lot size categories are as follows:

<u>Category</u>	<u>Lot Size Range</u>
Category A	> 10 Acres
Category B	> 5 to 10 Acres
Category C	> 2 to 5 Acres
Category D	1 to 2 Acres
Category E	0.5 to < 1 Acres
Category F	0.33 to < 0.5 Acres
Category G	0.125 to < 0.33 Acres

Using these categories, staff then segmented the parcels by county, municipality, and ultimately equalized assessed land value per acre. From this data, representing over 200,00 records, staff excluded the top 5% and bottom 5% of all parcel records for each category for purposes of ensuring data confidence. Additionally, each municipality with less than 3 parcels records for a given category was excluded to ensure sufficient sample size.

Working from these data sets, the Average Equalized Assessed Land Value per Acre (Average ELV/Acre) per municipality was calculated for each of the seven residential categories. To divide each class into tiers, deviations of 50% of the Average ELV/Acre per municipality was then calculated. This was done by multiplying the lowest Average ELV/Acre by 1.5. This established the ranges for each tier. Once the ranges were determined, the municipalities were then assigned a tier number based upon where that municipality's Average ELV/Acre fell within the ranges established. Tier No. 1 is the tier with the lowest range of Average ELV/Acre. Once each municipality was assigned to the appropriate tier, the Weighted Average ELV/Acre for that tier was then calculated.

After establishing the Weighted Average ELV/Acre for each tier within a residential category, staff calculated the Location Factor by dividing the Weighted Average ELV/Acre for each tier by the Weighted Average ELV/Acre for the lowest tier in that class. The data and calculations performed to derive the LFs are set forth in **Appendix C** titled "**Location Factors.**"

Appendix D titled "**Sample Residential Allocation Calculations**" provides examples of how the above allocation formula is applied, including an example applying a 25% bonus to net yield.

Non-Residential Allocation Method

The Highlands TDR Program permits the allocation of HDCs to eligible, non-residentially zoned parcels. The basis for allowing such allocation is that non-residentially zoned parcels have fewer options than residentially zoned property for extracting equity out of these lands. Additionally, staff has envisioned since program inception that HDCs could be used for residential and non-residential development in designated receiving zones.

Very few TDR programs allocate transferrable development rights to non-residentially zoned property. The few examples found by the Highlands Council staff were not appropriate given the types of non-residential property that are to be included in the Highlands TDR Program. Moreover,

in the programs where such allocation occurs, transfers may only occur between non-residentially zoned sending and receiving zones.

Working in conjunction with the Highlands Council's consultant Integra Realty Resources ("Integra"), staff set out to develop a non-residential allocation method that incorporates the same elements developed for the residential allocation method, namely lost development potential adjusted for market conditions. In developing this method staff considered several important circumstances. First, there are less than 3,500 disreect acres of undeveloped non-residentially zoned land in the Highlands Preservation Area. Second, consolidation of non-residential parcels further reduces the number of disreect property owners affected, and relative to the overall scale of the residential impacts, the non-residential formula is likely to be applied in far less instances, and is unlikely to be immediately required for hardship. Third, staff specifically acknowledges that non-residential properties not currently developed do not have an applicable Highlands Act exemption, and therefore, the allocation method must be broadly applicable, even though a specific non-residential property may not be considered "prime" in terms of location and physical characteristics.

In light of these considerations, staff recommends an allocation method for non-residentially zoned property that considers lost development potential and unit values for different types of non-residential uses. This allocation method is expressed in the following formula: **(Permitted Square Footage) ÷ (Non-Residential SF for Specified Use) x (30% Discount) = HDC Allocation.** Each element of this method is discussed below.

Permitted Square Footage

Based upon the assistance of Integra, staff recognizes that the functional variables typically used to value non-residential property is the potential building square footage that a specific property can yield. This is generally calculable within the context of local zoning requirements, adjusted for all ordinary physical constraints, and specifically with parking ratios and lot coverage requirements considered. Consequently, in determining a non-residentially zoned parcel's development yield, staff must consider parcel size, the applicable Floor Area Ratio ("FAR"), parking requirements and whether the parcel is subject to environmental constraints.

Non-Residential SF for Specified Use⁵

Similar to the Zoning Factors developed for the residential HDC allocation, staff recommends the use of a factor that recognizes different types of non-residential development have different underlying land values.

⁵ Unlike the residential uses that typically have a high degree of variation in the underlying land values because of the disparity in end unit housing prices (driven by schools, taxes, existing development patterns, etc.), non-residential uses are primarily affected by demand for non-residential space. Consequently, across the Highlands Region, non-residential unit values expressed on a dollar per FAR (buildable square foot) basis tend to bracket a relatively tight range. As such, location factors are not inherently required when one considers that general non-residential rent levels will be a function of demand, and that relative demand should be considered a constant given the limited number of non-residential property owner's affected.

Integra undertook a study of their existing non-residential land database, land records within CoStar and other subscription comps services, and considered the broad non-residential experience of the Integra professionals who specialize in non-residential valuation. Based upon this information, Integra recommended that the non-residential allocation method adopt an understanding of the land values on a dollar per square foot FAR (“\$/SF FAR”) basis generally in accordance with the following matrix:

<u>Use</u>	<u>\$/SF FAR Range</u>	<u>Average \$/SF</u>	<u>Ratio</u>
Industrial	\$10 - \$20 FAR	\$15/SF	1.0
Office	\$20 - \$40 FAR	\$30/SF	2.0
Retail	\$25 - \$60 FAR	\$42.50/SF	2.83

A “conversion factor” should then be applied based on the type of non-residential use. Industrial uses tend to support employees at a ratio of 1 per 1,500 SF. This becomes the basis for establishing the conversion factors to account for value/price variations in non-residential end use. Consequently, HDCs are allocated to the above uses at the following square foot intervals:

$$\text{Industrial Use} = (1,500/1 = 1,500) = 1,500 \text{ SF}$$

$$\text{Office Use} = (1,500/2 = 750) = 750 \text{ SF}$$

$$\text{Retail Use} = (1,500/2.83 = 530) = 530 \text{ SF}$$

Thirty Percent Discount

Importantly, because the non-residentially zoned parcels to be allocated HDCs are undeveloped, a discount must be applied that recognizes that the above conversion ratios are based on typical prices of approved non-residential development, or development subject to approvals. Therefore, a 30% discount is applied to adjust for lack of approvals.

The examples below illustrate how the non-residential allocation formula is applied in the case of a building that is 10,000 square feet in size.

$$10,000 \text{ SF industrial building} \div 1,500 \text{ SF} \times 0.70 = 4.66 \text{ HDCs}$$

$$10,000 \text{ SF office building} \div 750 \text{ SF} \times 0.70 = 9.33 \text{ HDCs}$$

$$10,000 \text{ SF retail building} \div 530 \text{ SF} \times 0.70 = 13.2 \text{ HDCs}$$