TDR Viability in Linn County

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Field Problems in Planning 102:209
Graduate Program in Urban and Regional Planning
The University of Iowa

April 24, 1998
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University of Iowa
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# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgments</td>
<td>ii</td>
</tr>
<tr>
<td>List of Tables and Maps</td>
<td>iv</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>v</td>
</tr>
<tr>
<td>The Fundamentals of Transferable Development Rights</td>
<td>1</td>
</tr>
<tr>
<td>Legal Authority to Implement TDRs</td>
<td>3</td>
</tr>
<tr>
<td>Regulatory Takings and TDR Programs</td>
<td>5</td>
</tr>
<tr>
<td>Partial Takings and Sending Participants</td>
<td>5</td>
</tr>
<tr>
<td>Partial Takings and Developers (Receiving Participants)</td>
<td>7</td>
</tr>
<tr>
<td>Land Use Goals and Policies in Linn County, Iowa</td>
<td>8</td>
</tr>
<tr>
<td>Current Development Patterns</td>
<td>10</td>
</tr>
<tr>
<td>Possible Program Features</td>
<td>12</td>
</tr>
<tr>
<td>Possible Sending and Receiving Area Criteria</td>
<td>12</td>
</tr>
<tr>
<td>CSR and Other Environmental Concerns</td>
<td>13</td>
</tr>
<tr>
<td>Public Infrastructure</td>
<td>15</td>
</tr>
<tr>
<td>TDR Impacts Upon Landowner Rights</td>
<td>17</td>
</tr>
<tr>
<td>Current Landowner Rights</td>
<td>17</td>
</tr>
<tr>
<td>Landowner Rights Under a TDR Program</td>
<td>17</td>
</tr>
<tr>
<td>Requirements for a Successful Program</td>
<td>19</td>
</tr>
<tr>
<td>Community Support for Land Use Goals</td>
<td>19</td>
</tr>
<tr>
<td>Clearly Identified Sending and Receiving Areas</td>
<td>20</td>
</tr>
<tr>
<td>TDR Market Potential</td>
<td>20</td>
</tr>
<tr>
<td>Secure Legal Foundations</td>
<td>20</td>
</tr>
<tr>
<td>Administrative and Funding Resources</td>
<td>21</td>
</tr>
<tr>
<td>Recommendations</td>
<td>23</td>
</tr>
<tr>
<td>Bibliography</td>
<td>25</td>
</tr>
</tbody>
</table>
List of Tables and Maps

**Tables:**

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Land Platted in Linn County, IA: FY93 – FY97</td>
<td>10</td>
</tr>
<tr>
<td>Table 2</td>
<td>Total Acreage Platted FY 1997</td>
<td>10</td>
</tr>
<tr>
<td>Table 3</td>
<td>Demographic Characteristics of Linn County Planning Areas</td>
<td>11</td>
</tr>
<tr>
<td>Table 4</td>
<td>Land Capability Classification</td>
<td>14</td>
</tr>
</tbody>
</table>

**Maps:**

<table>
<thead>
<tr>
<th>Map</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map 1</td>
<td>Spring Satellite Image for Linn County, IA</td>
</tr>
<tr>
<td>Map 2</td>
<td>Linn County Planning Areas</td>
</tr>
<tr>
<td>Map 3</td>
<td>Corn Suitability Ratings for Linn County, IA</td>
</tr>
<tr>
<td>Map 4</td>
<td>Land Capability Classification</td>
</tr>
<tr>
<td>Map 5</td>
<td>Flooding Frequency for Linn County, IA</td>
</tr>
<tr>
<td>Map 6</td>
<td>Highly Erodible Land in Linn County, IA</td>
</tr>
<tr>
<td>Map 7</td>
<td>2020 Transportation Plan Study Area and Proposed Improvements</td>
</tr>
</tbody>
</table>
Executive Summary

Linn County is interested in utilizing a Transfer of Development Rights (TDR) program in the fringe area around Cedar Rapids to preserve agricultural lands, promote contiguous development, ensure efficient use of infrastructure and protect property rights. Prior to enlisting a consultant, the county would like to determine if it is ripe for the introduction of a TDR program.

TDR programs allow municipalities to achieve land use goals by allowing owners of land the community wishes to protect to transfer their development rights to those developers seeking to build in identified growth areas. The program seek to create "win-win-win" outcomes whereby (1) the sending site owner is able to continue using their land while capitalizing upon the development potential of that land; (2) the receiving site owner is able to increase development density and profits; and (3) the community is able to preserve desired land uses without costly purchases. (Pruetz, 3)

Our task was to determine the suitability of and potential obstacles to the implementation of a TDR program in Linn County. Our analysis examines the current legal context for planning and zoning in Linn County, the articulated land use goals of the county, and the current land use patterns in Linn County. The analysis suggested possible criteria for sending and receiving areas and a series of ways a TDR program could be used to achieve the county’s land use goals. In addition, we explored the conditions necessary for introducing a TDR program. Finally, we compared the cost of implementing a TDR program with the cost of adapting the current land use regulatory program to better meet land use objectives.

The four most important land use goals identified by our investigation are the preservation of agricultural land, the management of growth based upon service levels, the encouragement of growth adjacent to existing development, and the preservation of landowner and developer property interests.

Subsequently, we suggested that a TDR program in Linn County would feature sending areas with high agricultural value, low service provision levels, and located away from incorporated areas. Receiving areas would be located in close proximity to incorporated areas and service lines and have a low agricultural value.

TDR programs could be used in Linn County to induce agricultural landowners to retire their development rights while allowing residential developers to increase profits through increased densities. However, our analysis revealed four potentially serious obstacles to the success of a TDR program in Linn County, Iowa: the absence of
information on future utility service locations and capacities, the uncertainty surrounding public support for proactive land use controls, the lack of TDR enabling legislation and the need for additional staff resources to design and administer the program. The first obstacle, the absence of information on utility locations, is particularly prohibitive because such data is necessary for the identification of both receiving areas and allowable densities. Without such information, the adoption of a TDR program would be fatal.

Subsequently, we do not recommend that the county enlist the services of a consultant to design a TDR program at this time. Rather we suggest that the county:

♦ Begin a public education campaign which links the loss of agricultural land to sprawl development.
♦ Conduct a survey to determine what level of land use control the community would exchange for agricultural preservation, high levels of utility service and orderly development.
♦ Solicit support of developers and agricultural community for proactive land use policies designed to serve those goals.
♦ Develop a more detailed understanding of the location and capacity of future utility lines.
♦ Revise the county land use plan and zoning ordinance to reflect the county's commitment to actively promoting orderly development and agricultural preservation.
♦ Seek TDR enabling legislation.
♦ Consider use of TDRs to compensate landowners for restrictive zoning regulations and encourage agricultural landowners to voluntarily retire development rights.
A transfer of development rights (TDR) program attempts to balance a community's preservation and growth goals by managing the use of property "development rights" through a community's zoning ordinance. In a TDR program, a community identifies those land uses or community assets it is interested in preserving and those areas where it is interested in promoting development. The types of areas designated for preservation typically include agricultural land, historic sites, wetlands and other unique heritage areas. Whereas the areas designated for development often include sites where excess capacity exists in the transportation, water and sewer systems, and where schools and fire protection can be adequately provided. Usually these areas are in close proximity to incorporated areas.

Development rights are one of a bundle of rights associated with property ownership. That bundle includes the right to air and water falling upon the parcel, to use or sell the land, to pass it along to heirs, to exclude others, and to develop the land. Such rights may be individually sold, leased, or donated at the discretion of the owner.

In a Purchase of Development Rights program (PDR), a predecessor of TDR, "a government agency or land trust purchases the development rights from a particular property, which is then restricted to agriculture or open space, and the development rights are 'retired' through the deed of easement." In TDR programs, private developers purchase development rights from individual landowners in order to qualify to build additional units upon a parcel above that allowed under normal zoning regulations.

A local government may create a market for development rights through either a mandatory or voluntary program. In a mandatory program, the government identifies sending areas designated for preservation and re-zones the land in that area to prevent development while allowing some economically viable use of the land to continue. In order to compensate the owner for the change in development potential, the locality issues transferable development rights "tickets" to landowners in the sending areas based upon the number of acres owned. Simultaneously, "the government identifies 'receiving' areas and requires that developers who wish to build at increased densities in the receiving area first purchase a set number of development rights tickets from the landowners in the sending areas." By facilitating the sale of sending-area development rights, local governments can ensure that landowners in sending areas are compensated for any economic loss that they might otherwise have incurred.
Under a voluntary program, sending-area landowners are not required to sell their development rights. Rather, the land is rezoned to allow some, although limited, development potential. In order to induce sending-area landowners to sell their development rights to developers of the receiving areas, local governments allow sending-area landowners an increased number of transferable development rights tickets if they are transferred.

Those sending-area landowners who sell their development rights give up their right to develop their land by placing a development restriction upon their deed in exchange for payment. The landowners retain all of the other rights and responsibilities associated with their land including the right to sell and their obligation to pay property taxes. "While the government owns the deed restriction, the land remains private property and no public access is allowed."³

In the case of agricultural landowners, the benefits of selling their development rights are numerous: farmers may obtain cash from their land to pay off debts, set up a retirement fund or reinvest in the farm operation. The owners may retain their farm or family's way of life without suffering the pains of being land rich and cash poor. In addition, a farm with no development rights remaining may have lower tax assessments and may reduce the value of a farm for estate tax purposes. Finally, because the speculative value of farmland has been removed, the farmers help ensure that farmland parcels will remain affordable for the next generation of farmers.

Developers are allowed to purchase development rights from the sending area and use them to build at higher density levels in the receiving areas. As in a private market, prices are determined by developers' bids and landowners' asking prices. In Montgomery County, Maryland, which has used a TDR program since 1980 to preserve valuable agricultural and open space resources, initial TDR prices were about $600 per acre. Currently, the development rights average approximately $3,000 per acre, with some rights selling in the range of $5,000 to $10,000 per acre. In the Pinelands of New Jersey, where development pressures are far less, TDRs have recently sold for slightly over $500 per acre. In either event, the opportunity to increase the profitability of a development parcel through appropriate increases in density creates a powerful incentive for the purchase of development rights.
Legal Authority to Implement TDRs

Local authority to implement TDR programs is derived from a state's police power, which allows states to regulate land uses to protect the health, safety and welfare of the public. All fifty states have delegated this authority to local governments through the power to zone and plan. Local authority to implement TDR programs also rests upon the delegation of police power. A state may specifically delegate the authority to implement TDR programs to local governments, often in conjunction with state zoning enabling legislation. In other cases, localities may infer authority to implement TDR programs based upon their utilization of existing zoning authority, the absence of legislation restricting the use of TDR programs, and home rule provisions.

Rick Pruett summarized the extent to which states with TDR programs had enacted TDR legislation in his 1997 book, Saved by Development. He identified twenty-one states with TDR legislation: California, Colorado, Connecticut, Delaware, Florida, Idaho, Kansas, Kentucky, Louisiana, Maryland, Nevada, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Dakota, Tennessee, Vermont and Washington. However, a national survey revealed that nine of these states had not implemented any TDR programs (Delaware, Idaho, Kansas, Kentucky, New Hampshire, North Carolina, Rhode Island, South Dakota and Tennessee). Strikingly, more programs existed in states without specific TDR legislation than those with legislation. Thirteen states have TDR programs in the absence of specific TDR legislation: Arizona, Georgia, Illinois, Maine, Massachusetts, Michigan, Minnesota, Montana, Oregon, South Carolina, Texas, Virginia, and Wyoming.

With regard to sending area landowners, local governments must have the authority to reduce allowable densities through zoning ordinances, to provide compensation through development rights allocations and/or augmentation, and to purchase and sell development rights in the capacity of a TDR bank. With respect to receiving sites, local governments would seek authority to adjust allowable densities for residential development, to purchase and sell development rights, and to require development rights purchases to achieve increased densities.

The legal authority for Linn County, Iowa to establish land use zones and regulate uses within such zones is provided for in Chapter 335 of the Iowa Code. It provides:

Subject to section 335.2 [which exempts land and buildings dedicated to farmer farm related activities from the provisions of the chapter] the board of supervisors may by ordinance regulate and restrict the height, number of structures, the
percentage of lot that may be occupied, the size of yards, courts, and other open
spaces, the density of population, and the location and use of buildings, structures
and land for trade, industry, residence, or other purposes, and may regulate, restrict,
and prohibit the use for residential purposes of tents, trailers, and portable or
potentially portable structures. However, such powers shall be exercised only with
reference to land and structures locates within the county but lying outside of the
corporate limits of any city.

Furthermore, Iowa Assistant Attorney General Weeg stated in Opinion No. 83-5-1,
that the county does have authority pursuant to home rule to exercise zoning provisions that
are not expressly governed by §335.2 and are not expressly inconsistent with the provisions
of that chapter. Home rule authority, granted to Iowa counties by the legislature in Iowa
Constitution, art. III, §39A, allows counties to exercise home rule authority whenever it is
"not inconsistent with the laws of the general assembly." Under §331.301(4) an exercise of
county power is not inconsistent with a state law "unless it is irreconcilable with the state
law."

Authority to require the acquisition and/or dedication of development rights in
exchange for increased density in receiving areas may be inferred from the opinions of the
U.S. Supreme Court in the cases of Nolan v. California Coastal Commission and Dolan v.
City of Tigard. Through these cases, the Supreme Court indicated that local governments
may require the dedication of land or land rights in exchange for development application
approval where the dedication requirement (1) is rationally related to the public interest
being protected or accommodated by the requirement, (2) is proportional to the harm the
development inflicts upon that public interest, and (3) does not force an individual to bear
burdens that in fairness and justice should be borne by the public as a whole.

A carefully designed TDR program in Linn County could meet these criteria by (1)
recognizing the link between the retirement of development rights and preservation of
agricultural land, (2) requiring developers to purchase and retire a set of development rights
that would be proportional to the cost increased densities place upon open space and
agricultural communities, and (3) spreading the cost of open space and agricultural loss
among all developers through zoning ordinances.
Regulatory Takings and TDR programs

A taking of property without just compensation is prohibited under the fifth and fourteenth amendments of the U.S. Constitution and are thus a matter of Federal Law. A taking may result from confiscation of property or through regulatory action. Falling under the latter, a TDR program is subject to two types of takings challenges: (1) a ‘facial’ challenge contending that the TDR program is itself a compensable taking and, (2) a challenge contending that the application of a TDR program in a particular case constitutes a taking without just compensation. Ripeness of such claims is a reference to the conditions that must be satisfied before such claims may be heard by courts.

As with any regulatory action, facial challenges to a TDR program are unlikely to succeed because of the heavy burden imposed on claimants in such cases and the need to overcome the presumption of validity of government action. However, such actions are ripe from the moment a regulatory program is enacted.

The second type of takings challenge can be subdivided into two main categories: categorical and partial takings. Such claims are generally ripe after all administrative remedies have been pursued. A categorical taking occurs when a government action results in loss of ‘substantially all value’ or all economically viable use of the land. This is unlikely to occur in the context of a TDR program because TDR programs generally do not result in interference with agricultural uses; there is thus no need to consider categorical takings in connection with a TDR program.

Partial takings occur in the case of a diminution in value less than ‘nearly all value’ but more than is reasonably necessary to achieve a government purpose. The threshold point for finding a partial taking is even more loosely defined than a categorical taking. The courts handle such claims on a case-by-case basis applying an ‘ad-hoc balancing test’ that takes three factors into account: (1) arbitrariness of the government action; (2) loss of economic viability; and (3) interference with reasonable investment backed expectations. Of the preceding factors, the third is the most important for a TDR program.

Partial Takings and Sending Participants

Unless the participants on the sending site are voluntarily giving up their development rights in exchange for the development credits, the regulatory nature of such a program makes it subject to a partial takings claim. A landowner may try to assert that he has invested in the land with the expectation that someday he could profit by developing his
land for residential and/or other non-agricultural uses. This is particularly a problem since
the language ‘investment backed expectations’ gives the landowner a better case when he
invests in a manner adverse to agricultural use.

It is reasonable to anticipate two types of claims that could be made by sending
participants in a TDR program. The first would involve a claimant whose land does not
meet the rezoning criteria and which is usually not subject to strong demand by developers.
Landowners in this situation have little motivation to litigate and little chances of success.
But note that though this class of landowners may be ideal from a legal standpoint, land not
immediately threatened by development may not be—and indeed often is not—ideal for
designation for participation in a TDR program.

The second would involve landowners whose land is under demand pressure for
development in addition to other market circumstances (decline in prices of agricultural
commodities etc.) that could make it economically attractive to abandon agricultural uses.
In such a case, the landowner may perceive that the value of the development credit he
receives would not reflect substantially the development potential of his land. This gives
the landowner a strong incentive to litigate and/or invest in a manner detrimental to
agriculture.

Because a TDR program involves creating a market for the development credits, it
is important to ensure adequate demand for the development credits. This can be done by
setting the base density and defining the receiving area in light of the forecasted demand on
development. As an added protection against takings, a procedure may be established
whereby the county guarantees purchase of rights in case of market failure. Such market
support measures, especially in the beginning stages of a TDR program, are detrimental. It
is also important to ensure fairness when determining the various transfer ratios for the
different classes of sending participants.

However, given a determination that a TDR program is permitted under state law
on a non-voluntary basis, a reasonable diminution in land value by participants does not
necessarily result in a taking. This is not to de-emphasize the importance of (1) ensuring
that the market value of the development credits at the time they are granted do not fall
much below the actual value of the land if it were developed and (2) classifying sending
participants according to market interests.

Lastly, there are two important points to consider with regard to takings claims.
One point is that in the landmark case of Suitum v. Tahoe Planning Agency, it was
determined that TDRs are considered when addressing the question of whether there has
been a taking—as opposed to when considering whether there has been just compensation.
This subtle difference seems to cut in favor of the government in such claims because it may
allow the government to preclude a takings claim altogether pursuant to Suitum and Penn Central. For further discussion of this issue see Suitum’s concurring opinion. The other point to consider is that takings litigation is largely a political issue as shown in the divided Supreme Court opinions. Therefore, realism dictates that a certain degree of uncertainty must be accounted for when considering takings litigation.

**Partial Takings and Developers (Receiving Participants)**

Developers and landowners of the designated receiving area would only be able to bring a takings claim if the implementation of the program requires downzoning of their property. In this situation a developer will have to buy whatever density he had before the downzoning by purchasing TDRs. In the cases where downzoning is necessary, it is helpful to ensure that the developer can buy more density than was available to him before the downzoning at an attractive price.

For example, a typical TDR program might assign a ratio of 1 TDR for every 5 acres of property taken out of development. Each TDR represents a right to construct 1 additional dwelling unit over the base maximum density in the receiving area. Thus, a developer with a base maximum density that permitted 100 units who purchased 25 TDRs could develop 125 units on the same amount of land. If lots cost $50,000 and each TDR unit costs $10,000, the developer is accorded increased density, at a savings of $40,000 per unit. As long as downzoning of the receiving area in the context of a TDR program bears a ‘reasonable relationship’ or ‘nexus’ to a legitimate public purpose, such actions will not constitute a taking.

The point to be made with regard to receiving areas is that efficient regulation of the market is important for two reasons. First, regulation may help avoid claims of a taking without just compensation. Second, a successful market for TDRs may come at a hidden cost when considering the costs associated with allowing increased densities for residential development in the receiving area (e.g., public services, schools, etc.).
Land Use Goals and Policies in Linn County, Iowa

Land use goals for the state of Iowa are carefully articulated in Chapter 352 of the Iowa Code which describes the purpose of County land preservation and use commissions. It provides:

It is the intent of the general assembly and the policy of this state to provide for the orderly use and development of land and related resources in Iowa for residential, commercial, industrial and recreational purposes, preserve private property rights, protect natural and historic resources and fragile ecosystems of this state including forests, wetlands, rivers, streams, lakes and their shorelines, aquifers, prairies and recreational areas to promote the efficient use and conservation of energy resources, to promote the creation and maintenance of wildlife habitat, to consider the protection of soil from wind and water erosion and preserve the availability and use of agricultural land for agricultural production, through processes that emphasize the participation of citizens and local governments.

The general assembly recognizes the importance of preserving the state's finite supply of agricultural land. Conversion of farmland to urban development, and other non-farm uses, reduces future food production capabilities and may ultimately undermine agriculture as a major economic activity in Iowa.

Similar objectives are articulated in the statement of objectives under Section 335 authorizing county zoning:

The regulations shall be made in accordance with a comprehensive plan and designed to preserve the availability of agricultural land; to consider the protection of soil from wind and water erosion; to encourage efficient urban development patterns; to lessen congestion in the street or highway; to secure safety from fire, flood, panic, and other dangers; to protect health and general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to promote the conservation of energy resources; to promote reasonable access to solar energy; and to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements.

A survey of Linn County land use policy statements revealed a similar set of land use goals. The 1997 Linn County Land Use Plan, the (DRAFT) Rural Land Use Plan, and the Cedar River Corridor Plan advocate the preservation of agricultural land; the management of growth based upon service levels; the preservation of land owner and developer property interests; the encouragement of growth adjacent to existing development; the protection of water quality; pollution control; the protection of critical areas including unique or sensitive natural areas, erodible soils, and flood plains; the
maintenance of buffer areas between incompatible uses; energy conservation; in-fill
development and re-development of urban areas.

Based upon our discussions with the Linn County planning staff, our project focused
upon the ability of TDR programs to aid in the preservation of agricultural land, the
management of growth based upon service levels, the encouragement of growth adjacent to
existing development, the protection of sensitive areas, and the preservation of land owner
and developer property interests.
Current Development Patterns

After a decade of stagnant growth during the 1980s, Linn County is again experiencing an upward swing in its population. Residential development of large single family lots is occurring at a rapid rate, and roughly 1,000 acres of agricultural land is being converted to other uses each year.\textsuperscript{14} As residents are becoming more aware of the costs associated with urban sprawl, they are showing increased interest in preserving agricultural land. At public visioning meetings held during the summer of 1997, preservation of farmland was voted a top priority by each of the six planning areas.

Tables 1 and 2 indicate the amount of growth that has occurred in Linn County over the past five years. Most of the growth has taken place outside the two-mile extraterritorial jurisdiction on converted prime agricultural land. Over the period under consideration 3,931.25 acres have been platted with an average lot size of 4.63 acres, and 1,997.46 acres have been rezoned from agricultural land to residential zones. In 1997 alone 79.4\% of the land platted within 2 miles of the incorporated city limits and 90.9\% of the land platted over 2 miles from the city limits was in areas designated as prime agricultural areas.

\textbf{Table 1. Land Platted in Linn County, IA: FY93 – FY97}

<table>
<thead>
<tr>
<th></th>
<th>FY93</th>
<th>FY94</th>
<th>FY95</th>
<th>FY96</th>
<th>FY97</th>
<th>Total</th>
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<tr>
<td># of Acres Platted</td>
<td>636.00</td>
<td>870.28</td>
<td>908.18</td>
<td>900.77</td>
<td>620.02</td>
<td>3,931.25</td>
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<tr>
<td># of Acres Rezoned from Agricultural</td>
<td>262.72</td>
<td>377.83</td>
<td>505.68</td>
<td>455.05</td>
<td>396.18</td>
<td>1,997.46</td>
</tr>
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<td>Avg. lot size in Acres</td>
<td>6.58</td>
<td>4.31</td>
<td>3.72</td>
<td>5.85</td>
<td>4.03</td>
<td>4.63</td>
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\textbf{Table 2. Total Acreage Platted FY 1997}

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<tr>
<th></th>
<th>Within 2 miles of Incorporated City Limits</th>
<th>Percent</th>
<th>Over 2 miles Outside Incorporated City Limits</th>
<th>Percent</th>
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<tr>
<td>Total # of Acres</td>
<td>364.72</td>
<td>100%</td>
<td>441.72</td>
<td>100%</td>
</tr>
<tr>
<td># of Acres in Designated Prime Residential Areas</td>
<td>74.96</td>
<td>20.6%</td>
<td>40.28</td>
<td>9.1%</td>
</tr>
<tr>
<td># of Acres in Designated Prime Agricultural Areas</td>
<td>289.76</td>
<td>79.4%</td>
<td>401.44</td>
<td>90.9%</td>
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</table>

Note: The total amount of acres platted shown in Table 2 does not match Table 1 due to an annexation that occurred while this data was being prepared. These tables were taken from materials prepared by Linn County staff.

Comparing the age of the housing stock by census tract also provides an indication of the areas experiencing the greatest growth. In March 1990 there were 14,886 housing
units in Linn County outside incorporated city limits. Approximately 1,940 of these housing units, or 13.0%, were built between 1980 and March 1990. Within this group 41.6% of the housing units were built in two of 21 census tracts. (See Map 1 for general development pattern.)

Table 3 provides information on the specific planning areas within Linn County. This data excludes Cedar Rapids, Marion and Hiawatha, and simply provides some demographic material for the six planning areas. (See Map 2 for the boundaries of each planning area.)

Table 3. Demographic Characteristics of Linn County Planning Areas

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<thead>
<tr>
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<th>NW</th>
<th>CE</th>
<th>CW</th>
<th>SE</th>
<th>SW</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Persons</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural Total</td>
<td>4,184</td>
<td>5,676</td>
<td>4,953</td>
<td>4,239</td>
<td>5,969</td>
<td>4,070</td>
<td>29,091</td>
</tr>
<tr>
<td>Farm</td>
<td>681</td>
<td>807</td>
<td>538</td>
<td>401</td>
<td>638</td>
<td>446</td>
<td>3,511</td>
</tr>
<tr>
<td>Non-farm</td>
<td>3,503</td>
<td>4,869</td>
<td>4,415</td>
<td>3,838</td>
<td>5,331</td>
<td>3,624</td>
<td>25,580</td>
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<tr>
<td>Urban Total</td>
<td>0</td>
<td>0</td>
<td>20,727</td>
<td>6,035</td>
<td>3,679</td>
<td>484</td>
<td>30,925</td>
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<tr>
<td>Total</td>
<td>4,184</td>
<td>5,676</td>
<td>25,680</td>
<td>10,274</td>
<td>9,648</td>
<td>4,554</td>
<td>60,016</td>
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<tr>
<td><strong>Rural Sewage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Sewer</td>
<td>801</td>
<td>1,146</td>
<td>274</td>
<td>29</td>
<td>670</td>
<td>288</td>
<td>3,208</td>
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<tr>
<td>Septic Tank</td>
<td>899</td>
<td>1,041</td>
<td>1,414</td>
<td>1,419</td>
<td>1,571</td>
<td>1,148</td>
<td>7,492</td>
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<tr>
<td>Other</td>
<td>34</td>
<td>62</td>
<td>18</td>
<td>52</td>
<td>71</td>
<td>28</td>
<td>265</td>
</tr>
<tr>
<td>Total</td>
<td>1,734</td>
<td>2,249</td>
<td>1,706</td>
<td>1,500</td>
<td>2,312</td>
<td>1,464</td>
<td>10,965</td>
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<td><strong>Housing Units</strong></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>0</td>
<td>0</td>
<td>8,101</td>
<td>2,581</td>
<td>6</td>
<td>198</td>
<td>10,886</td>
</tr>
<tr>
<td>Non-urban</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,033</td>
<td>0</td>
<td>1,033</td>
</tr>
<tr>
<td>Farm</td>
<td>286</td>
<td>276</td>
<td>203</td>
<td>119</td>
<td>235</td>
<td>144</td>
<td>1,263</td>
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<tr>
<td>Non-farm</td>
<td>1,448</td>
<td>1,973</td>
<td>1,503</td>
<td>1,381</td>
<td>2,077</td>
<td>1,320</td>
<td>9,702</td>
</tr>
<tr>
<td>Total</td>
<td>1,734</td>
<td>2,249</td>
<td>9,807</td>
<td>4,081</td>
<td>3,351</td>
<td>1,662</td>
<td>22,884</td>
</tr>
</tbody>
</table>
Possible Program Features

While TDR programs have been recognized as one of the most complex land use planning tools, programs are primarily concerned with two elements: the identification of sending and receiving areas and the definition of landowner rights and responsibilities in each area. In order to provide a glimpse into what a TDR program might look like in Linn County, the following analysis suggests possible criteria for sending and receiving areas and discusses the various rights and obligations Linn County land use owners may possess under a TDR program.

Possible Sending and Receiving Area Criteria

The delineation of sending and receiving areas serves a two-fold purpose in TDR programs. The designation of sending areas allows a community to protect specific land uses or environmentally sensitive areas; while the designation of receiving areas allows the community to direct growth into areas that have adequate public facilities or are compatible with current development patterns.

Several different measures can be used when determining potential sending and receiving areas. In addition to current development patterns which may help communities determine what areas would benefit the most from being designated as receiving areas, a number of environmental features may be useful. For agricultural land, measures of productivity, such as the Corn Suitability Rating (CSR), may be particularly important for determining sending areas. Other environmental factors, such as topography, soil type, and well vulnerability, may also be helpful. For more urbanized land, knowledge of public infrastructure capacities and accepted levels of service may be significant for determining receiving areas.

Currently, Linn County uses CSR to designate primary areas for residential development. The Land Use Plan discourages development of rural land with a weighted CSR above 65 for non-farm uses. However, using a single measure to determine land uses may not be the most appropriate method. A combination of the measures listed above may actually provide the clearest delineation of potential sending and receiving areas.
CSR and Other Environmental Concerns

Corn Suitability Ratings provide a relative ranking from 0 to 100 for all soils based on their potential to be utilized for intensive row crop production. The CSR assume (1) adequate management, (2) no irrigation, (3) artificial drainage where required, (4) no leveling or terracing, and (5) no frequent flooding. Over 67% of the area in Linn County has a CSR of 61 or higher, with over 31% above 80. The highest CSR values (81–100) occur primarily in the area between the Cedar River and the Wapsipinicon River. (See Map 3) Although Linn County has a strong desire to protect this prime agricultural land from development, much of it lies directly north of Marion and Cedar Rapids. It would seem simple enough to direct growth away from this land, but land with a low CSR also tends to have other sensitive environmental features, which limit its development potential.

Another useful index included in the data files of mapped soil units is the Land Capability Classification, which shows the general suitability of soils for most field crops. Soils are grouped into seven classes and three subclasses according to (1) their limitations for field crops, (2) their risk of damage if used for crops, and (3) their response to management. Class 1 soils have practically no limitations on use, and class 7 soils have such severe limitations as to be unavailable for cultivation. The subclasses indicate the major limitation within each class, such as the risk of erosion; water in or on the soil; and shallow, droughty or stony soil. In Linn County over 18% of the land area is very severely limited in some way, and over 5% is unsuitable for cultivation or unavailable for use. The Land Capability Classification is not a substitute for an in-depth analysis necessary for determining sending areas, but it can indicate areas of further study. Table 4 provides a brief description of each class and its approximate percentage of area within Linn County, and Map 4 shows the location of soils in Class 1 and Classes 4-7.
Table 4: Land Capability Classification

<table>
<thead>
<tr>
<th>Land Capability Class</th>
<th>Definition</th>
<th>Percentage of Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>(no class given)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Few limitations restricting use</td>
<td>3.03</td>
</tr>
<tr>
<td>2E</td>
<td>Moderate risk of erosion; moderate limitations on choice of plants or</td>
<td>22.30</td>
</tr>
<tr>
<td></td>
<td>requires some management</td>
<td></td>
</tr>
<tr>
<td>2S</td>
<td>Moderately shallow, stony or droughty; moderate limitations on choice of</td>
<td>4.20</td>
</tr>
<tr>
<td></td>
<td>plants or requires some management</td>
<td></td>
</tr>
<tr>
<td>2W</td>
<td>Moderate amount of water in or on soil; moderate limitations on choice of</td>
<td>22.34</td>
</tr>
<tr>
<td></td>
<td>plants or requires some management</td>
<td></td>
</tr>
<tr>
<td>3E</td>
<td>Severe risk of erosion; severe limitations on choice of plants, requires</td>
<td>19.65</td>
</tr>
<tr>
<td></td>
<td>very careful management or both</td>
<td></td>
</tr>
<tr>
<td>3S</td>
<td>Severely shallow, stony or droughty; severe limitations on choice of plants,</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>requires very careful management or both</td>
<td></td>
</tr>
<tr>
<td>3W</td>
<td>Severe amount of water in or on soil; severe limitations on choice of plants,</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>requires very careful management or both</td>
<td></td>
</tr>
<tr>
<td>4E</td>
<td>Severe risk of erosion; very severe limitations on choice of plants,</td>
<td>3.50</td>
</tr>
<tr>
<td></td>
<td>requires very careful management or both</td>
<td></td>
</tr>
<tr>
<td>4S</td>
<td>Severely shallow, stony or droughty; very severe limitations on choice of</td>
<td>5.69</td>
</tr>
<tr>
<td></td>
<td>plants, requires very careful management or both</td>
<td></td>
</tr>
<tr>
<td>5W</td>
<td>Water in or on soil that is impractical to remove thereby limiting use</td>
<td>3.80</td>
</tr>
<tr>
<td>6E</td>
<td>Severe risk of erosion, making soil generally unsuitable for use</td>
<td>3.20</td>
</tr>
<tr>
<td>6S</td>
<td>Severely shallow, stony or droughty, making soil generally unsuitable for</td>
<td>1.07</td>
</tr>
<tr>
<td></td>
<td>use</td>
<td></td>
</tr>
<tr>
<td>7E</td>
<td>Very severe risk of erosion, making soil unavailable for use</td>
<td>0.91</td>
</tr>
<tr>
<td>7S</td>
<td>Very severely shallow, stony or droughty, making soil unavailable for use</td>
<td>0.38</td>
</tr>
<tr>
<td>7W</td>
<td>Very severe amount of water in or on soil, making it unavailable for use</td>
<td>0.08</td>
</tr>
</tbody>
</table>

There are additional limitations on the availability of land for development. For instance, the frequency of flooding should be considered when siting developments. In Linn County, the areas along the Cedar River and the Wapsipinicon River are frequently flooded, with flooding occurring on average more than 509 times in 100 years. (See Map 5) Another consideration is the erodibility of topsoil. The soil data file includes information on highly erodible lands for Land Capability Classes 4–7. Soil that would have an excessive rate of erosion if cultivated is classified as being highly erodible, potentially highly erodible, or not highly erodible. (See Map 6)

Finally, information on slope and soil composition are important when determining sending and receiving areas. Knowledge of soil composition helps in determining the bearing capacity, internal drainage, erodibility and slope stability of a parcel. William M.
Marsh in *Landscape Planning: Environmental Applications* suggests conducting field tests to answer the following questions:

- Is the material below the surface mainly organic?
- Does water rapidly seep into and eventually fill most of the pit?
- Is buried waste (such as agricultural debris, industrial rubble, municipal garbage, or hazardous waste) present?\(^\text{16}\)

If the answer to any of the above questions is yes, then the site should usually be classified as unsuitable for development. However, these sites might make excellent sending areas. Determining these areas, unfortunately, requires a level of analysis that was beyond the scope of this report. As for determining areas with unsuitable slopes, a limited amount of information was available. Most land uses require slopes of less than 18%, but residential development can occur on slopes as great as 25% depending on the underlying stability of the soil.\(^\text{17}\) The standard soil map number contains information for standard slope classes ranging from 0 to 40%. Only a small percentage of the land area in Linn County has slopes greater than 18% and much of this land lies along the Cedar and Wapsipinicon Rivers.

**Public Infrastructure**

Most residential development in Linn County occurs on large one to three acre lots and most of these homes rely on septic systems. In Linn County land with a low CSR tends to be composed of alluvial soils. These sandy soils, primarily along the Cedar River, tend to drain well and have a high water table. The use of septic systems in these areas is creating a potential water quality nightmare. Although the areas currently designated as prime residential areas do avoid the areas which were recently determined to have the greatest potential of well vulnerability, these vulnerable sites are immediately adjacent to the developing areas. Furthermore, many of the municipal wellheads are located near these septic system developments along the Cedar River. No ground water contamination has been detected at this point, but the threat does exist.

Consequently, Linn County is considering the adoption of a set of criteria which will require that certain public improvements be in place before development can occur. The existence of public sewers is perhaps the most critical of the potential requirements. Public sewers allow for greater density of development and can limit leapfrog expansion. Two major trunk sewers have been extended into Linn County. They are the Morgan Creek
Trunk line on the northwestern side of the city and the Squaw Creek Trunk line on the northeastern side. In addition, the Prairie Creek Interceptor is currently under construction. According to Jim Hackney in the Cedar Rapids Engineering Department it is difficult to say where future extensions will occur. He indicated that the Metro Area Utility Study, completed by Cedar Rapids in the late 1960s, has provided a blueprint for current projects, but that future extensions will be determined as annexation occurs.\footnote{18}

The 2020 Transportation Plan that was completed by the Regional Planning Commission also contains information on the future availability of publicly-provided infrastructure. A number of improvements have been proposed for the northern areas of the Cedar Rapids metropolitan area which will open additional land for development once public sewers are provided. The new roads also help create a system of arterial streets surrounding Cedar Rapids, which may reduce traffic congestion on city streets or may at least reduce travel times. (See Map 7)

There are many factors to consider and analyze when specifying sending and receiving areas. In addition, establishing a specific goal for the program will help in determining appropriate areas. In general, though, sending areas should be reserved for those areas containing specific resources which the community wishes to preserve, such as agricultural land or environmentally sensitive areas, and receiving areas should be for those areas capable of handling increased density due to existing excess capacity of critical publicly-provided infrastructure. In Linn County potential sending areas will have a high CSR or otherwise be unsuitable for cultivation or development; while the receiving areas will be within the two mile extraterritorial zone or contiguous to other existing developments. Much of the data is available for determining these areas; however, it was beyond the scope of this project to provide more detail.

One final note, under a TDR program, Linn County could adopt a land use plan, zoning ordinance and zoning map which would establish sending and receiving areas that prohibits residential development in areas with (1) inadequate service levels, (2) high CSR values, or (3) other environmentally sensitive features. The county has indicated a willingness to move in this direction for making re-zoning decisions, which will greatly enhance its ability to define sending and receiving areas. As a second alternative the county could adopt a plan and ordinance that designates residential zones which excludes land with the above mentioned features.
Map 1. Spring Satellite Image for Linn County, IA

Sources: IA Department of Natural Resources; U.S. Geological Survey Bureau, 1997

- Incorporated Areas
- Rivers
Map 2. Linn County Planning Areas


- Linn County Boundary
- Incorporated Areas
- Rivers
- Northwest Planning Area
- Northeast Planning Area
- West Central Planning Area
- East Central Planning Area
- Southwest Planning Area
- Southeast Planning Area
Map 3. Corn Suitability Ratings for Linn County, IA

Sources: IA Department of Natural Resources; U.S. Geological Survey, 1997.

- Linn County Boundary
- Incorporated Areas

Corn Suitability Rating
- Very low (0 - 20)
- Low (21 - 40)
- Average (41 - 60)
- High (61 - 80)
- Very high (81 - 100)
Map 4. Land Capability Classification

Sources: IA Department of Natural Resources; U.S. Geological Survey, 1997.
Map 5. Flooding Frequency for Linn County, IA

Sources: IA Department of Natural Resources; U.S. Geological Survey, 1997.

- Linn County Boundary
- Rivers
- Incorporated Areas
- Flooding Frequency
  - Frequently flooded
  - Occasionally flooded
  - Ponded
Map 6. Highly Erodible Land in Linn County, IA

Sources: IA Department of Natural Resources; U.S. Geological Survey, 1997.

- **Linn County Boundary**
- **Incorporated Areas**
- **Rivers**
- **Highly Erodible Land**
  - highly erodible
  - potentially highly erodible
  - not highly erodible
TDR Impacts Upon Landowner Rights

Current Landowner Rights

Under Linn County’s current land use plan, three types of landowners have direct effects upon agricultural preservation and new residential development. The first class consists of landowners in zoning districts identified as primary and secondary development areas. These landowners may develop their land at densities ranging from four units per acre to one unit per three acres depending upon the availability of water and sanitary sewer service, the CSR of the land, their proximity to hard surface roads and their distance from an incorporated town.

The second class of landowners are those whose land is zoned for agricultural use. These owners may develop at a density of one unit per 35 acres without obtaining a rezoning of their land for residential use. Under Iowa law, land or structures devoted to agricultural or agriculturally related use are exempt from local zoning regulations.

The third class is agricultural owners who are eligible to convert their agricultural land to residential zones so that they may develop at residential zone densities. In order to qualify for a rezoning, landowners must be in close proximity to hard surface roads, and depending on lot size public water and/or sewer service must be available.

Landowner Rights Under a TDR Program

Upon changing the county’s zoning criteria to meet the sending and receiving area characteristics suggested earlier, some land that was formerly zoned residential or was eligible for a rezoning to a residential zone will no longer qualify. Here, while the land may retain value as agricultural land or open space, residential development may be completely prohibited. These types of landowners would become sending areas for purposes of a TDR program. The county may involve landowners in the program through the use of either regulatory (mandatory) or financial (voluntary) incentives.

A mandatory TDR program would insulate the county from claims that such a change in zoning would constitute a taking by allowing affected land owners to sell development rights equal to or greater than their development potential under the former ordinance and maximizing their opportunity for the sale of such rights. In such cases the county may guarantee a minimum purchase price for the development rights. However, because courts consider numerous other factors when determining if a takings has occurred, this mechanism does not ensure that the county will be protected against litigation.
A voluntary program would take a slightly different approach. Instead of restricting development completely upon such parcels, the land would be down-zoned to densities necessary to protect the resource involved or to match those allowed on surrounding agricultural land. Owners would be allowed to build on their land at the reduced density or would be allowed to sell development rights equal to their development potential under the former ordinance in exchange for restricting the deed to their land.

Where land remains or becomes eligible for inclusion in a residential zone, the area will serve as the program’s receiving zone. Having revised residential zoning requirements to reflect the most appropriate places for development, TDRs may be used to encourage increased density is such regions while providing a market for the purchase of TDRs from the described sending areas.

As above, the receiving area program may be mandatory or voluntary. Under a mandatory program, residential densities would be maintained at current levels or raised to reflect the suitability of the land for residential or subdivision development. However, in order to develop at those levels an additional requirement would be imposed: a developer would be required to purchase development rights or pay a fee in lieu in proportion to the amount of land used or units constructed. This type of program provides the needed incentive for the purchase of development rights. However, in order to prevent the program from inhibiting development in desired areas, the program must provide an efficient market for the sale and purchase of rights and ensure that enough rights are available so that cost does not become prohibitive.

The voluntary approach would establish a baseline density slightly lower or equivalent to existing allowable densities. Developers need only meet the residential criteria to develop at the baseline level. However, their land would become eligible for increased densities up to an established maximum upon the purchase of development rights.

Under the rezoning suggested above, the last class of landowners, those with land zoned as agriculture, would probably maintain their current maximum development potential of one unit per thirty-five acres. In addition, fewer of such owners would be eligible to have their land rezoned for residential development due to more restrictive criteria for residential zoning. Should the community wish to permanently prohibit non-farm development on such parcels, it may provide an opportunity for agricultural owners to sell their development rights at a rate higher than the owner’s current development rights in order to induce the owner to place a permanent restriction upon their land. As the allowable density is sufficient to protect agricultural interests in most cases, the community may want to consider restricting the opportunity to participate in such a program to those agricultural parcels with exceptional development potential.
Requirements for a Successful Program

A number of community and program characteristics are necessary for the success of a TDR program. There must be strong community support for the land use goals being served by the program and for the program itself. The community must have the specific information necessary to clearly identify sending and receiving areas. There must be existing pressure to convert land targeted for preservation to new development. The program must be founded upon secure legal authority and must comply with land use law conventions. Finally, the community must possess the administrative and financial resources necessary to facilitate the program.

Community Support for Land Use Goals

TDR programs represent a proactive approach to achieving a community’s land use goals. To be successful, those goals must be clearly identified. Furthermore, because the program will affect numerous individuals there must be widespread public support for those goals. In Linn County, there is clearly public support for the preservation of agricultural land. In recent visioning meetings, Linn County landowners identified agricultural preservation as the most important of their land use goals. Agricultural preservation has been stated as a land use priority for the County in both the 1997 Land Use Plan and current zoning ordinance.

At the state level, the Iowa Legislature has indicated their continuing support for agricultural preservation through extensive legislation designed to support the state’s agricultural economy. Furthermore, the Iowa State Legislature has appointed an interim committee, the Commission on Urban Planning, Growth Management, and Protection of Farmland, to specifically investigate and propose solutions to the loss of farmland to sprawling residential developments.

Community support for contiguous development and efficient infrastructure use is less visible. Because the costs of sprawl development have not yet created substantial demands for public spending, taxpayers are unlikely to demand increased densities to minimize such costs. Furthermore, it is unclear that Linn County developers would be willing to exchange increased profitability for more limited location choices. Before investing in a TDR program, the county must clarify the extent to which residents and landowners accept restrictions on development density and location in exchange for agricultural preservation and decreased infrastructure costs.
Clearly Identified Sending & Receiving Areas

In addition to public support, the community must be able to clearly identify sending and receiving areas. The identification of such areas may be accomplished by setting specific geographic boundaries or restricting development to those parcels that meet a set of development criteria.

At present there are a number of criteria that might be used to identify a Linn County agricultural sending area: corn suitability ratings, soil erodibility, absence of public sewer or water service, and location outside of the two-mile subdivision boundary for incorporated areas. This is not the case for receiving areas. Currently, utility extensions are developed on demand and are not part of a documented capital improvements planning effort. Specific information on the location and capacity of utility lines is necessary both to identify receiving areas and to designate acceptable development densities. The information will be particularly important in delineating receiving area boundaries within the two-mile review boundary of incorporated areas. These areas are under substantial development pressure and information on service provision may diffuse potential conflicts over where development should occur. The absence of such information will serve as a substantial obstacle to program success in Linn County.

TDR Market Potential

Once sending and receiving areas have been identified, the success of the TDR market will rely upon the extent to which existing development pressure or program incentives encourage the sale and purchase of TDRs. According to Linn County, approximately 3,931 acres have been platted within the last five fiscal years. A full 1,997 of those acres required a rezoning approval from classification as agricultural land. In 1997 alone, 79.4% of the land platted within two miles of incorporated city limits and 90.0% of the land platted over 2 miles from the city limits was in areas designated as prime agricultural areas. This development activity may be used to drive a successful TDR market in Linn County.

Secure Legal Foundations

Long term TDR program success will rely upon the strength of the program’s legal foundation. An examination of current zoning legislation and the comments of the Iowa Attorney General on zoning under home rule authority indicates that a TDR program would
fall within Linn County's existing land use authority. Nonetheless, because no other county has attempted to implement a TDR program in Iowa, it is difficult to predict with certainty if a TDR program would withstand legal scrutiny. To create a more secure legal foundation, state legislation specifically defining local authority to implement TDR programs and limits on that authority should be drafted and introduced to the legislature.

**Administrative and Funding Resources**

Finally, it is important to consider the administrative and funding resources necessary for the successful establishment and implementation of a TDR program. Tom Daniels has suggested that TDR programs are the least likely of agricultural preservation tools to be used effectively because of the large amount of land involved and because few localities devote the time and expertise to do the necessary community wide planning. To avoid this problem, county planning staff must be available to:

- identify specific sending and receiving areas.
- draft a new zoning ordinance establishing appropriate base and TDR allowed densities for the receiving area.
- develop a criterion for assigning development rights credits.
- conduct market research on the market value of development rights.
- assign development rights credits to sending parcels.
- solicit landowners to participate in the program.
- facilitate the exchange of development rights between sending and receiving areas.
- enforce the conservation easements used to obtain increased receiving area density.
- monitor the effectiveness of the program.

In addition to the resources necessary for adequate staffing, TDR programs often require the establishment of a TDR bank to facilitate exchanges and lend confidence to TDR transactions. A TDR bank may be used to purchase TDR rights from private landowners and occasionally ensures a base price for development rights. The development rights may then be assembled and sold to developers in the quantities necessary to achieve maximum densities without individually soliciting numerous agricultural land owners.

If the county adopts a TDR program on its own or in conjunction with a larger farmland protection program, the county may apply to acquire seed money for a TDR bank
through the Farmland Protection Program created by the 1996 Farm Bill. The program provides matching funds to local governments for the acquisition of conservation easements on land threatened by development. To be eligible, a local government must have a farmland protection program that provides for the purchase of agricultural conservation easements for the purpose of protecting topsoil by limiting conversion to nonagricultural uses of land. The program must have pending offers when submitting a proposal.

The Iowa Natural Resources Conservation Service Conservationist Leroy Brown, would then evaluate the program based on the conservation benefits derived from such farmland protection efforts. The county’s program would have to (1) demonstrate a commitment to long term conservation of agricultural land through legal devices such as right to farm laws, agricultural districts, zoning or land use plans; (2) use voluntary easements or other legal devices to protect farmland from conversion to nonagricultural uses; (3) demonstrate a capability to acquire, manage, and enforce easements and other interests in land; and (4) demonstrate that funds equal to at least 50 percent of the total fair market value of the easements are available from the local government.
Recommendations

The previous section revealed four potentially serious obstacles to the success of a TDR program in Linn County, Iowa: the absence of information on future utility service locations and capacities, the uncertainty surrounding public support for proactive land use controls, the lack of TDR enabling legislation, and the need for additional staff resources to design and administer the program. The first obstacle, the absence of information on utility locations, is particularly prohibitive because such data is necessary for the identification of both receiving areas and allowable densities. Without such information, a TDR program is not at all possible.

Subsequently, we do not recommend that the county enlist the services of a consultant to design a TDR program at this time. Rather we suggest that the county:

- begin a public education campaign that links the loss of agricultural land to sprawl development.
- conduct a survey to determine what level of land use control the community would exchange for agricultural preservation, high levels of utility service and orderly development.
- solicit support of developers and agricultural community for proactive land use policies designed to serve those goals.
- develop a more detailed understanding of the location and capacity of future utility lines.
- revise the county land use plan and zoning ordinance to reflect the county's commitment to actively promoting orderly development and agricultural preservation.
- seek TDR enabling legislation.
- consider use of TDRs to compensate landowners for restrictive zoning regulations and encourage agricultural landowners to voluntarily retire development rights.
2 Ibid., 173.
3 Ibid., 145.
5 Ibid., 85.
7 For a general discussion on regulatory takings see, Eisinger, Mark. ‘It’s a regulatory taking, cause the courts say so: purifying the test for regulatory takings’ 1 Drake J. Agric. L. 227.
12 Example from Abrams, Stanley D. ‘Transferrable development rights as an economic development incentive’ SC 10 ALI-ABA 491.
17 Ibid., 80.
18 Interview with Jim Hackney, Cedar Rapids Department of Engineering, April 15, 1998.
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