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METHODS OF OPEN SPACE PRESERVATION*

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SUMMARY

The values of open space are both social and physical. Social values include the use of open space for recreation, education, social interaction, pursuit of solitude, and enjoyment of aesthetic qualities. Physical values pertain to the health of the environment. For example, open spaces help control erosion, flooding, and water pollution and contribute to aquifer recharge. Open space improves air quality by removing carbon dioxide and releasing oxygen and nitrogen. The removal of carbon dioxide also contributes to climate control by mitigating the greenhouse effect. In addition, continued species diversity is encouraged by the preservation of plant and animal habitats in open space.

Several methods of open space preservation may be used by municipalities:

1. Land may be acquired through outright purchase (fee simple acquisition) or receipt of gifts from citizens.
2. Municipalities may take easements or interests in land, which restrict or prohibit development in return for tax abatement.
3. Protective zoning may be used to control development and preserve open space. Environmental Protection Overlay District

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(EPOD) zoning applies special review criteria to environmentally sensitive areas; cluster zoning alters the distribution of development density to increase open space; and large lot zoning lowers development densities.

4. Development rights of a parcel of land may be treated as a separate article of property and transferred to another parcel, resulting in increased density on one parcel, open space on the other. Or a municipality may purchase development rights to a parcel, permanently preventing development.

5. A municipality may designate environmentally important areas Critical Environmental Areas (CEA's) and thereby subject all proposed development in these areas to the scrutiny of State Environmental Quality Review procedures.

6. A land trust, an organization independent of government and dedicated to conservation of open space, may land.

7. Development may result in incidental preservation of open space through homeowner's association agreements, legal agreements (restrictive covenants) between developers and permitting authorities, and access, pedestrian, and trail easements.

8. Residents with a special interest in a nearby area may form a Special Park District to be maintained by the municipality and paid for (through taxes) by landowners in the district.

VALUES OF OPEN SPACE (1)

As the overwhelming success of every New York State bond issue to finance open space preservation suggests, the majority of citizens place a high value on open space. These values can be categorized into social and physical values.

Social Values of Open Space

Though extremely subjective, the social values of open space generally are agreed upon by consensus. Most citizens at least occasionally use open space to recreate, socialize, or escape the hectic daily routine. Many use open space formally, or recreationally, as outdoor classrooms, and, aesthetically, few would question the value of open space.

Physical Values of Open Space

Scientific evidence demonstrates the physical values of open space. Open space is essential for maintaining a quality environment through its effects on water, air, climate, and wildlife habitat.

In developed areas, much water runs off instead of being absorbed into the ground. This runoff promotes erosion and flooding, pollutes streams (with phosphates or road salt, for example), and allows suspended sediments to suffocate aquatic life and clog flood-controlling channels. Open spaces, wetlands in particular, absorb water and slow runoff, resulting in aquifer recharge, flood and storm water control, and water quality improvement. In addition, wetlands improve water quality by filtering out high percentages of many pollutants (such as coliform

bacteria and heavy metals), allowing suspended sediments to drop, and preventing the pollution of waterways caused by excessive runoff.

Open space also strongly contributes to air quality. For example, vegetation removes dust and carbon dioxide from the air and manufactures oxygen through photosynthesis. In wetlands, sulfates from acid rain are precipitated as insoluble sulfides, and compounds of nitrogen found as pollutants in runoff (from excessive use of fertilizers) is returned to the atmosphere as elemental nitrogen.

Removal of carbon dioxide from the atmosphere by vegetation may also play a critical role in climate control by slowing the greenhouse effect (global warming due to excess atmospheric carbon dioxide). In addition, trees reduce our use of fossil fuels, the main source of excess carbon dioxide, by providing shade in the summer and windbreaks in the winter, resulting in lessened need for cooling and heating of buildings.

Finally, open space preserves plant and animal habitats, maintaining the species diversity and natural checks and balances that prevent extinction of some species and uncontrolled proliferation of others.

With these values firmly in mind, a discussion of methods of open space preservation follows.

METHODS OF OPEN SPACE PRESERVATION

Acquisition

A municipality may acquire permanent ownership of open space by purchase or donation. Fee simple acquisition and receipt of gifts are the two most common ways these lands are obtained.

Fee Simple Acquisition

Fee simple acquisition of a parcel of land is the outright purchase of the parcel and its development rights. As a result, the owner has complete control over the land, and it may be permanently protected (2).

Fee simple acquisition is the simplest method of open space preservation and offers the greatest certainty of preservation. It is used where key areas (such as important environmental resources or prime recreational land) are threatened, when no other preservation method is viable (2). Fee simple acquisition is also the most expensive preservation method, since the land must be purchased and is removed from the tax base. The municipality must assume liability and maintenance responsibilities (3). However, the loss of tax revenue is usually small, since the land is undeveloped. In fact, public ownership may enhance the value and desirability of adjoining and other lands in the municipality (4).

Gifts and Wills

Occasionally, citizens or developers may donate or will land to municipalities. Like simple acquisition, such donations carry permanent protection advantages and financial disadvantages.

Easements

An easement is a legal interest held by one party in land owned by another that entitles its holder to a specific limited use of the land. A municipality may take conservation or permanent easements on lands in order to preserve open space.

Conservation Easements

Section 247 of the New York State General Municipal Law allows municipalities to acquire interests and rights (by gift or purchase) in real property for the preservation of open spaces (2). The landowner retains ownership and use of his land, but is subject to easement restrictions. These conservation easements restrict or prohibit structural development (or mining or logging, for example) of the land for a number of years; in return, the owner is granted tax abatement, the amount relating directly to the duration of the easement. Monetary penalties are levied if the easement is broken (3).

Since purchase costs are less and the land remains on the tax rolls, the use of conservation easements is a less expensive open space preservation method than fee simple acquisition (3). However, since the municipality does not obtain full control of the land, these easements are recognized as only a stopgap measure of conservation. For example, many developers will break the easements, since penalties may be insignificant compared to profits realized in development. In addition, conservation easements simply allow landowners to postpone, rather than prohibit, selling land for development.

Permanent Easements

Some conservation easements are permanent; they have no time limits and may not be removed. These permanent easements are a useful tool for preserving lands of recognized environmental value.

Permanent easements may provide tax benefits to landowners beyond those granted by the municipality. New York State has a tax abatement program for permanent easements. In addition, since the value of the property under easement is generally reduced, the landowner may claim this loss as a charitable deduction on federal income taxes. Only permanent easements qualify for federal tax abatement (5).

Protective Zoning

Zoning is a method of development control where a municipality partitions lands into regions or zones reserved for specific uses and governed by appropriate building regulations. Specifi-

cally, the use of Environmental Protection Overlay District zoning, cluster zoning, and large lot zoning may effectively preserve open space.

Environmental Protection Overlay District (EPOD) Zoning

Environmental protection overlays are maps of environmentally sensitive areas such as steep slopes, wetlands, floodplains, or other features which may be desirable to keep in open space or large lot use. The underlying zoning of an Environmental Protection Overlay District (EPOD) is not changed by the environmental overlay. However, the development standards or procedures of the underlying zoning are superseded by special project review criteria and/or larger lot size requirements, which minimize the adverse effects on the resource. The overlay can be developed at the underlying zoning density only if the developer demonstrates by design that the valued environmental feature will not be impaired (2).

For example, in hilly Perinton, EPOD zoning coupled with a town ordinance has preserved open space by limiting development. The overlay is known as the Limited Development District or LDD. One single family house per five acres is allowed in LDD overlay areas, unless the developer demonstrates to the satisfaction of the planning and conservation boards that no environmental degradation will result from greater development density. The Town's boards have developed policies and design criteria to guide density and placement of roads and utilities in environmentally sensitive areas. Deed restrictions are imposed to protect resultant open space. The LDD overlay and ordinance have preserved steep slopes, wetlands (smaller than the 12.5 acres required for State protection), waterways, and floodplains.

Cluster Zoning

Section 281 of New York State General Municipal Law allows town planning boards to modify the town's zoning ordinance simultaneously with approval of a subdivision plot. Overall density must not be increased, but lot sizes can be smaller than zoning requires, resulting in the clustering of structures and larger parcels of open space. Open space can be dedicated to the town, maintained via a homeowners' association, or given over to larger lots with restrictive covenants (legal restrictions) (2).

Although state law allows towns to require clustering, planning boards may find that developers voluntarily comply, since clustering reduces costs for roads and utilities. Citizens, however, may resist clustering efforts, fearing that resulting development will lower neighborhood property values. Successful completion of attractive clustered projects may mitigate these fears.

Large Lot Zoning

A municipality may use large lot zoning (for example, requiring five acres per one house) to reduce residential density, preserve open space, and protect environmental attributes of the

land. However, it may be argued that large lot zoning consumes open space, and means fewer woodlands, less naturally vegetated land, and more lawns (i.e., mowed, chemically treated surface). Low density development does not provide public access to the land (6).

Development Rights

Ownership rights of a parcel of land may be divided into two parts: development rights and all other rights. Development rights (rights to construct buildings, roads, and other structures) become a separate article of property that can be transferred or sold. After selling the development rights, a landowner retains title and all other rights to his land. These other rights permit farming, forestry, some recreational uses, and other nonintensive uses. In addition, the owner may sell or exchange title to the land just as if the development rights had not been transferred; however, the new owner may not further develop the land, since he has not purchased the development rights, which were sold separately. Transfer or purchase of development rights may be effective devices for preserving open space (2).

Transfer of Development Rights (TDR)

Transfer of Development Rights (TDR) permits the density potential of one tract of land to be transferred to a noncontiguous parcel owned by the same person or someone else. In other words, the development rights are sold to a landowner whose property can support greater densities (2). TDR is an attractive method of open space preservation since the cost is absorbed by the landowner who purchases the development rights. However, participation is purely voluntary, and long-term protection is not guaranteed (3).

Purchase of Development Rights

Instead of being transferred to another parcel, development rights may be purchased outright by the municipality. This effective method of open space preservation has many of the advantages of fee simple acquisition at a lower cost to the municipality, since the development rights are only a portion of the value of the property. However, purchase of development rights is a relatively expensive method of preservation, especially in areas with high real estate values (3).

Critical Environmental Area Designation

Under Article 8 of New York's Environmental Conservation Law, a municipality may designate Critical Environmental Areas (CEA's)--areas that have unique characteristics making them environmentally important. All projects proposed within a CEA receive the attention of any Type I (environmentally significant) action. Although CEA designation does not preserve an area per se, it does alert the community and potential developers to the

environmental importance of the area; extra care during reviews is ensured.

Land Trust

A land trust is a charitable organization independent of government that holds lands (usually environmentally valuable parcels) for preservation and/or conservation purposes. Land trusts may accept gifts of land or cash, purchase and sell land, or hold land for subsequent government purchase, although there are some very definite restrictions on this kind of activity. The organization pledges to preserve land as open space. The Nature Conservancy and the Trust for Public Land are two well-known land trusts (7).

Open Space Preservation Resulting from Development

Occasionally development of a parcel of land will result in incidentally preserved open space through homeowners' association agreements, restrictive covenants put on the land by the municipality, or access, trail, and pedestrian easements.

Homeowners' Association Agreement

Open space in a subdivision can be owned and administered by a homeowners' association generally set up by the developer. Purchasers of lots within a development may pay a fee at the time of purchase (and annually thereafter) to pay for maintenance of the lands administered by the homeowners' association. Agreements are made to preserve and maintain sensitive features within the development and, often, to provide recreational opportunities for the residents.

Restrictive Covenants

At the time of development, the permitting authority may place legal restrictions upon activities in environmentally sensitive areas, such as slopes, wetlands, floodplains, and regions bordering waterways. These agreements are known as restrictive covenants. They may be written into the deed to ensure their longevity and to make future homeowners aware of their presence.

Access Easements

Municipalities often take easements along waterways to maintain drainage patterns; in addition, easements must be taken so that necessary working equipment can reach drainageways. Construction within an easement which would hinder maintenance or access is forbidden, and, hence, access easements result in the preservation of open space. These easements are generally long, narrow strips; however, when they encompass a structure such as a detention pond, larger areas can be protected. The pond or other structures can be designed to preserve open space.

However, the experience of the Town of Greece has been that Town ownership of floodplains produces better control of land use than drainage and flooding easements. In fact, where such easements exist, property owners frequently request that the municipality undertake additional expense to clean channels, cut trees, or provide erosion control. If the land is owned by the municipality, costs of services are better controlled, and the public/private boundary is clearly established rather than blurred, as it may be with easements. In addition, the need for public "vigilance" or for the protection of the land is much lower if the land is clearly owned by the municipality (4).

In addition, municipalities occasionally obtain pedestrian and trail easements which preserve land for recreation by residents.

Special Park Districts

When nearby residents have an intense interest in the preservation of a parcel of land, they may petition the municipality for a Special Park District, which includes the open space and nearby residences. The open space is owned by the residents of the district and maintained by the municipality, which taxes only these residents for acquisition and maintenance costs. When Park Districts are inactive (require no maintenance by the municipality), the municipality reserves the right to tax landowners within the district if intervention to correct a maintenance problem in the open space is necessary.

CONCLUSION

As discussed above, municipalities can successfully preserve open space by utilizing a variety of methods. These methods should be exploited and new ones explored in order to ensure a future replete with open space, which is highly valued by the majority of citizens.

REFERENCES

1. D. Stinson, "Open Space Values," Perinton Natural Resources Inventory, Town of Perinton Conservation Board, unpublished.

2. K. Gordon, L. Zicari, Jr., F. Reese, "Methods of Open Space Preservation," Appendix E from "Town of Amherst Open Space Acquisition Plan," by Larsen Engineers, Architects, and Planners and Kotz and Schneider, March, 1988.

3. P. Johnson, "Land Preservation Strategies," Information sheet for Agricultural Land and Open Space Preservation Workshop sponsored by Monroe County Planning and Environmental Management Councils, Oct. 14, 1989.

4. J. Peet, Town Engineer, Town of Greece, personal communication, May 1990.

5. E. Thompson, "Local Efforts to Encourage Private Land Conservation," Zoning and Planning Law Report, Vol. 9, No. 4, April, 1986.

6. W. Klockner, Director, Central-Western Office, The Nature Conservancy, personal communication, March 1990.

7. "Questions and Answers about Land Trusts," Cooperative Extension Association of Suffolk County, Riverhead, N.Y.