

The
Town of Eden

Open Space Index

Prepared by

The Eden Conservation Advisory Board

with the assistance of

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and

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and

The U.S. Department of Agriculture
Natural Resources Conservation Service

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ACKNOWLEDGMENTS

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FOREWORD

Article 12-F of the New York State General Municipal Law requires conservation boards to keep an inventory and map of all open spaces within their respective towns for the purpose of providing information as to the proper utilization of such open lands. The Open Space Index consisting of an Open Space Map and an Open Space Inventory attempts to meet this requirement. The ECAB also completed a Natural Resource Inventory (NRI) concurrent with the Open Space Index. A copy of the NRI is available under separate cover at the Eden Town Clerks Office. The NRI is a companion piece to the OSI and provides extensive information as to the specific characteristics of the open areas with regard to their natural resources.

THE PROCESS

Initial discussion regarding the need to complete an Open Space Index took place early in 1995. The following year funds were appropriated to hire professional consultants who would help direct the process and to complete vital mapping and inventory information. During this time many meetings were held, public information sessions conducted, information printed in the local pennysaver and ECAB members did outreach to local community groups. It should be noted that the process was extended due to the fact that two separate (but related) studies were being carried out at the same time, e.g. the Open Space Index and the Natural Resources Inventory.

The ECAB believes that the Open Space Index which is presented below is a relatively accurate depiction of the open areas in the Town of Eden. While 100% accuracy is a laudable goal, chances are we have not met this goal and information will need to be rechecked and revised if found to be inaccurate. Notwithstanding, the ECAB hopes that this Open Space Index will be a useful planning tool for government and private interests.

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The Open Space Index

The Open Space Index consists of an Open Space Map and an Open Space Inventory.

Land Use\Land Cover Map

Features of the Land Use/Land Cover Map (Figure 1) were determined through photo-interpretation of 1985-86 and 1990-91 aerial photographs. Other sources consulted included: the Erie County Soil Survey; NYSDEC wetland maps: USFWS NATIONAL WETLAND INVENTORY MAPS; other B&W aerial photo series (especially 1938); USGS 7.5' QUAD MAPS; direct observations; on-site surveys of properties and road survey/checks - checking areas visible from public roads. The Open Space Map (Figure 2) was derived from the Land Use/Land Cover Map.

The Open Space Inventory (Table A) describes open areas greater than 5 acres as presented in the Open Space Map. Various physical characteristics of each open area are presented, such as: land use; size; location; and existing zoning. The use of greater than 5 acres was an arbitrary one.

The Land Use/Land Cover (LU/LC) Map Figure 1, forms the basis for the Open Space (OS) Map Figure 2. The LU/LC Map was hand drawn by Paul Rutledge, Ph.D. Consulting Ecologist to the Eden Conservation Advisory Board and digitized by staff and volunteers of the U.S. Department of Agriculture Natural Resources Conservation Service. In the following sections, Dr. Rutledge describes the methodology he used to complete this map, suggests how this map may be used, the Land-Use and Covertype Classification System he employed and the effects of change on this map. (See Attachment A).



LANDUSE/LAND COVER MAP

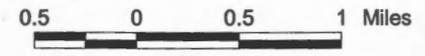
FIGURE 1

Data for this map is found in the Land Use/
Land Cover Summary Table on Page 6E.

Map prepared by Nathan Zieziula in coordination with the Western New York Land Conservancy. Data Description: Base data prepared by Paul Rutledge, Ph.D. for the Town of Eden Conservation Advisory Board using 1990 aerial photography recompiled to a scale of 1:24000. Data in this view are aggregated to the "parent" level in a multi-level classification scheme based on a system used by the U.S. Geological Survey and the NY Natural Heritage Program. Field checked, 1997.

LEGEND

- AGRICULTURAL LAND
- AQUATIC
- BARREN LAND
- MIXED COVERTYPES
- NATURAL TERRESTRIAL - FORESTED
- NATURAL TERRESTRIAL - OPEN
- PALUSTRINE - WETLANDS
- URBAN or BUILT UP LAND



TOWN OF EDEN
Erie County, New York

"An Open Space Index with Natural Resource
Inventory for the Town of Eden"

Introduction

The LU/LC map shows all of the open spaces in the Town of Eden, and their relation to the more developed areas. Each open space area on the LU/LC Map is identified by type or category of open space. The purpose of the LU/LC Map is to present reasonably complete information about open space in the Town, and thus provide information which can be used when making policy decisions related either directly or indirectly to open space within the Town.

Methodology

The Town of Eden LU/LC Map is based on USGS 7.5' quad maps for the road system and Town boundaries. The USGS quads are planimetric maps, so using the roads and Town boundary positions provides a reference grid system, which enables substantial correction for various distortions present in the aerial photographs used. Only planimetric maps can be accurately used to measure distances between features shown on a map.

The other features on the LU/LC Map have been determined from a number of sources:

- 1990-1991 (currently the most recent) flight black & white (B&W) aerial photographs - primary source for general covertypes.
- 1985-1986 flight false color infrared (IR) aerial photographs - useful in helping to distinguish differences like evergreen versus deciduous forests
- Erie County Soil Survey
- NYSDEC wetland maps
- USFWS National Wetland Inventory maps
- Other B&W aerial photo series (especially 1938)
- USGS 7.5' quad maps
- Direct observations
 - On-site surveys of properties
 - "Road surveys/checks" - checking areas visible from public roads

Most of the LU/LC Map features were determined through photo-interpretation of the 1985-86 and 1990-91 aerial photographs. The resulting LU/LC Map is composed of a large number of irregularly shaped, contiguous polygons. Each polygon represents a discreet area occupied by a particular kind of coertype and/or land-use. The boundaries of each polygon are determined by interpretation of the aerial photos (both B&W and IR), and drawn on a transparent sheet laid directly over the aerial photo being analyzed. Each polygon is assigned an "attribute" number. This attribute number identifies the coertype/land-use of the polygon according to a classification system for land-use and covertypes (see Attachment A).

Use of the LU/LC Map

The LU/LC Map is intended to be used for general planning purposes. Its usefulness lies in the visualization of the distribution of the open space resources present in the entire Town. The LU/LC Map is information, which in turn can then be used when making decisions about land use changes, open space preservation, and many other issues. However, the LU/LC Map itself says nothing about these issues.

The LU/LC map is not to be used for any very specific purposes, for example drawing and/or determining wetland - non-wetland boundaries. The LU/LC Map resolution is simply not sufficiently accurate for such tasks. In the case of wetland boundaries this is true both for the boundary lines and for the detection of inclusions (see below).

Since most of this initial version of the LU/LC map has not been "ground-truthed" (that is verified by an actual site visit), it is not likely to be entirely accurate, both with respect to the exact boundary lines and the assigned attributes. However, the vast majority of the features will be correct as shown.

Another characteristic of the LU/LC Map is that within any specific polygon there may be smaller unmapped inclusions of a covertime different from the main one. In this respect it is like a county soil survey. With county soil surveys, dissimilar inclusions of up to 3-5 acres are generally not shown. Inclusions are not mapped either because they are below the level of resolution for the map and/or they are not obviously different from examination of the aerial photos. For the Town of Eden LU/LC Map inclusions up to 1-2 acres in size are generally not shown. Occasionally, inclusions larger than that may also not be shown. There are probably many small inclusions throughout the Town of Eden, in part because diverse human activities over the years have fragmented many areas of the landscape.

The Covertime/Land-Use Classification System

The covertime and/or land-use classification system used for this LU/LC Map has been developed by combining two different systems for assigning categories. This classification system is valid for Western New York (WNY), but may not be adequate or appropriate in all other parts of the state. See Attachment A for a complete listing of the covertypes used in WNY. This list also serves as a key for the LU/LC Map for Eden. The system used here is hierarchical. This means it is based on a numbering system which goes from the more general to the more specific, doing so by the addition of more digits to the assigned number of a covertime. This hierarchical approach is used and recommended by the United States Geological Survey (USGS). The numbers can be composed of between one and four digits. The first digit for each is taken directly from the USGS system.

Only eight first digits are used for WNY, representing the following broad categories:

- 1 Urban or Built-Up Land
- 2 Agricultural Land
- 3 Natural Terrestrial Systems - Open
- 4 Natural Terrestrial Systems - Forested
- 5 Aquatic Systems
- 6 Palustrine Systems
- 7 Barren Land
- 8 Mixed Covertypes

The first seven categories can be considered primary categories. These primary categories encompass specific covertypes and generally follow the USGS system. The eighth category includes various combinations of covertypes and is one made necessary by the data format requirements of the Geographic Information System (GIS) being used.

The second digit of a coertype number is based on a more specific division of one of the seven broad primary categories listed above. This level is also based on the USGS system, but with some modification. Thus a sub-category of Coniferous Forest is assigned an attribute number of 42, indicating it is within the general category of Natural Terrestrial Forested Land (#4), while an attribute number of 41 indicates a Deciduous Forest within the same general category (see Attachment A).

As recommended by the USGS, the third and fourth digits are taken from another system to serve the purpose at hand. In this case, since the primary purpose is to survey the ecological communities present in the Town of Eden, the third and fourth digits in the natural areas categories (#3 through #6, above) refer to divisions specific to ecological communities in New York State as presented in Reschke (1990) and used by the New York Natural Heritage Program (NYNHP). The three other broad primary categories (#1, 2, and 7) have likewise been subdivided more extensively. For example, Vineyards, within the Agricultural Land category, are assigned the attribute number of 222. Within these three broad categories the more specific categories have been created arbitrarily for this project.

Most of the polygons on this initial version of the Town of Eden LU/LC Map have attributes determined only to the 2-digit level. The third and fourth levels will generally require a site visit. However, note that in some cases covertypes are classified only to two or three digits.

Change and the Land Use/Land Cover Map

The LU/LC Map as originally hand-drawn is useful on its own. But the usefulness of such a map can be greatly increased by having it digitized. The Eden LU/LC Map has been digitized, and it is now incorporated into the Geographic Information System (GIS) used by the Town of Eden. The final editing of digitization of the Eden LU/LC Map is complete. This edition should, however, be viewed as a starting point, since the Town is continually changing. Periodic updating and refinement of the LU/LC Map will be needed. With the LU/LC Map in the Town's GIS, future editing of the LU/LC Map can be done via computer: 1) Any changes that occur in land use or cover type in a particular polygon can be made on the map; 2) Likewise if the boundaries or shape of a polygon change, such a change can be made; 3) An erroneous assignment of attribute or boundary done on the original map can be corrected when the error comes to light (usually through a site visit); Any more detailed information which enables the classification of polygons to a more refined level (again usually made possible through site visit experiences) can be added.

One should keep in mind that the aerial photos on which this type of map and its polygons are based, and which were used to assess attributes for the polygons, are the most recent of their type generally available. However, for Erie County locations the IR aerial photographs are 12-13 years old and the B&W aerial photographs are about 7 years old. Thus some areas will be incorrect because of changes which have occurred over these intervening years. This is particularly the case if the areas are away from any public roads and are therefore likely to have escaped correction during the "Road Survey and Check" phase. A county wide computerized color infrared aerial photo series has recently become available. This might be a useful starting point for updating the LU/LC Map.

In addition to the editing functions listed above, there are several other uses which digitization of the LU/LC Map makes possible, including:

- The LU/LC Map can be combined visually with one or more other sets or "layers" of information already present in the Town's GIS base. These include such diverse features as waterways, soils, and zoning.
- Within the LU/LC Map one or more categories or sub-categories can be "highlighted" by using a particular color or colors. Distribution of the category or categories of interest throughout the Town can then be readily visualized.
- Newly edited, up-to-date editions of the LU/LC Map can be printed, in color if desired, in a wide range of sizes; and many copies can be printed quickly. Similarly, any particular area within the Town can be printed on its own.

The Open Space Map and Inventory

The Open Space Map (Figure 2) was derived from the Land Use/Land Cover Map (Figure 1) referred to above. An attempt was made to map and inventory open land areas larger than 5 acres. The parameters chosen to describe these open areas included: Land Use Classification; number of acres; general location; and existing zoning. See Table A for Inventory.

Considerations for Conservation. Prioritizing Open Space Areas for Protection

If the Town decides to consider pursuing some form of protection or preservation for certain open space areas, the general approach recommended here is to use a rather flexible and approximate system for prioritization of candidate open space areas. There are two main categories of open space, agricultural land and natural land, and these probably should be considered separately. In addition, a third category of areas worthy of protection consideration and which involves open spaces can be termed “viewsapes” (see below).

For Natural Land, the main parameters to consider are:

- **Size.** This is of primary importance. However, it depends somewhat on the specific ecological community involved. For example, in our region a Rich Sloping Fen community would typically be only one to a few acres in size of occurrence, so requiring a parcel containing many acres of this community before recommending it for acquisition would be inappropriate. On the other hand, a parcel of only a few acres of a Hemlock-Northern Hardwood Forest would usually be given a relatively low priority since large acreages exist of this community. Size is given such importance because protection is (or should be) for the long-term. The current condition of a parcel or the covertypes on it is in many respects secondary. A large size parcel helps with some of the other parameters as well, particularly diversity, defensibility, and potential for long-term survival (see below).

- **Ecological Community Type.** This parameter may require some specialized knowledge. However, it also may not be a major concern initially. The Town of Eden is currently at a point where it has not made any decisions to commit to protecting large areas of natural open space. If Eden does in the near future begin to find ways to protect some natural open space areas, exactly which communities to protect will be relatively unimportant. Only later after significant acreage has been protected may it become advisable to review what types of communities are well-represented, and what types are not. Furthermore, Eden does not appear to have much in the way of rare (for New York State) species or communities. A list of ecological communities found or likely to be found in the Town of Eden is attached to this report (Attachment B). Following each community type is a Natural Heritage ranking both for the State of New York and for the world. The state ranking can be used in the evaluation process if desired.

- **Condition of Ecological Community.** This parameter requires evaluation by someone with extensive experience with ecological communities for a best estimate. Considerations include the maturity of the community, presence of exotic invasives, and how good an example it is of the general type.

OPEN SPACE MAP

FIGURE 2



A

B

C

D

E

F

Open spaces greater than 5 acres are identified on this map. The numbers on the map correspond to the Site I.D. No. found in Table A.

Map prepared by Nathan Zieziula in coordination with the Western New York Land Conservancy. Data Description: Base data prepared by Paul Rutledge, Ph.D. for the Town of Eden Conservation Advisory Board using 1990 aerial photography recompiled to a scale of 1:24000. Data in this view are aggregated to the "parent" level in a multi-level classification scheme based on a system used by the U.S. Geological Survey and the NY Natural Heritage Program. Field checked, 1997.

LEGEND

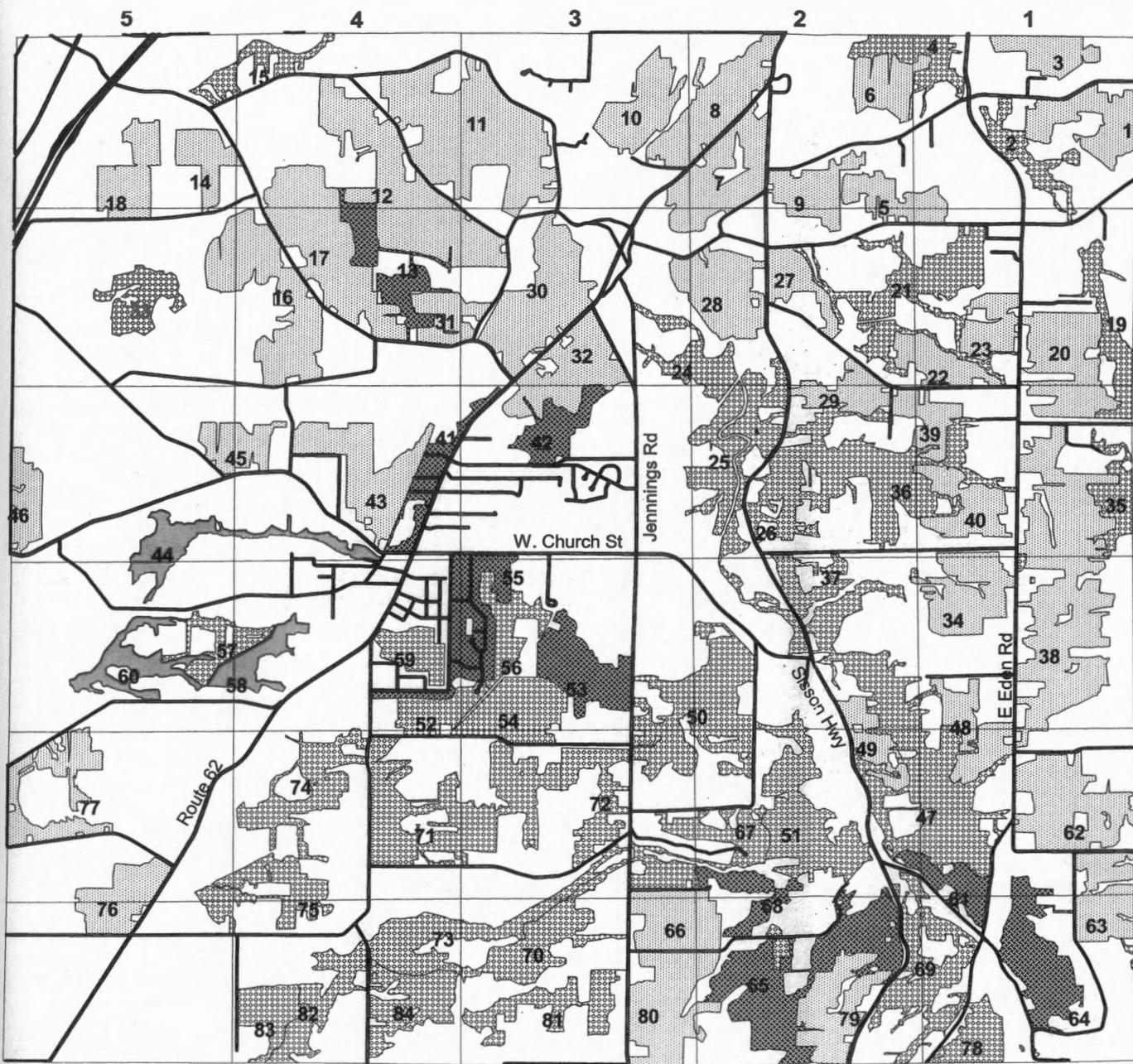
- GRID LINES
- STREETS
- AGRICULTURAL LAND
- MIXED COVERTYPES
- NATURAL TERRESTRIAL FORESTED
- PALUSTRINE - WETLANDS

0.5 0 0.5 1 Miles



TOWN OF EDEN
Erie County, New York

"An Open Space Index with Natural Resource Inventory for the Town of Eden"



Open Space Inventory

Table A

| SITE ID NO | ACRES | LANDUSE/COVER CLASSIFICATION | PRIMARY GRID LOCATION | 2NDARY GRID LOCATION | ZONING CLASSIFICATION | GENERAL LOCATION |
|------------|-------|--------------------------------|-----------------------|----------------------|--|-------------------------------------|
| 1 | 9.91 | AGRICULTURAL LAND | Grid A1 | | Suburban Residential | S. Eckhardt Rd, E. East Eden Rd |
| 2 | 5.73 | NATURAL TERRESTRIAL - FORESTED | Grid A1 | | Suburban Residential | E. East Eden Rd, S. Eckhardt Rd |
| 3 | 5.90 | AGRICULTURAL LAND | Grid A1 | | Suburban Residential | N. Eckhardt Rd, E. East Eden Rd |
| 4 | 7.06 | NATURAL TERRESTRIAL - FORESTED | Grid A1 | Grid A2 | Suburban Residential | W. East Eden Rd, N. Eckhardt Rd |
| 5 | 6.60 | AGRICULTURAL LAND | Grid A2 | Grid A1 | Rural Residential & Suburban Residential | N. North Boston Rd, W. East Eden Rd |
| 6 | 6.75 | AGRICULTURAL LAND | Grid A2 | | Suburban Residential | N. Eckhardt Rd, W. East Eden Rd |
| 7 | 13.11 | AGRICULTURAL LAND | Grid A2 | | Agricultural / APO | W. Sisson Hwy, SE Route 62 |
| 8 | 13.57 | AGRICULTURAL LAND | Grid A2 | Grid A3 | Agricultural / APO | NW Route 62, |
| 9 | 7.30 | AGRICULTURAL LAND | Grid A2 | | Rural Residential | S Eckhardt Rd, E Sisson Hwy |
| 10 | 9.48 | AGRICULTURAL LAND | Grid A3 | | Agricultural / APO | NW Route 62, |
| 11 | 30.08 | AGRICULTURAL LAND | Grid A3 | Grid A4 | Agricultural / APO | NE Bauer Rd, W Belknap Rd |
| 12 | 25.05 | AGRICULTURAL LAND | Grid A4 | Grid B4 | Agricultural | SW Bauer Rd, NE Shadagee Rd |
| 13 | 8.72 | MIXED COVERTYPES | Grid B4 | | Agricultural | N. Shadagee Rd, SW. Bauer Rd |
| 14 | 5.52 | AGRICULTURAL LAND | Grid A5 | | Rural Residential | W. Shadagee Rd, N. Ferrie Rd |
| 15 | 5.00 | NATURAL TERRESTRIAL - FORESTED | Grid A4 | Grid A5 | Conservation | N. Bauer Rd |
| 16 | 19.25 | AGRICULTURAL LAND | Grid B4 | Grid B5 | Rural Residential | N. March Rd, W. Shadagee Rd |
| 17 | 21.17 | AGRICULTURAL LAND | Grid B4 | Grid A4 | Agricultural | E. Shadagee Rd, |
| 18 | 8.34 | AGRICULTURAL LAND | Grid A5 | Grid B5 | Rural Residential | N. Ferrie Rd, W. Shadagee Rd |
| 19 | 6.82 | NATURAL TERRESTRIAL - FORESTED | Grid B1 | Grid C1 | Suburban Residential | E. East Eden Rd, N Keller Rd |
| 20 | 14.20 | AGRICULTURAL LAND | Grid B1 | Grid C1 | Suburban Residential | E. East Eden Rd, N Keller Rd |
| 21 | 17.54 | NATURAL TERRESTRIAL - FORESTED | Grid B1 | Grid B2 | Agricultural & Suburban Residential | S. North Boston Rd, W. East Eden Rd |
| 22 | 6.35 | AGRICULTURAL LAND | Grid B1 | Grid B2 | Agricultural | N. Hardt Rd, W East Eden Rd |
| 23 | 5.90 | AGRICULTURAL LAND | Grid B1 | | Agricultural & Suburban Residential | E. East Eden Rd, N. Hardt Rd |
| 24 | 6.97 | NATURAL TERRESTRIAL - FORESTED | Grid B2 | Grid B3 | Agricultural / APO | E. Jennings Rd, W. Sisson Hwy |
| 25 | 7.42 | NATURAL TERRESTRIAL - FORESTED | Grid C2 | | Agricultural & Conservation | E. Jennings Rd, W. Sisson Hwy |
| 26 | 10.53 | NATURAL TERRESTRIAL - FORESTED | Grid C2 | | Agricultural & Conservation | W. Sisson Hwy, S. North Boston Rd |
| 27 | 5.49 | AGRICULTURAL LAND | Grid B2 | | Agricultural & Rural Residential | SE. Intersection Sisson & N Boston |
| 28 | 12.05 | AGRICULTURAL LAND | Grid B2 | Grid B3 | Agricultural & Rural Residential / APO | S. North Boston Rd, W. Sisson Hwy |
| 29 | 5.74 | AGRICULTURAL LAND | Grid C2 | Grid B2 | Agricultural | E. Sisson Hwy, S. Hardt Rd |
| 30 | 16.88 | AGRICULTURAL LAND | Grid B3 | | Agricultural / APO | S. Bley Rd, NW. Route 62 |
| 31 | 5.43 | AGRICULTURAL LAND | Grid B4 | Grid B3 | Agricultural / APO | N. Shadagee Rd, W. Bley Rd |
| 32 | 12.44 | AGRICULTURAL LAND | Grid B3 | Grid C3 | Agricultural / APO | S. Intersection Jennings & Route 62 |
| 33 | 6.45 | NATURAL TERRESTRIAL - FORESTED | Grid B5 | | Rural Residential | S. Ferrie Rd, N. March Rd |

Open Space Inventory

Table A

| SITE ID NO | ACRES | LANDUSE/COVER CLASSIFICATION | PRIMARY GRID LOCATION | 2NDARY GRID LOCATION | ZONING CLASSIFICATION | GENERAL LOCATION |
|------------|-------|--------------------------------|-----------------------|----------------------|--|-------------------------------------|
| 34 | 11.30 | AGRICULTURAL LAND | Grid D1 | | Agricultural | S. Schnitzius Rd, W. East Eden Rd |
| 35 | 5.44 | NATURAL TERRESTRIAL - FORESTED | Grid C1 | | Agricultural | E. East Eden Rd, S. Keller Rd |
| 36 | 29.00 | NATURAL TERRESTRIAL - FORESTED | Grid C2 | Grid C1 | Agricultural & Conservation | E. Sisson Hwy, N. Schnitzius Rd |
| 37 | 7.11 | NATURAL TERRESTRIAL - FORESTED | Grid D2 | | Conservation | SE. IntersecSchnitzius & Sisson Hwy |
| 38 | 36.59 | AGRICULTURAL LAND | Grid C1 | Grid D1 | Agricultural | E. East Eden Rd, S. Keller Rd |
| 39 | 5.25 | AGRICULTURAL LAND | Grid C1 | Grid C2 | Agricultural | S. Hardt Rd, W. East Eden Rd |
| 40 | 7.92 | AGRICULTURAL LAND | Grid C1 | | Agricultural | NW. Intersection E Eden & Schnitziu |
| 41 | 5.85 | MIXED COVERTYPES | Grid C4 | Grid C3 | General & Office Business | W. Route 62, N. West Church |
| 42 | 6.67 | MIXED COVERTYPES | Grid C3 | | Agriculture & Hamlet Residential | N. Schoolview Dr, W. Sisson Hwy |
| 43 | 14.02 | AGRICULTURAL LAND | Grid C4 | | Hamlet Residential | E. Schriener Rd, W. Route 62 |
| 44 | 8.98 | PALUSTRINE | Grid C5 | Grid C4 | Hamlet & Suburban Residential | S. Evans Rd, N. Hemlock Rd |
| 45 | 5.92 | AGRICULTURAL LAND | Grid C4 | Grid C5 | Hamlet & Rural Residential | N. Intersection Derby & Evans Rd |
| 46 | 5.20 | AGRICULTURAL LAND | Grid C5 | | Rural Residential & Suburban Residential | E. Eden Townline Rd, N. Evans Rd |
| 47 | 34.40 | NATURAL TERRESTRIAL - FORESTED | Grid D2 | Grid E1, E2 | Agricultural & Conservation | E. Sisson Hwy, W. East Eden Rd |
| 48 | 7.88 | AGRICULTURAL LAND | Grid D1 | Grid E1 | Agricultural | S. Schuster Rd, W. East Eden Rd |
| 49 | 5.34 | AGRICULTURAL LAND | Grid E2 | Grid D2 | Conservation | E. Sisson Hwy, S. Schnitzius Rd |
| 50 | 21.75 | NATURAL TERRESTRIAL FORESTED | Grid D2 | Grid D3, E3 | Rural Residential & Conservation | E. Jennings Rd, N. Gary Dr |
| 51 | 17.10 | NATURAL TERRESTRIAL - FORESTED | Grid E2 | | Conservation, Rural Residential, & Agriculture | W. Sisson Hwy, N. Yochum Rd |
| 52 | 5.46 | NATURAL TERRESTRIAL - FORESTED | Grid D4 | Grid D3 | Rural Residential | N. Paxon Rd, W. Sandrock Rd |
| 53 | 10.95 | MIXED COVERTYPES | Grid D3 | | Rural & Suburban Residential Restricted | W. Jennings Rd, N. Paxon Rd |
| 54 | 10.84 | NATURAL TERRESTRIAL - FORESTED | Grid D3 | Grid E3 | Rural Residential | N. Paxon Rd, W. Jennings Rd |
| 55 | 12.70 | MIXED COVERTYPES | Grid D3 | Grid D4 | Suburban Residential Restricted | E. & W. Woodside Dr, S. East Church |
| 56 | 5.87 | NATURAL TERRESTRIAL - FORESTED | Grid D3 | | Suburban Residential Restricted | E. Woodside Dr, S. East Church St |
| 57 | 5.03 | NATURAL TERRESTRIAL - FORESTED | Grid D4 | Grid D5 | Suburban Residential | S. Hemlock Rd, N. New Jerusalem Rd |
| 58 | 5.27 | PALUSTRINE | Grid D4 | Grid D5 | Suburban & Hamlet Residential | S. Hemlock Rd, N. New Jerusalem Rd |
| 59 | 5.14 | NATURAL TERRESTRIAL - FORESTED | Grid D5 | | Hamlet Residential | SE. Route 62, N. Oakland Dr |
| 60 | 7.61 | PALUSTRINE | Grid D5 | | Suburban Residential | S. Hemlock Rd, N. New Jerusalem Rd |
| 61 | 5.30 | MIXED COVERTYPES | Grid E1 | Grid F1 | Conservation | N. Intersection NewOregon&Langford |
| 62 | 15.50 | AGRICULTURAL LAND | Grid E1 | | Agricultural | E. East Eden Rd, N. Haag Rd |
| 63 | 9.13 | AGRICULTURAL LAND | Grid E1 | Grid F1 | Agricultural | S. Haag Rd, E. Knoll Rd |
| 64 | 12.83 | MIXED COVERTYPES | Grid F1 | Grid E1 | Agricultural & Conservation | W. Knoll Rd, E. New Oregon Rd |
| 65 | 23.62 | MIXED COVERTYPES | Grid F2 | | Agricultural & Conservation | S. Yochum Rd, W. Sisson Hwy |
| 66 | 10.14 | AGRICULTURAL LAND | Grid F3 | Grid F2 | Agricultural | N. Yochum Rd, E. Jennings Rd |

Open Space Inventory

Table A

| SITE ID NO | ACRES | LANDUSE/COVER CLASSIFICATION | PRIMARY GRID LOCATION | 2NDARY GRID LOCATION | ZONING CLASSIFICATION | GENERAL LOCATION |
|------------|-------|--------------------------------|-----------------------|----------------------|--|------------------------------------|
| 67 | 10.71 | NATURAL TERRESTRIAL - FORESTED | Grid E2 | Grid E3 | Rural Residential | S. Gary Dr, N. Wepax Rd |
| 68 | 5.05 | MIXED COVERTYPES | Grid E2 | Grid F2 | Rural Residential & Agriculture | N. Yochum Rd, E. Jennings Rd |
| 69 | 13.78 | NATURAL TERRESTRIAL - FORESTED | Grid F1 | Grid F2 | Agricultural & Conservation | E. Sisson Hwy, W. Langford Rd |
| 70 | 10.54 | NATURAL TERRESTRIAL - FORESTED | Grid F3 | Grid E3 | Rural Residential & Agriculture | W. Jennings Rd, S. Kulp Rd |
| 71 | 24.24 | NATURAL TERRESTRIAL - FORESTED | Grid E4 | Grid E3 | Rural Residential | S. Paxon Rd, N. Kulp Rd |
| 72 | 7.60 | NATURAL TERRESTRIAL - FORESTED | Grid E3 | | Rural Residential | W. Jennings Rd, S. Paxon Rd |
| 73 | 12.45 | NATURAL TERRESTRIAL - FORESTED | Grid F4 | Grid F3 | Rural Residential | S. Kulp Rd, W. Jennings Rd |
| 74 | 11.01 | NATURAL TERRESTRIAL - FORESTED | Grid E4 | | Rural Residential | SE. Route 62, W. Sandrock Rd |
| 75 | 9.46 | NATURAL TERRESTRIAL - FORESTED | Grid E4 | Grid F4 | Rural Residential | N. Sandrock Rd, SE. Route 62 |
| 76 | 8.76 | AGRICULTURAL LAND | Grid E5 | Grid F5 | Rural Residential | N. Pontiac Rd, W. Route 62 |
| 77 | 9.89 | AGRICULTURAL LAND | Grid E5 | | Rural Residential & Suburban Residential | NE. Carpenter, S. New Jerusalem Rd |
| 78 | 5.68 | NATURAL TERRESTRIAL - FORESTED | Grid F1 | | Agricultural & Conservation | E. Langford Rd, W. New Oregon Rd |
| 79 | 11.53 | AGRICULTURAL LAND | Grid F2 | | Agricultural | W. Sisson Hwy, S. Yochum Rd |
| 80 | 14.85 | AGRICULTURAL LAND | Grid F3 | Grid F2 | Agricultural | E. Jennings Rd, S. Yochum Rd |
| 81 | 8.46 | NATURAL TERRESTRIAL - FORESTED | Grid F3 | | Rural Residential & Agriculture | W. Jennings Rd, N. EdenCollins Tow |
| 82 | 7.84 | NATURAL TERRESTRIAL - FORESTED | Grid F4 | | Rural Residential | W. Larkin Rd, S. Sandrock Rd |
| 83 | 6.08 | NATURAL TERRESTRIAL - FORESTED | Grid F4 | | Rural Residential | E. Tice Rd, S. Sandrock Rd |
| 84 | 9.28 | NATURAL TERRESTRIAL FORESTED | Grid F4 | | Rural Residential | E. Larkin Rd |

| Land Use/Cover | Total Acres | Percent |
|------------------------------|-------------|---------|
| Agricultural | 894.67 | 37 |
| Aquatic | 18.83 | 1 |
| Barren | 3.69 | 1 |
| Mixed Covertypes | 145.03 | 6 |
| Natural Terrestrial Forested | 627.07 | 26 |
| Natural Terrestrial Open | 146.24 | 6 |
| Palustrine - Wetlands | 214.79 | 9 |
| Urban or Built-Up | 335.8 | 14 |
| All Uses | 2386.12 | 100 |

- **Location.** Ideally, areas of protected open space land should be distributed throughout the Town, not just confined to one or two areas. Like the Ecological Community Type parameter, location will generally become an important consideration only after appreciable areas of open space have been protected. However, location may be important even early in the open space protection process if certain features or areas within the Town are deemed priorities for protection. Examples of this would be forested areas along steep slopes and any natural areas bordering watercourses.

- **Diversity.** There are several ways to look at the “diversity” of an area. For our purposes here the main ones are plant species diversity, animal species diversity, ecological community diversity, and physical features diversity. From a practical standpoint, the most important ones to determine in some fashion are plant species diversity and ecological community diversity. Animal species diversity is generally dependent on the other two. The diversity of physical features is more subjective, but worthy of consideration. It can affect the other three.

Indices for diversity of plant species are dependent on two things: Species Richness, which is simply the total number of species in a particular area; and Species Abundance Evenness, which is a measure of how equal the abundances of the different species are. There are many technical diversity indices, but for field evaluation purposes, a fairly complete estimation of species richness coupled with a rough estimate of evenness is generally sufficient. One estimate of the latter is to determine how many species represent 10% or more of the total cover in their general layer (herb, shrub-sapling, or tree), and to use the total number of these species in all layers as the measure of evenness. Multiplying the total number of species in the area by the evenness number can yield a rough measure of diversity. Some people equate species richness with diversity and just use the number of species in an area as the measure of diversity. This approach is adequate for ecological community diversity.

- **Potential for Long-Term Survival of Community or Communities without A Major Management Effort.** This consideration is important for practical reasons, including financial. The potential for survival is influenced by size and what is or is likely to be adjacent to the protected parcel. The larger a parcel is, the better it can buffer itself. Parcels which appear to require significant management for the biological communities to survive should be avoided in most cases. This is because such a situation will strain the resources and will of the Town, particularly in light of long-term protection. An exception would be any case where a conservation organization formally agrees to accept management responsibility for the property, thus relieving the Town of such a burden.

Agricultural Land.

For Agricultural Land, an evaluation system using somewhat different criteria is of course advisable. As a suggestion or guideline, a form currently used by the Western New York Land Conservancy is attached to this report (Attachment C). As with the evaluation of natural land, the approach is to gather and present pertinent information, not to generate a rigid ranking of parcels. Here emphasis is placed on soils and their suitability for agricultural purposes, on auxiliary systems required (if any) to enable economic farming of the parcel, and on the actual recent history of the parcel.

Viewscapes

Viewscapes are relatively scenic vistas, which through their viewing by the public serve to display and reinforce some of the aesthetic characteristics important to the Town. These views are usually found along roads or trails within the Town, since unlike the natural and agricultural open space areas themselves, the general public must have at least visual access to viewscapes in order for them to have value. Viewscapes are not shown on the initial version of the LU/LC Map, but their locations can be added later.

Summary of Evaluation Approach

The recommendation is to consider most or all of the above parameters for each parcel being evaluated. However, it is not necessary to use a numerical ranking system. The process is simply not sufficiently precise to require a numerical system (although one can be used). Furthermore, if parcels or particular covertype/ecological community units are evaluated and then simply placed in one of several general acquisition categories, there is less tendency to become committed at an early stage to obtaining a particular parcel. Such flexibility is always advisable, and is easily feasible at this point in time for the Town of Eden.

ATTACHMENT A

LAND-USE AND COVERTYPE CLASSIFICATION SYSTEM

LAND-USE AND COVERTYPE CLASSIFICATION SYSTEM

Based on USGS and NY Natural Heritage Program systems - adapted by Paul Rutledge, Ph.D.

Note: All covertypes in this classification system can be found somewhere in Western New York. However, not all will be found within a particular area like the Town of Eden, or even Erie County.

1 URBAN or BUILT-UP LAND

11 Residential

- 111 Rural
- 112 Low Density
- 113 Medium Density
- 114 High Density
- 115 Mowed Lawn (w/ Trees)

12 Commercial & Services

- 121 Schools
- 122 Churches
- 123 Small Retail Stores

13 Industrial

14 Transportation, Communications, & Utilities

- 141 Utilities ROW (periodically cleared)
- 142 Gas Well Clearing
- 143 Roadways (all types)
- 144 Highway Medians

15 Industrial & Commercial Complexes

- 152 Natural Gas Pumping Stations

16 Mixed Urban or Built-Up Land

17 Other Urban or Built-Up Land

- 171 Golf Courses
- 172 Developed Public Parks
- 173 Cemeteries
- 174 Camps
- 175 Trap or Other Shooting Ranges
- 176 Clubs

2 AGRICULTURAL LAND

21 Cropland & Pastureland

- 211 Cropland/Row Crops
- 212 Cropland/Field Crops
- 213 Pastureland

22 Orchards, Vineyards, Etc.

- 221 Orchards
- 222 Vineyards
- 223 Nurseries

23 Confined Feeding Operations

24 Other (Misc.) AgLand (incl. Farmsteads)

25 Transitional Covertypes - Starting from Agricultural Land

- 2561 : 21 changing to 6113

3 NATURAL TERRESTRIAL - OPEN

31 Open/Herbaceous

- 311 Riverside Sand/Gravel Bar
- 312 Shoreline Outcrop
- 313 Calcareous Shoreline Outcrop
- 314 Cobble Shore
- 315 Cliff Community
- 316 Calcareous Cliff Community
- 317 Shale Cliff & Talus Community
- 318 Successional Old Field

32 Open/Woody

- 321 Oak Openings
- 322 Limestone Woodland
- 323 Calcareous Talus Slope Woodland
- 324 Acidic Talus Slope Woodland
- 325 Shale Talus Slope Woodland
- 326 Successional Blueberry Heath
- 327 Successional Shrubland

35 Transitional Covertypes - Starting from Open Terrestrial

- 3531 : 31 changing to 32
- 318 changing to 327
- 3536 : 318 changing to 6113
- 3541 : 32 changing to 41
- 327 changing to 41
- 3542 : 32 changing to 42
- 3561 : 327 changing to 61
- 327 changing to 6117

4 NATURAL TERRESTRIAL - FORESTED

41 Deciduous

- 410 Partially logged (thinned) Deciduous Forest
- 411 Appalachian Oak-Hickory Forest
- 412 Allegheny Oak Forest
- 413 Chestnut Oak Forest
- 414 Rich Mesophytic Forest
- 415 Beech-Maple Mesic Forest
- 416 Maple-Basswood Rich Mesic Forest
- 417 Successional Northern Hardwoods

42 Coniferous

- 421 Pine Plantation
- 422 Spruce/Fir Plantation
- 423 Conifer Plantation

43 Mixed

- 431 Appalachian Oak-Pine Forest
- 432 Hemlock-Northern Hardwood Forest
- 433 Pine-Northern Hardwood Forest

45 Transitional Covertypes - Starting from Forested Terrestrial

- 4516 : 41 changing to 62
- 4541 : 42 changing to 41
- 4543 : 41 changing to 43
- 41 changing to 432
- 4544 : 42 changing to 43

5 AQUATIC

51 Riverine

- 511 Rocky Headwater Stream
- 512 Marsh Headwater Stream
- 513 Midreach Stream
- 514 Main Channel Stream
- 515 Backwater Slough
- 516 Intermittent Stream
- 517 Ditch/Artificial Stream

52 Lacustrine

- 521 Bog Lake/Pond
- 522 Marl Pond
- 523 Eutrophic Pond
- 524 Farm/Artificial Pond
- 525 Reservoir/Artificial Impoundment

6 PALUSTRINE

61 Open

611 Open Mineral Soil Wetlands

- 6111 Deep Emergent Marsh
- 6112 Shallow Emergent Marsh
- 6113 Wet Meadow
- 6114 Cobble Shore Wet Meadow
- 6115 Inland Non-Calcareous Lake Shore
- 6116 Inland Calcareous Lake Shore
- 6117 Shrub Swamp
- 6118 Impounded Marsh

612 Open Peatlands

- 6121 Sedge Meadow
- 6122 Rich Sloping Fen
- 6123 Rich Graminoid Fen
- 6124 Medium Fen
- 6125 Inland Poor Fen
- 6126 Rich Shrub Fen
- 6127 Dwarf Shrub Bog
- 6128 Highbush Blueberry Bog Thicket

62 Forested

620 Partially logged (thinned) Swamp Forest

621 Forested Mineral Soil Wetlands

- 6211 Floodplain Forest
- 6212 Red Maple-Hardwood Swamp
- 6213 Silver Maple-Ash Swamp
- 6214 Vernal Pool
- 6215 Hemlock-Hardwood Swamp
- 6216 Successional Hardwood Swamp
- 6217 Impounded Swamp

622 Forested Peatlands

- 6221 Red Maple-Tamarack Peat Swamp
- 6222 Northern White Cedar Swamp
- 6223 Rich Hemlock-Hardwood Peat Swamp
- 6224 Black Spruce-Tamarack Bog

65 Transitional Covertypes - Starting from Open Palustrine

- 6522 : 6112 changing to 62
- 6527 : 6112 changing to 6117
- 6537 : 6113 changing to 6117
- 6572 : 61 changing to 62
 - 6117 changing to 62
 - 6117 changing to 621

7 BARREN LAND

75 Strip Mines, Quarries, and Gravel Pits

751 Sand & Gravel Pits

752 Quarries

76 Construction Areas (large)

77 Mixed Barren Land

8 MIXED COVERTYPES

81 Mixed Covertypes Involving Urban or Built-Up Land

81112 : 11 and 12

81113 : 115 and 13

81124 : 11 and 24

81131 : 11 and 318

81141 : 11 and 41

81161 : 115 and 6113

81224 : 12 and 24

81231 : 12 and 318

82 Mixed Covertypes Involving Agricultural Land

82132 : 21 and 32

82224 : 223 and 24

83 Mixed Covertypes Involving Natural Open Terrestrial

83161 : 31 and 61

83241 : 32 and 41

327 and 41

83261 : 327 and 6117

84 Mixed Covertypes Involving Forested Terrestrial

84143 : 41 and 43

41 and 432

84162 : 41 and 62

41 and 621

84362 : 43 and 62

86 Mixed Covertypes Involving Palustrine Areas

86262 : 621 and 6214

ATTACHMENT B

ECOLOGICAL COMMUNITIES LIST

**NATURAL AND QUASI-NATURAL ECOLOGICAL COMMUNITIES
FOUND OR LIKELY TO BE FOUND IN THE TOWN OF EDEN**

Most of the following ecological communities are classified according to Reschke (1990), and the few others are based on discussions with Reschke.

The rankings given below are for both global (G) and New York State (S) abundance. Thus for many ecological communities the abundance is greater on a global basis (ie. the community is relatively abundant somewhere on earth) than it is in New York. Relative abundance is estimated on a scale of 1-5, with 1 being quite rare and 5 being common.

| <u>Ecological Community</u> | <u>Abundance Ranking</u> |
|----------------------------------|--------------------------|
| Riverside Sand/Gravel Bar | G5 S5 |
| Shoreline Outcrop | G5 S5 |
| Calcareous Shoreline Outcrop | G3G4 S3(?) |
| Cobble Shore | G4G5 S4 |
| Shale Cliff & Talus Community | G4 S3(?) |
| Successional Old Field | G5 S5 |
| Successional Shrubland | G5 S5 |
| Rich Mesophytic Forest | G4 S2S3 |
| Beech-Maple Mesic Forest | G4 S4 |
| Maple-Basswood Rich Mesic Forest | G4 S2S3 |
| Successional Northern Hardwoods | G5 S5 |
| Hemlock-Northern Hardwood Forest | G4G5 S4 |
| Pine Plantation | G5 S5 |
| Spruce/Fir Plantation | G5 S5 |
| Conifer Plantation | G5 S5 |
| Rocky Headwater Stream | G4 S4 |
| Marsh Headwater Stream | G4 S4 |
| Midreach Stream | G4 S4 |
| Intermittent Stream | G4 S4 |
| Ditch/Artificial Stream | G5 S5 |
| Eutrophic Pond | G4 S4 |
| Farm/Artificial Pond | G5 S5 |
| Deep Emergent Marsh | G5 S5 |
| Shallow Emergent Marsh | G5 S5 |
| Wet Meadow | N/A |
| Cobble Shore Wet Meadow | G3 S2S3 |
| Shrub Swamp | G5 S5 |
| Impounded Marsh | G5 S5 |
| Sedge Meadow | G5 S4 |
| Rich Sloping Fen | G3 S1S2 |
| Rich Graminoid Fen | G3 S1S2 |
| Rich Shrub Fen | G3G4 S1S2 |
| Floodplain Forest | G3G4 S2S3 |
| Red Maple-Hardwood Swamp | G5 S4S5 |
| Silver Maple-Ash Swamp | G3G4 S2S3 |
| Vernal Pool | G4 S3S4 |
| Hemlock-Hardwood Swamp | G4G5 S4 |
| Successional Hardwood Swamp | N/A |
| Impounded Swamp | G5 S5 |
| Rich Hemlock-Hardwood Peat Swamp | G3G4 S2S3 |

ATTACHMENT C

WESTERN NEW YORK LAND CONSERVANCY AGRICULTURAL LAND EVALUATION FORM

WNYLC – AGRICULTURAL LANDS EVALUATION FORM

Property/Farm Name:

Field Observations:

Description and Current Conditions:

Drainage:

Surrounding Land Uses:

Other Features & Notes:

SUMMARY:

**WESTERN NEW YORK LAND CONSERVANCY
SITE EVALUATION COMMITTEE
AGRICULTURAL LANDS EVALUATION FORM**

Property/Farm Name:

Property Location:

Project No.

Landowner:

Owner Address:

Telephone No.:

Date(s):

Evaluator(s) Name(s):

Brief History of Farm:

Parcel Acreage Summary: (Current Use)

Total Acres =
Row Cropland =
Pasture/Non-Row =
Fallow Cropland =
Woodland =
Pond(s) =
Stream(s) =
Other (specify) =

Office analysis of land based on soils (data taken from County Soil Survey, but can be supplemented with field observations):

| <u>SoilMap</u> <u>Symbol</u> | <u>Soil Series Name</u> | <u>Capabil.</u> <u>Class</u> | <u>Drainage</u> | <u>Prime</u> <u>Farmland?</u> | <u>Acres</u> |
|---------------------------------|-------------------------|---------------------------------|-----------------|----------------------------------|--------------|
|---------------------------------|-------------------------|---------------------------------|-----------------|----------------------------------|--------------|

* - Prime Farmland with some reservations/qualifications