

COMMUNITY ENVIRONMENTAL MANAGEMENT



CEM HANDBOOK FOR COMMUNITY CONSERVATION PLANNING ----- Draft -----



Prepared by the
CENTER FOR COMMUNITY ENVIRONMENTAL MANAGEMENT
in association with the
NEW YORK STATE SOIL AND WATER CONSERVATION COMMITTEE
NEW YORK ASSOCIATION OF CONSERVATION DISTRICTS
and the
NEW YORK STATE CONSERVATION DISTRICT EMPLOYEE'S ASSOCIATION

RECOGNIZING THE PROBLEM WE FACE

For many, there is a crisis of confidence in the way we are building our communities in New York State. People look around at the built evidence and see sprawl with its' associated traffic congestion and ugly strip development, and environmental problems including loss of farmlands, water quality degradation, loss of wildlife habitats and wildlife corridors, and loss of scenic amenities and green space.



Eroding soil from this construction site is transported in stormwater runoff and.....

.....eventually reaches and pollutes receiving waterbodies. Sediment is very destructive to fish and wildlife habitat, drinking water supplies and recreational amenities.



From about 1850 to 1940, when we were less wealthy than we are today, we built healthier communities that were compact and which provided for a sense of place and a strong sense of community. The small villages that we like so well, which, with their mixture of uses, i.e., shops, offices and apartments above shops and residences, all within walking distance of one-another were an expression of the principal pattern of development during this time period. Around 1940, this all began to change in response to the emergence of the automobile. For the past 60 years our dominant pattern of development, including the massive highway infrastructure, has been built largely to accommodate the automobile and the desire of people to have their own 'place in the country'. This, coupled with conventional zoning, has led to sprawl which has become very destructive of natural resources in many areas of the State. Sprawl is an inherently environmentally unsustainable pattern of development. With its huge infrastructure requirements, it is an economically inefficient pattern of development, which has

resulted in the needless degradation and loss of natural resources, it has contributed significantly to the economic decline of our inner cities, and it has contributed substantially to the loss of quality of life amenities for many and loss of sense of community. This has been a source of great frustration among many, including some developers with whom we entrust with the development of our communities, who question whether we can ever again build great communities.



This is not the way it has to turn out. We stand at a crossroads in the development of communities in the State. Either we modify our behavior and leave a legacy that we can be proud of or we don't. While it can not address all of the problems we currently face, this guidebook can help citizens and local officials plan for sustainable development and help put quality back into our communities which can be a source of great pride.

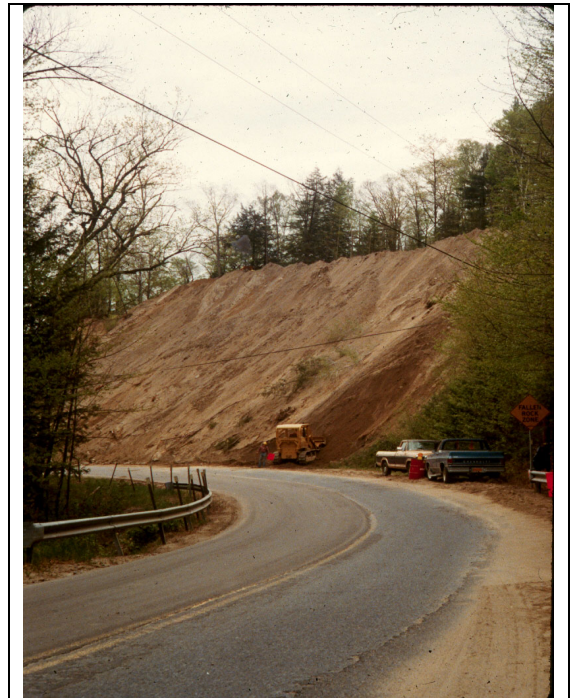
THE COMPREHENSIVE PLAN

Fundamental to the planning process is the Comprehensive Plan or Master Plan. The Comprehensive Plan sets forth community values by providing a vision of how citizens want their community to look twenty or thirty years in the future. For suburban or rural communities, the Comprehensive Plan typically seeks to preserve agricultural lands, water quality, rural character, open space, greenways, wildlife habitat, etc. But, when one examines zoning in most communities, it's as if the Comprehensive Plan does not exist. For example, conventional zoning which provides for a two acre zoning district, enables a house to be built on every two acres in that district, or a house on every five acres in areas zoned as five acres. Clearly, nothing could be more destructive to preserving farmland, wildlife habitat or other open space resources. Carving farmland into one, two or five acre zones simply does not preserve farmland, or open space, or rural character, and yet, the vast majority of communities in the State which have zoning have conventional zoning which typically works at cross purposes with the vision and goals set forth in their Comprehensive Plan. The problem with current land use planning is that in many instances natural resource protection tools and techniques are not widely used to achieve natural resource protection goals and objectives.

The CEM process is intended to provide the necessary tools and techniques to accomplish this task.

THE COMMUNITY CONSERVATION PLAN

A Community Conservation Plan is not intended as a substitute or replacement for a Comprehensive Plan. On the contrary, it is factored into and becomes an integral component of the Comprehensive Plan. Community conservation planning provides a process whereby communities and their citizens can, through the use of guidance documents, remediate existing environmental problems, and prevent environmental and natural resource problems related to future growth and development. Community conservation planning provides a set of tools for looking at green space and natural resources in ways that, heretofore, have not been readily available in the comprehensive planning process. Owing to a lack of such tools and an understanding of those that do exist, open space resources, water quality, wildlife habitats, farmland, and greenways have suffered in most communities across New York State that have been subjected to pressures of growth and development. The community conservation planning process proceeds with the underlying assumption that there are natural resource problems in your community which need to be addressed. It also proceeds with the identification of an individual or “sparkplug” who can provide leadership to get the “ball rolling” and take responsibility to see the process through to the completion and implementation of a Community Conservation Plan. It also calls for the formation of a planning team or steering committee. It is critical that the community’s elected officials, the planning board and zoning board of appeals, environmental council, and highway department be represented on the planning team. Community stakeholders selected from the public at large should also be appointed to the team.



PREPARING A COMMUNITY CONSERVATION PLAN

Community conservation planning follows a five-tiered approach:

Tier 1: Survey of Community Natural Resource Concerns

As part of the planning process, a community should undertake a problem assessment to take stock of natural resources assets in the community and determine the health and well-

being of these resources. This can be accomplished by using the Survey of Natural Resource Concerns Worksheet that can be found in the CEM Worksheets supplement to this guide. While a community may undertake the survey as a self-assessment, in New York State County Soil and Water Conservation Districts are well positioned to assist with the assessment. Owing to their natural resources expertise and knowledge about local resource issues, working with Soil and Water Conservation Districts is highly recommended. The Survey of Natural Resource Concerns Worksheet helps identify the level of concern and location of 1) water quality problems, 2) drinking water concerns, and 3) other natural resource concerns such as loss or decline of fish and/or wildlife species and/or habitats, loss or decline of biodiversity, loss of open space and scenic amenities, loss of and encroachment of development onto prime farmlands and more.



This water supply reservoir has fallen into disuse as a result of erosion and sedimentation due to road building for a subdivision that was never built upstream in the watershed.

Several other items should be examined during Tier 1. The Comprehensive (Master) Plan should be examined to determine if it has a well articulated vision as to how the community is to look like in 20 or 30 years into the future. The Comprehensive Plan also should be examined to determine if its goals and objectives support the vision. Implementation mechanisms such as zoning should be examined to determine if they provide the regulatory framework for delivering the vision and achieving stated goals and objectives. If after completing the Survey of Natural Resource Concerns it is concluded that there are natural resource issues that need to be addressed, then either the Comprehensive Plan is not being effectively implemented, goals and objectives for protecting specific natural resources do not exist, or the plan implementation mechanisms, such as the zoning regulations are inappropriate for achieving stated goals and delivering on the vision. If the Comprehensive Plan lacks goals and objectives for protecting natural resources, then an update of the Plan may be in order if that is the desire of community stakeholders. But, it is almost always desirable to supplement the Comprehensive Plan with a Community Conservation Plan because there usually are outstanding natural resource and environmental issues that need to be addressed in most communities.

Tier 2A: Environmental Assessment Worksheets

For each specific resource problem or concern identified and evaluated in Tier 1 above, there is a Community Environmental Management Worksheet. (See the CEM Worksheets supplements to the guide.) These worksheets, or a combination of them, can be used to further articulate the nature of a particular natural resource problem, identify its cause(s), evaluate the impacts to the community, identify potential strategies and management options for addressing the problem, identify barriers to implementation, and identify what assistance a community might need to address a particular natural resource management issue. Assistance may take the form of information/education, assessment/planning, BMP design/implementation, design of regulations, and potential funding, etc. Following is a current list of Environmental Assessment Worksheets available:

Water Quality Protection and Restoration

- Flood Mitigation
- Stormwater Management/Erosion and Sediment Control
- Stream Corridor Management
- On-site Wastewater Management
- Highway Right-of-Way Maintenance and Salt Storage
- Marina Operations (under development)

Natural Resource Protection

- Wetlands Protection
- Forest Fragmentation
- Wildlife Corridors
- Rare & Endangered Species
- Bio-diversity
- Unique Geologic Features
- Scenic Vistas/Roads
- Historic/Cultural Resources
- Outdoor Recreation (passive & active)

Farmland Protection

Sustainable Development

- Criteria for sustainable growth and development
- Map of Potential Conservation Lands

Drinking Water Source Protection

Tier 2B: Community Capacity Assessment

Another component of the planning process is the Community Capacity Assessment. This assessment provides a current overview of the community's ability to address natural resource problems and issues. The assessment is accomplished by using a worksheet which identifies local administrators having responsibility for a specific resource area and their level of training or expertise. It also identifies existing regulatory arrangements, and current enforcement and maintenance capabilities. Appropriate members of the County Water Quality Coordinating Committee such as the county planner, county soil and water conservation technician, forester, cooperative extension agent, etc., can be called upon to participate on the planning team as needed.

Tier 3: The Community Conservation Plan

The results of the Tier 1 Survey of Natural Resource Concerns, the Tier 2A Environmental Assessments, and the Tier 2B Community Capacity Assessment should provide the basis for performing a SWOT Analysis. The SWOT Analysis provides a framework for examining the community's Strengths, Weaknesses, Opportunities and Threats as regards protection of natural resources. The SWOT Analysis can simply be a listing or summation of strengths, weaknesses, opportunities and threats in the community and for tailoring planning strategies and options for addressing specific natural resource issues. It provides direction for where emphasis is needed in planning for the correction or remediation of environmental problems or for preventing problems from occurring. The Tier 2A Environmental Worksheets provide a host of strategies and options to consider in developing the Community Conservation Plan. The results of the Tier 1, Tier 2, and SWOT Analysis can be summarized in the CEM Risk and Problem Assessment Summary Report which, in turn, can be presented to community officials and the public at large. The Summary Report becomes a critical component of the Community Conservation Plan. It will help prioritize environmental action initiatives over the next three to five years.

Mapping Potential Conservation Areas: A Key Component of the Community Conservation Plan

One of the most important steps a community can take in preparing a Community Conservation Plan is to conduct a natural resources inventory and from this inventory prepare a Map of Potential Conservation Areas. The Map of Potential Conservation Areas is prepared by superimposing on a parcel map (Figure 1) of the community both Primary and Secondary Conservation Areas. Primary Conservation Areas include critical resource features such as wetlands, floodplains, steep slopes over 25 % (See Figure 2). The Primary Conservation Areas in a community often are protected by state and/or local codes.

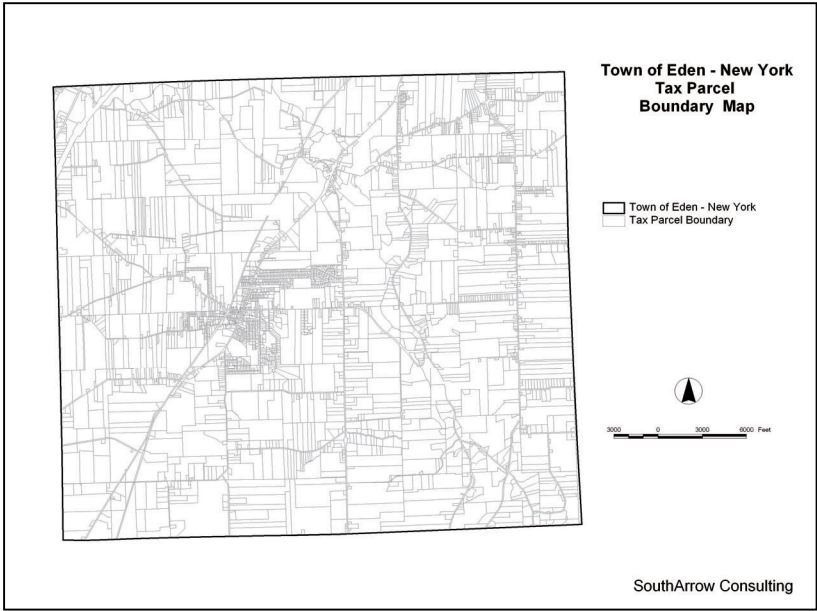
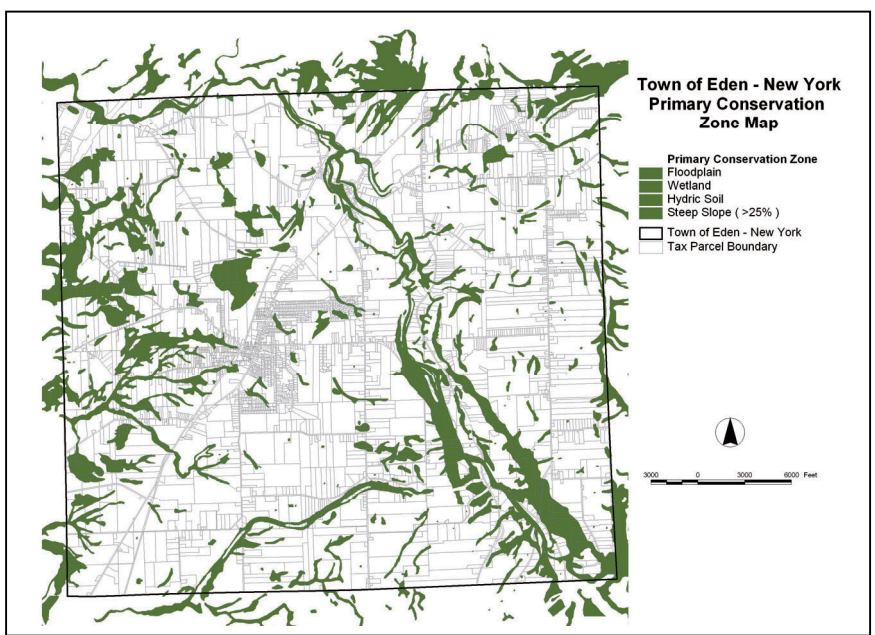


Figure 1. Tax parcel map. map. Town of Eden, NY NY.

The GIS mapping undertaken for the Town of Eden was made possible through a Section 319 grant from the NYS Department of Environmental Conservation to the Erie County Soil and Water Conservation District. SouthArrow Consulting in Buffalo NY was awarded the grant by the county to provide GIS and other planning services for the Town of Eden as part of a CEM pilot project.

Figure 2. Primary Conservation Areas... wetlands, floodplains, and steep slopes.



Secondary Conservation Areas include sensitive natural resource features such as prime farmland, wildlife habitats, commercially viable forest lands, unique geological formations, historic features, scenic and viewsheds, wildlife corridors, stream corridors aquifer recharge

areas, or other greenway assets in the community (See Figures 3 and 4). Secondary Conservation Areas seldom are protected. Conventional zoning practices typically work at cross purposes with the protection of Secondary Conservation Areas. Subsequently, Secondary Conservation Areas are vulnerable to developmental pressures.

Figure 3. Secondary Conservation Areas... stream buffers, slopes from 15 to 25 %, prime farmland, 100+ acre farms.

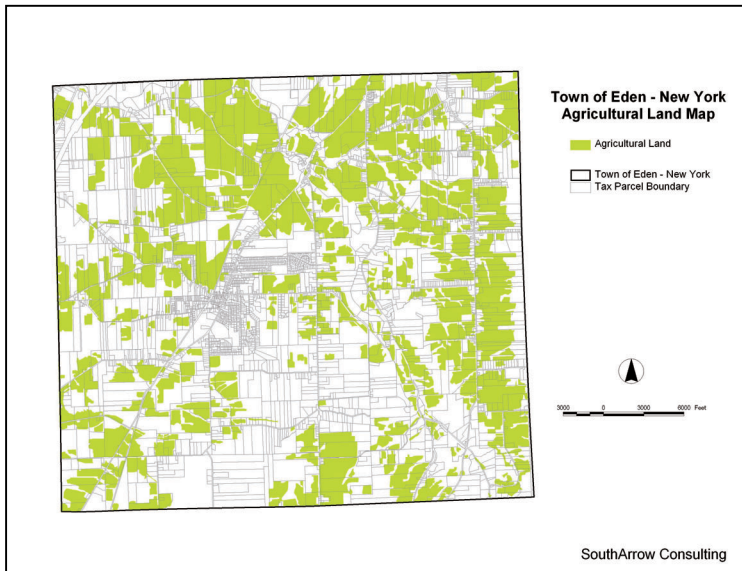
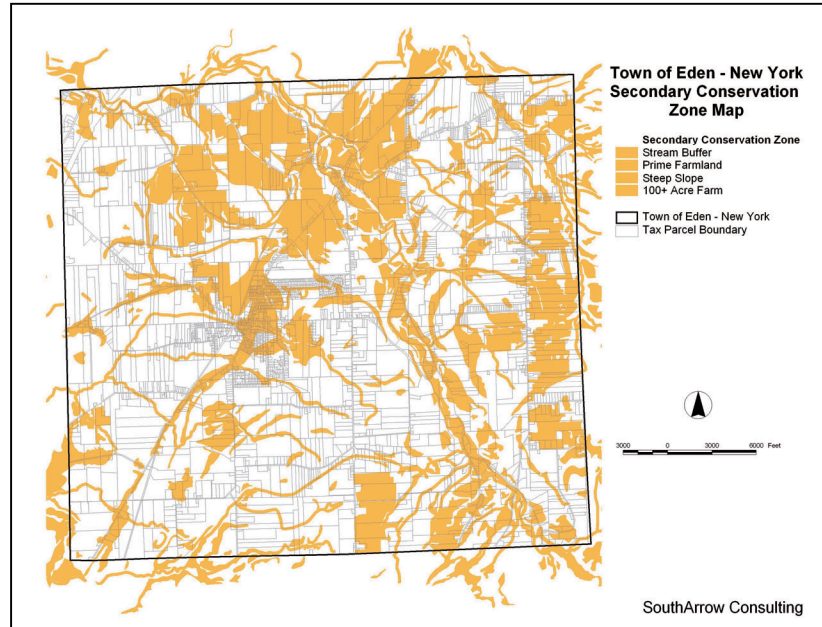


Figure 4. Secondary Conservation Areas... agricultural lands.

The Map of Potential Conservation Lands (Figure 5) consists of a composite of Primary and Secondary Conservation Areas. The map identifies for the community which lands may need to be protected from development and where density should otherwise be placed. The

map also lets developers know which lands the community may feel are important. It also shows where zoning changes may be needed if important natural resources in a community are to be protected. County Soil and Water Conservation Districts are well positioned to assist in the preparation of the Map of Potential Conservation Lands. The map also provides important natural resources and tax parcel information that can be the basis for designing a community-wide (or watershed-wide) interconnected trail system.

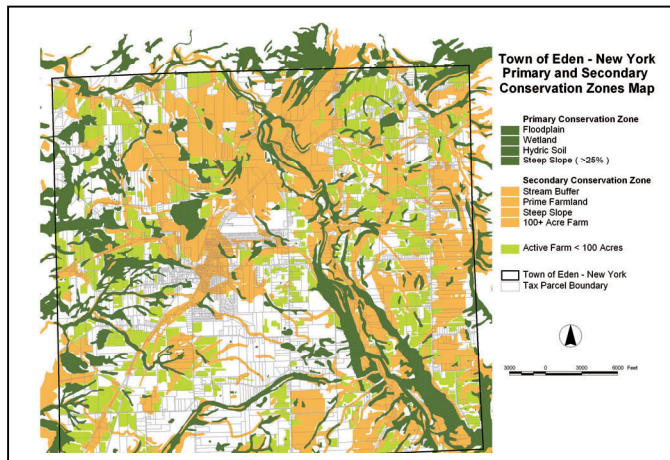


Figure 5. Map of Potential Conservation Lands...Town of Eden, NY.

Preparing a Map of Potential Conservation Lands provides a basis for designing development around Primary and Secondary natural resource features that a community believes are important rather than destroying those resource features. Conservation design of subdivisions, which provides for very low impact development, typically follows a four-step process as described in Growing Greener: Putting Conservation into Local Plans and Ordinances by Randall Arendt (See Figure 6 on next page). The Figure 6 schematics show a conventional subdivision with 32 lots and a conservation subdivision with the same number of lots. Adoption of conservation zoning provisions by local officials will be required if conservation subdivisions dominant pattern of development in the community.

It is up to elected officials in the community to adopt the Map of Potential Conservation Lands as an amendment to the Comprehensive Plan. Likewise, as strategies and options for addressing specific natural or environmental resource issues are developed as an outgrowth of the Tier 1, 2A and 2B assessments and the SWOT Analysis above, elected officials will have to give their endorsement to the strategies. The selected strategies and provisions for putting conservation into local plans and ordinances also should be incorporated into and become a part of the Comprehensive Plan.

Tier 4: Plan Implementation

Plan implementation involves setting a realistic time schedule to undertake and specific planning tasks and then setting the tasks into motion. As mentioned above, planning

strategies/options generally hinge on one or a combination of the following mechanisms: information/education, assessment/planning, BMP design/implementation, design of regulations, and potential funding.

Tier 5: Feedback

It is vitally important to keep track of implementation initiatives because only then will community stakeholders know if the goals of the Comprehensive Plan and the Community Conservation Plan are being achieved. If deficiencies occur and a particular strategy is not working, the strategy and selected option(s) may have to be revisited and re-examined. Adjustments to the process may be required.

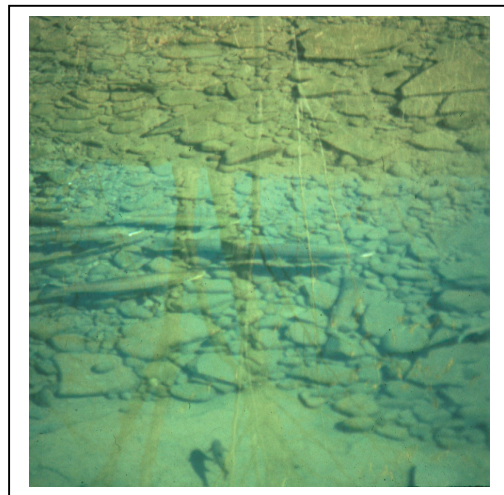
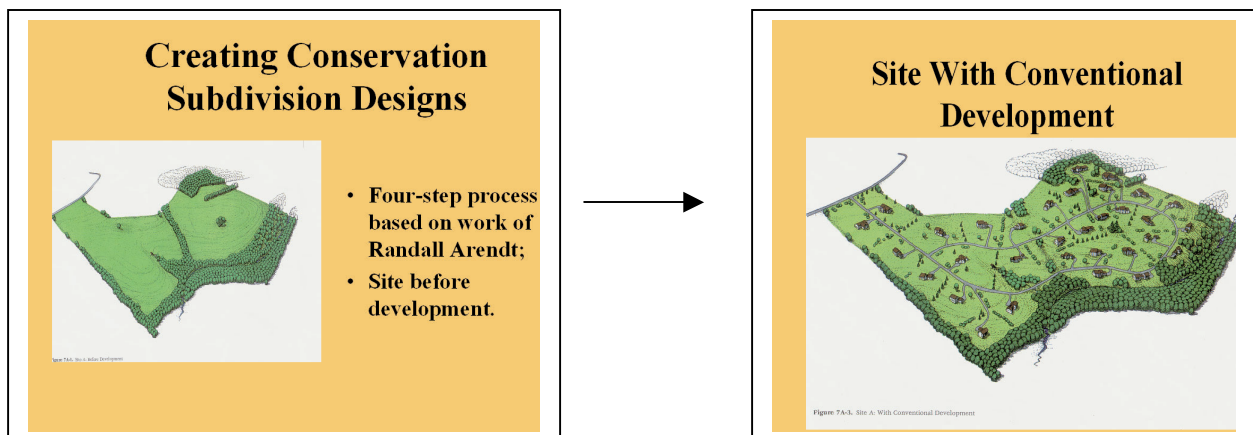
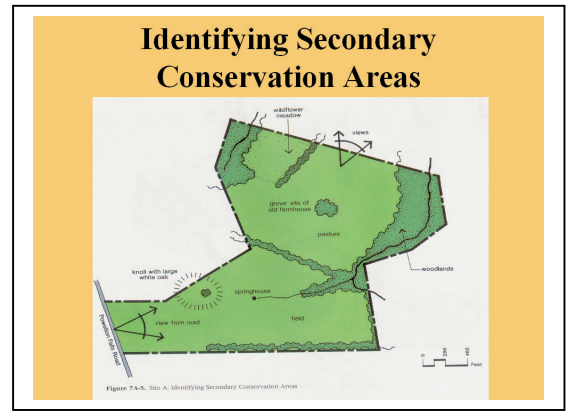
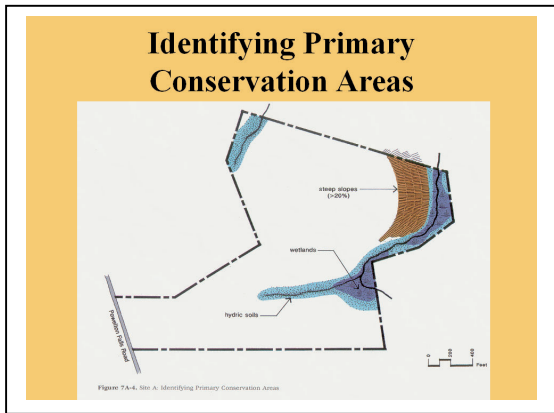


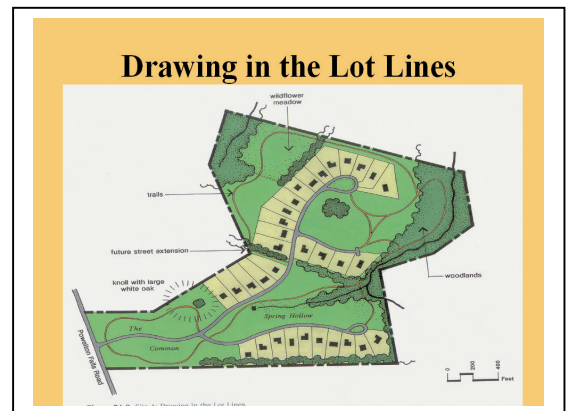
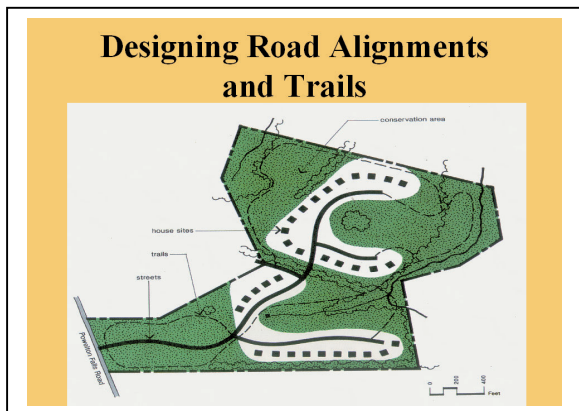
Figure 6. Schematic of Conservation Design Including Four-Step Process





Step 2 of the Four-Step process.

Step 1 of the Four-Step process.



Step 3 of the Four-Step process.

Step 4 of the Four-Step process.



WATERSHED PLANNING

It is to be noted that the process described above for preparing a Community Conservation Plan can be readily adapted to planning for the protection of natural resources within the NYS Framework for Local Watershed Management Plans. (See Attachment 2.)

