

Chapter 6 - Conservation of Canal Resources

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Chapter 6 - Conservation and Preservation of Canal Resources

At Three Rivers Junction . . .

"The ground on which I stood was elevated; below me flowed the Oneida River, and on my left the Seneca poured its waters, and uniting together they formed a majestic stream. Flocks of white geese were sporting on the water - a number of boats lying moored to the banks - a white tent erected on the right, enlivened by a blazing fire ... the bellowing of thousands of frogs in the waters, and the roaring of bloodhounds, in pursuit of deer and foxes, added to the singularity of the scene. My mind became tranquilized . . ."

DeWitt Clinton,
Private Canal Journal, 1810

The success of the Canal Recreationway is dependent upon the natural and man-made resources that have made canaling a unique and magical experience since the time of DeWitt Clinton. Conservation of these resources is the essential first step in creating the Recreationway, and is a cornerstone of transforming the system into a world-class facility for recreation and tourism. This chapter describes a detailed plan for conserving and enhancing critical, systemwide elements of the Canal System. These elements include preservation of the Canal's historic characteristics, conservation of its natural features, and maintenance and protection of its infrastructure, lands and waters. Taken together, these measures will ensure a solid foundation for the more proactive boating and recreation proposals and plan projects, discussed in Chapters 7 and 8.

6.1 HISTORIC PRESERVATION

Planning Principles

Historic song and legend have made the Canal a significant part of our national heritage. Fortunately, much of its rich and colorful historic character remains. Preservation of the historic assets of the Canal will ensure that its unparalleled legacy is preserved for future generations, and will facilitate promotion of the system as a living museum.

The following planning principles provide guidance with respect to historic preservation of the Canal:

- All parties involved should be encouraged to restore, preserve and interpret the historic elements of the original Canal System, the evolution and fabric of the modern Canal, and the historic qualities of canal communities.
- Historic canal structures should be preserved, and design of new projects should be based upon original historic features, to the extent possible.
- Historic artifacts, towpaths, views and the character of the Canal should be incorporated into land-use and open-space guidelines.
- An appropriate federal and/or state historic designation(s) should be pursued for the NYS Canal System.

Historic Designation

Formal historic designation of the NYS Canal System as a national treasure is recommended. Designation not only ensures protection of the resource, but is also an important means of gaining national attention and funding support for the Canal System.

Various national and state programs are available for designation. Two principal methods are recommended: listing on the National Register of Historic Places, which is perhaps the most common and best known approach; and additional designation as a National Heritage Area under a program currently being considered by Congress.

National Heritage Area designation is more broadly defined than National Register listing, encompassing cultural, natural and recreational resources, as well as historic structures and buildings. It is also a vehicle for development and implementation of a comprehensive interpretive plan.

The National Register of Historic Places

Listing in the National Register would be an honor attracting national recognition. The program's intention is to encourage the preservation of our nation's most valued historic treasures. Achieving Register status affords the following benefits:

- Reinforcement of the consideration for historic properties required in planning for any projects sponsored, funded, licensed, permitted or approved by a federal or state agency.
- Eligibility for certain federal tax provisions, such as the 20 percent investment tax credit for rehabilitation of privately owned income-producing historic structures.
- Project eligibility for federal historic preservation grants.
- Greater visibility of the resource, and enhanced opportunities for marketing and promotion.

The Canal System has been determined to be eligible for listing on the National Register of Historic Places. The National Register application process is consummated through comprehensive surveys, assessment of significance, and submission of nomination documentation to the National Park Service, through the NYS Office of Parks, Recreation and Historic Preservation (OPRHP).

An important first step in planning for the historic elements of the Canal, although not required for National Register status, is the development of a preservation plan. A preservation plan establishes the hierarchy of importance of canal components and sets forth guidelines and procedures for their preservation, rehabilitation, replacement, and maintenance. These same guidelines may be applied to new construction in order to maintain

compatibility with the Canal's historic fabric. The preservation plan would serve as a means of integrating historic preservation with canal operations and economic development initiatives recommended in the Canal Recreationway Plan. (See Appendix A6-a, "Design Guidelines" for suggested preservation and maintenance guidelines for canal structures.)

The American Heritage Partnership

Currently the federal government has no systematic program for identifying and funding regional heritage development. The approach thus far has been to obtain National Heritage Area designation on a case-by-case basis, each requiring a separate act of Congress. There are currently four nationally designated Heritage Areas: the Blackstone River Valley National Heritage Corridor; the Delaware and Lehigh Navigation Canal National Heritage Corridor; the Illinois and Michigan Canal Heritage Corridor; and America's Industrial Heritage Project in Pennsylvania.

The growing interest in heritage areas has led to efforts to create a National Heritage Area Program. Several pieces of legislation have been introduced in the current Congress toward this end. The bills prescribe processes for designating national heritage areas and emphasize the importance of partnerships in their development and management. The bills differ in the level of federal funding that would be made available for the program, where the funding would come from, and the purposes for which the funding would be used. The prospect for passage of National Heritage Area legislation is uncertain. Because national heritage area designation for the NYS Canal System would be appropriate, Congress should be encouraged to include it in any legislation that is enacted.

Absent Congressional action on the heritage area program, an alternative is to seek designation as a National Heritage Corridor. The linear nature of the canal corridor demonstrates its appropriateness for this designation. At the present time, heritage corridors are designated individually through site-specific Heritage Corridor statutes. Designating the Canal System would require introduction of legislation by New

York State's representatives in Congress. Heritage Corridor statutes are programmatically similar to Heritage Areas and typically include implementation and oversight by agencies with similar intent and composition to the Canal Recreationway Commission.

In last year's Congress, \$150,000 was allocated for a special resource study of the NYS Canal System. The National Park Service has begun the study, which is scheduled to be completed in late 1996. The study will include an assessment of canal resources, compare the Canal to other comparable sites within and outside the National Park System, define a range of management and partnership alternatives for the system, and determine the feasibility of the system for national recognition.

The benefits of National Heritage Corridor and/or Area designation include:

- Attracting national attention to the Canal.
- Eligibility for federal and state funding from related programs.
- Coordination of tourism, preservation, conservation, and other initiatives.
- Stimulation of revitalization efforts, public-private partnerships, and the identification of development opportunities.
- Encouragement of redevelopment that is sensitive to the Canal's historic, cultural, and recreational resources.
- Protection of natural resources.

A related state program was created by a 1994 amendment to the NYS Urban Cultural Parks Act, providing for partnership planning and management of State Heritage Areas. The act specifically designates the Mohawk Valley as a State Heritage Corridor, which includes a portion of the Canal. The intent of the program is to enhance tourism and create economic opportunity in conjunction with fostering educational, recreational, historic-preservation and natural-resource-conservation efforts. State Heritage Corridors are eligible for planning, acquisition and development, and programming grants, with funding allocated for the creation of a

management plan and early-action projects. The establishment of the Mohawk Valley State Heritage Corridor will benefit a specific area of the Canal; designation of the entire system would apply these benefits more broadly, as well as provide a springboard for achieving National Heritage Area status. However, the Canal Corporation should coordinate these programs to avoid duplication.

Preservation of the Original Canal and Related Communities

While the scope of the Canal Recreationway Plan is concerned primarily with the modern-day canal alignment, the preservation and interpretation of the historic Canal will add significantly to the visitor experience and discovery of the system. Remnant examples of the Old Canal have been preserved and interpreted in numerous locations largely through the efforts of local organizations. It is recommended that the many "Friends of the Canal" continue to reclaim and restore the missing links of the historic Canal System. Local governments and others should be encouraged to preserve, interpret and restore historic elements of the original canal alignment through a coordinated effort with the Canal Corporation and the NYS Office of Parks, Recreation and Historic Preservation.

6.2 CONSERVATION OF OPEN SPACE AND NATURAL RESOURCES

The conservation of the Canal's natural resources is as important as the preservation of its historic elements. As a transportation artery, the Canal moves through its extensive natural and man-made environment, and the quality of the canal experience is greatly affected by the way that the surrounding land is utilized. The Canal Corporation has significant holdings, but the great majority of the land in the canal corridor is owned and controlled by others. For this reason, the Plan's goals regarding land use and open-space preservation will be among the most difficult to achieve.

This section describes a series of land-use guidelines which are proposed to the Canal Corporation for use on its own land, and also recommended to canal municipalities for use in local planning and for site-plan review of projects adjacent to the Canal. Land-use guidelines are supplemented by more specific site-design guidelines presented in Appendix A6-a, "Design Guidelines." Included in the appendix are design standards for public spaces, design guidelines for site and building development, and guidelines for the preservation and maintenance of canal structures.

Following the land-use guidelines are recommendations regarding conservation of canal-owned lands located in the Adirondack Park, recognizing the unique characteristics of this important resource. All guidelines and recommendations in this Plan are consistent with the State Open Space Plan.

Planning Principles

The following planning principles are the basis for the Plan's land-use and conservation guidelines:

- The historic pattern of cluster development connected by stretches of undeveloped open space should be maintained. New development should be encouraged to locate within existing communities.
- Conservation of open space and natural vegetation should be encouraged. To the extent possible, open space should be connected by means of a greenway that establishes a continuous linkage of open spaces between existing developed areas. Canal vistas from the Thruway and other parallel roads will be preserved by limiting the planting of trees which would result in impeding these vistas.
- Public access to the Canal should be enhanced wherever appropriate and desirable, including additional launching facilities for watercraft and access opportunities for pedestrians.
- Provisions of the State Environmental Quality Review Act (SEQR), which provide for a

review of the environmental impact of certain proposed actions, must be followed by the Canal Corporation where required by law.

- Primary agricultural lands should be conserved to insure agriculture as a viable industry.
- Existing wetlands and aquatic/terrestrial ecosystems should be protected and restored where feasible and consistent with canal operations.
- Fish and wildlife habitats should be protected and enhanced throughout the Canal System, along with hunting, fishing and trapping as traditional uses of canal waters and lands wherever practicable.

Guidelines for Land Use and Conservation along the Canal

This section proposes guidelines for five basic types of land use along the Canal. Each land-use type is described, and guidelines for conservation are suggested. Land-use types are:

- Greenway
- Canalway Trail
- Access and services for canal users
- Existing settled areas
- Areas not currently settled

A Greenway

As defined in Chapter 5, for purposes of this Plan a greenway is a protected landscape corridor connecting open spaces, following natural and man-made terrain, and linking environmental, cultural and recreational amenities. The primary purpose of creating a greenway along the Canal is to conserve the open space and natural resources between clusters of existing development.

The term "greenway" represents a conservation planning and management concept that is very flexible in its scope. Greenways may contain a mixture of public and privately owned land and they may extend over more than one political jurisdiction. Greenways can be located in or encompass urban, suburban or rural areas. They link recreational, cultural and natural focal points while conserving open space.

Greenways can be of varying widths, dependent upon available land and geography. Regardless of width, all greenways share the principle of connectivity, and differ mainly in the purposes for which they are employed. There are three major purposes: habitat protection, environmental quality, and recreation. The first promotes the greenway principally as a biological corridor, the second as a living filter, and the third as an enhancement of outdoor enjoyment.

Ideally, greenway design should include all three greenway purposes. Multiple ownership, financial realities and regulatory limitations, however, necessitate that the greenway be a balance between the ideal of a corridor sufficient to serve all three purposes and one that is achievable. In practice, only a few reaches of the Canal System will emphasize habitat protection; others, environmental quality; and perhaps most, recreation.

The strategy for creating the canal greenway is to identify greenway forms that reflect the nature of the environment through which the Canal passes, and propose a greenway form for each canal region that can be achieved within the framework of willing local-government participants and the actions of private landowners.

Four greenway forms are proposed and discussed below: Wildlife or Habitat Conservation Corridors; Riparian Greenway; Recreational/Aesthetic Greenway; and Community Greenway.

- *Wildlife or Habitat Conservation Corridors*

These corridors promote habitat protection by connecting existing areas where there are large and significant wildlife and natural ecosystems. As a means of overcoming the unnatural isolation of species living in separate areas, this form of a greenway can facilitate the exchange of genes, dispersal to alternative refuges in case of catastrophe, and repopulation of target species in areas where they may have died out.

The primary location along the Canal where a wildlife and habitat conservation corridor is possible is in the central portion of the Erie

Canal, roughly from Lyons to just west of Baldwinsville, where the Montezuma Complex and the Galen Marsh, Cayuga Lake, Howland Island and Cross Lake Island State Wildlife Management Areas combine to create a significant protected natural wetlands area. The U.S. Fish and Wildlife Service and the NYS Department of Environmental Conservation are already cooperating in the Northern Montezuma Wetlands Project, which seeks to add over 36,000 acres to managed lands and will provide significant additional connectivity.

- *Riparian Greenways*

A riparian greenway is a buffer strip that protects quality of water and the aquatic habitat. The width of riparian greenway can vary, but in most areas a width of between 7.5 to 15 meters (25 to 50 feet) is sufficient to maintain canal water conditions, provide summer shade, and protect surface water quality. Greater width is needed where the area contributing run-off is larger, where slopes are steeper, and/or where human disturbance is more intense. Greater widths may also be identified as part of county water-quality plans.

For protection of environmental quality, first priority should be given to protection of riparian edges from the mouths of all tributary streams and feeder sources to their headwaters. Additional priority actions include:

- Protection and management of belts of plant cover at points of potential erosion, including undercut banks, bridge foundations, boat-access ramps, development sites, intensive forestry, overgrazed pastures, or cultivated fields.
- Protection of a strip along the level top edge of a bank from cultivation, which taken to the water's edge would accelerate loss of good soil by erosion.
- Avoidance of mowing canside vegetation, except to renew landscaping selectively if desired.

- Providing engineering solutions like berms and retention/detention basins where adequate buffer width does not exist.

- *Recreational/Aesthetic Greenway*

The recreational or aesthetic greenway would not be wide enough to provide significant connections for wildlife and in most places would not have significant riparian edge other than the immediate canal bank. The dimensional goal for this form of greenway is a minimum width of 4.5 meters (15 feet) on both sides of the Canal and/or the trail.

While any green area can create at least some aquatic shade and diversity of habitat, and the goal of environmental protection is an important goal for all greenway forms, the motivating factor for the recreational greenway is human enjoyment, whether by permitting the development of a trail, or through the creation of additional shade, visual interest or beauty.

Conditions most appropriate for the recreational or aesthetic greenway exist in two types of places: the more settled sections of the Canal where available land is limited by adjacent land use, and in the western section of the Erie Canal between Lockport and Rochester, where for significant distances the Canal flows in an embankment above the natural landscape. Where a recreational greenway form is used, special effort should be taken to incorporate existing parks and natural areas into the system.

In areas where a recreational greenway is being established, it is probable that new planting will be required. The type and form of planting should be consistent with that of the contiguous environment, maintain existing scenic vistas, screen undesirable views from the Canal, and provide a variety of visual experiences. Introduction of a row of trees to add variety to an extensive open stretch of the Canal is recommended.

A recreational/aesthetic greenway along the Canal is also appropriate to maintain the sense of a greenway in those sections where the

canal trail diverges from the Canal. The minimum goal should be to create a protected visual corridor. Vegetation and other characteristics should be consistent with the surrounding landscape.

- *The Greenway through a Community*

The final greenway type occurs within settled areas where there is little opportunity for creation of a strip of landscape. The community greenway has three goals: (1) to be continuous, (2) to incorporate the trail, and (3) to include, at a minimum, a row of trees along the Canal. The trees will mark the Recreationway, aiding in the rediscovery of the Canal by the urban community. It is recognized that in areas where tree roots could damage canal structures or other masonry walls, alternative strategies to visually mark the Recreationway may be required.

The dimensional goal for a community greenway is a minimum of three meters (ten feet) for a surfaced walkway with trees. Wherever possible, this should be widened to permit improved environmental, aesthetic and recreational quality.

An End-to-End Trail

The end-to-end trail along the Canal will be a major element of the greenway, providing significant recreational opportunities, greatly enhanced access, and linkages to other trails, including those which follow the route of abandoned historic canals. Trails are also an important part of the economic value of the Canal. They can attract tourism and can be an important amenity in encouraging investment along the Canal.

Because the trail is to be an end-to-end feature of the Recreationway, it must be accommodated along the entire Canal. Trail alignment, use, and design considerations are discussed in detail in Chapter 7.

Access and Services for Canal Users

The third type of canal-related land use provides access and services for Recreationway users. Users include: individual boaters, tour and excursion boat patrons, long-distance hikers and

bikers, day trippers, hunters, trappers and fishermen, community residents, and visitors.

The following guidelines are applicable to access and service considerations throughout the Recreationway:

- Docking and boater services, including locks, docking walls, and other canal-related amenities should include foot and vehicular access to nearby settlements.
- Connections should be provided from the trail to local communities, locks, historic sites, or other points of interest.
- Water access for power boaters should be concentrated in areas of existing settlement and/or where canal-related facilities are present. Access points for muscle-powered craft are also encouraged and can be accommodated where power-boat access is not feasible or desirable.
- Where service and canal access occurs in or near canal communities, the connection should follow routes through community centers.
- All canalside development should accommodate greenway and trail development and provide, wherever possible, public access to the Canal from adjacent sidewalks or streets.
- All vehicular and pedestrian connections between the Canal, the trail, and settlements should be improved with walking surfaces, lighting, landscaping, and signage designed to be compatible with those along the Canal.

Existing Settled Areas

Consistent with the underlying principles of the Recreationway, accommodating development within already settled areas is the preferred way to provide new services and facilities along the Canal.

To the extent possible, new development should avoid the consumption of land with subdivisions that do not respect local tradition, land forms, topography or vegetation. The tools for implementing this and other Plan recommendations will be determined individually

by each municipality. With respect to canal-owned lands, the Canal Corporation will be able to influence development location through its property-management program. A discussion of several possible mechanisms for implementation is included in Chapter 11.

The recommended general principle for new development is that of the traditional urban settlement. There is a strong likelihood that existing settled areas contain historic properties or historic districts, and planning and design for new development within these areas should consider this context. Each community can adopt guidelines that are appropriate to its own existing settlement and tailor implementation to its legislative and managerial processes.

Areas Not Currently Settled

Development should be discouraged in areas that are currently pristine and unsettled. Property with significant open space or conservation values under the direct management of the Canal Corporation should not be made available for development purposes. In cases where there are parcels not needed for operation of the Canal and where environmental conservation is the primary consideration, the Canal Corporation may wish to transfer stewardship to the NYS Department of Environmental Conservation.

As with development in existing settlements, development within areas that are currently rural or characterized by open space will be greatly influenced by local land-use measures. The underlying principle for conservation of the visual and natural character of an area is to consider open space as a land use that has importance equal to that of development.

The greenway is the primary land use recommended for protection of habitat, riparian edges and important canal viewsheds. There are open land areas, however, such as primary agricultural lands, that cannot be protected as greenways but which are nevertheless environmentally, visually, culturally, or economically important to conserve. Priorities for conservation of these lands will vary among communities along the Canal.

While development of open space should be discouraged and minimized, it is recognized that it may occur in certain areas. Suggested site-design guidelines intended to conserve essential visual and natural character are provided in Appendix A6-a, "Design Guidelines."

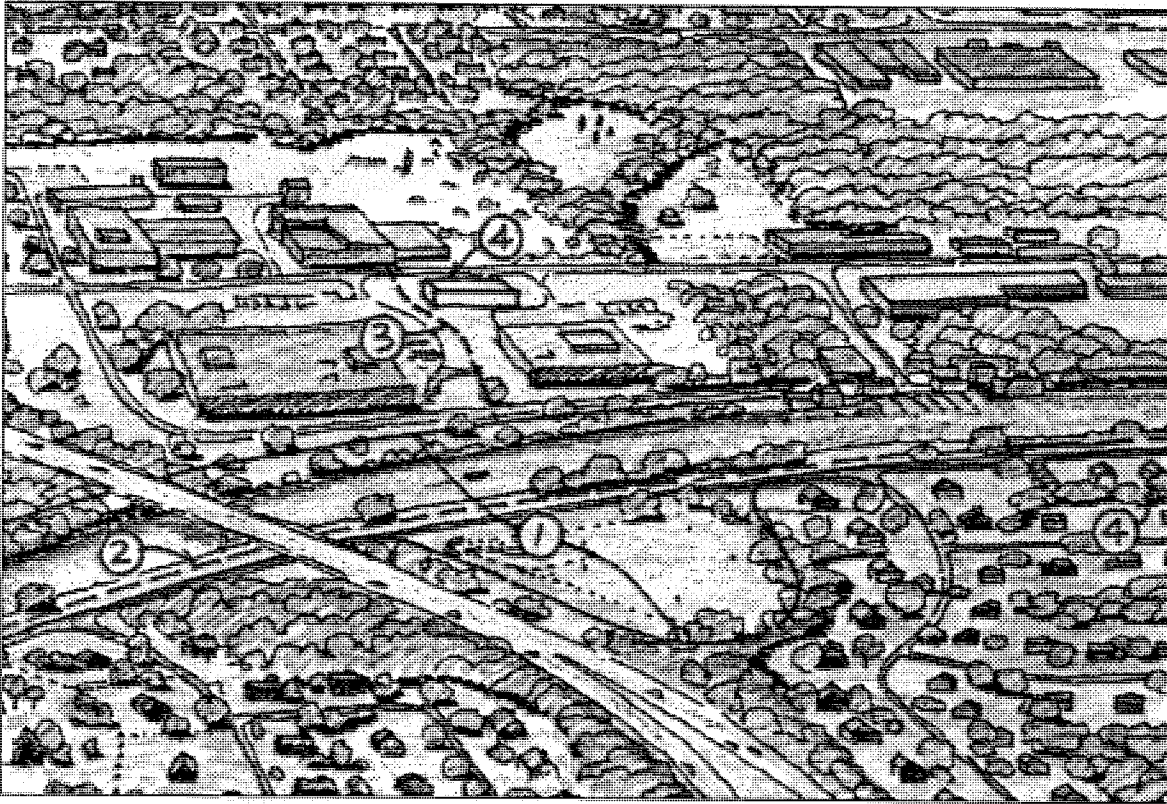
Land Use and Conservation Guidelines for the Canal Thematic Regions

The land-use and conservation guidelines proposed above will be applied selectively according to local conditions. While all individual sites are different, there are many land-use and site conditions common to each of the fifteen thematic canal regions identified in Chapter 4. These are illustrated in birdseye sketches in Exhibits 6-1 through 6-15; and for each land-use type, guidelines appropriate to conditions most common within the region are identified. The guidelines are intended to be used together with the site-design guidelines presented in Appendix A6-a. Together they identify and provide guidance for the successful achievement of the land-use and conservation strategies of the Canal Recreationway Plan.

Exhibit 6-1: Land-Use and Conservation Guidelines

Thematic Canal Region 1: Niagara Frontier

Erie Canal through The Tonawandas



Specifics regarding guidelines for each land-use type are discussed in the previous section. See also Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

Land-Use Types

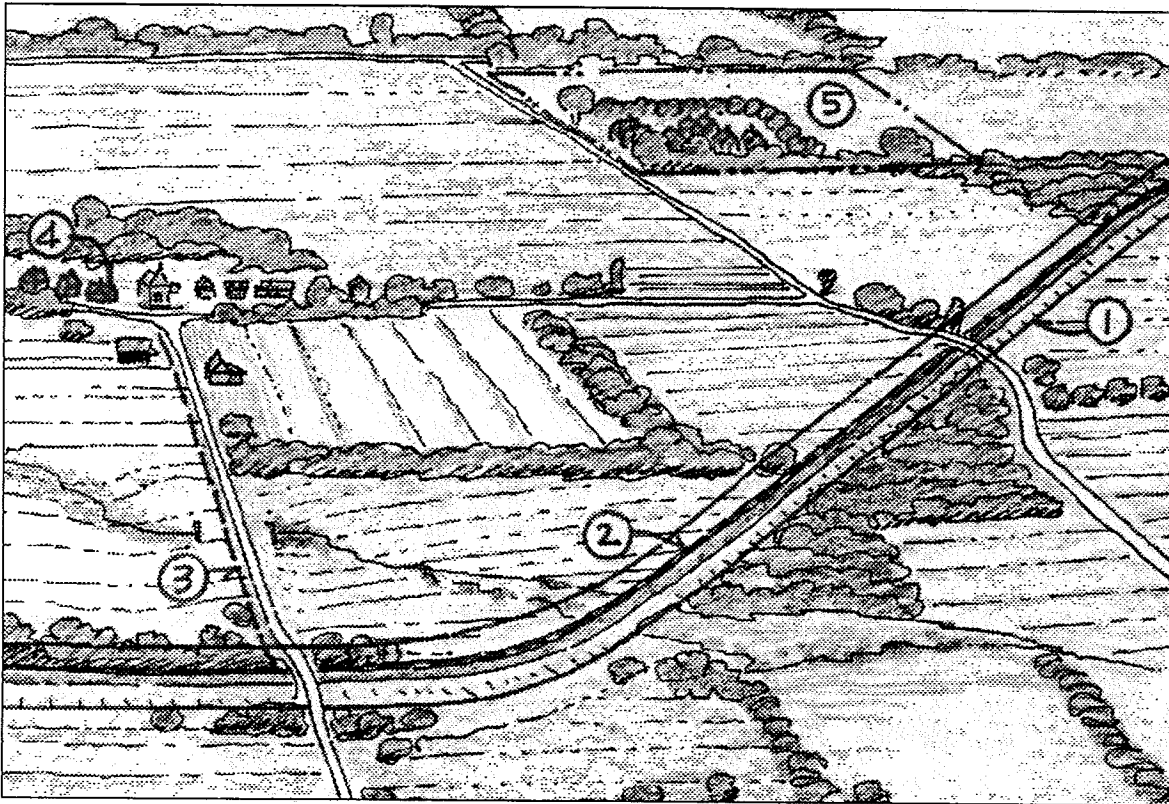
Guidelines

- | | |
|--|--|
| 1. Greenway | <ul style="list-style-type: none"> • Recreational/aesthetic greenway along the canal bank connecting existing parkland and public open space. |
| 2. Canalway Trail | <ul style="list-style-type: none"> • Trail maintained within the landscaped edges of the Canal. Portions of the trail exist. |
| 3. Access and Services for Canal Users | <ul style="list-style-type: none"> • Service and access for canal users will be accommodated by the addition of facilities at strategic locations at the Western Canal Gateway and along the Canal in this region. |
| 4. Existing Settled Areas | <ul style="list-style-type: none"> • Commercial and residential development to be within the existing roadway and infrastructure network or in extensions that retain the traditional local design character. • Public access to the Canalway Trail accommodated in all new development. |
| 5. Areas Not Currently Settled | <ul style="list-style-type: none"> • N/A |

Exhibit 6-2: Land-Use and Conservation Guidelines

Thematic Canal Region 2: Ontario Lake Plain

Erie Canal between the metropolitan areas of Buffalo and Rochester



Specifics regarding guidelines for each land-use type are discussed in the previous section. See also Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

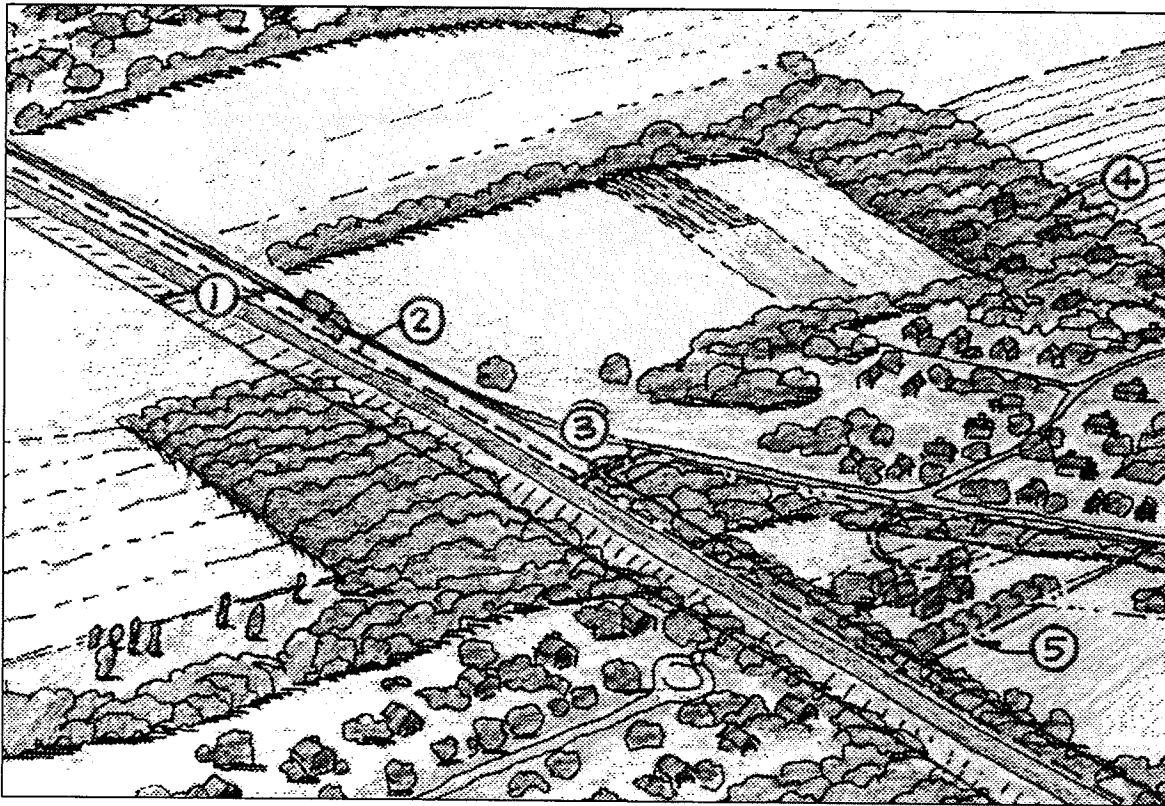
Land-Use Types

1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

Guidelines

- Recreational/aesthetic greenway along built-up canal embankment. Long views to be maintained where there are extensive open stretches along the waterway. Introduction of rows of trees parallel to the Canal is recommended.
- Trail located within the greenway on the canal bank. The trail exists from Lockport through Rochester.
- Foot and vehicular access to nearby settlement should be improved with proper walking surfaces, landscaping, and signage.
- New development to be within the existing roadway and infrastructure network or in extensions that retain the traditional local character.
- New development located as close to existing settlements as possible and to be clustered to preserve existing patterns of landscape and vegetation.

Exhibit 6-3: Land-Use and Conservation Guidelines
Thematic Canal Region 3: Metropolitan Rochester
 Erie Canal around Rochester



Specifics regarding guidelines for each land-use type are discussed in the previous section. See also Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

Land-Use Types

1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

Guidelines

- Recreational/aesthetic greenway along canal banks incorporating parks and other public open space that abuts the Canal.
- Trail follows canal alignment through the greenway edge. The trail is complete in this segment.
- Primary access points for power boats to be along the Genesee River in Rochester and at locks. Additional access points for muscle-powered crafts is encouraged.
- New development to be within the existing road and infrastructure network or in extensions that retain the traditional local design character.
- Canal environment and open space to be maintained through clustered new development. Public access to the Canalway Trail to be accommodated in all new development.

Exhibit 6-4: Land-Use and Conservation Guidelines
Thematic Canal Region 4: The Drumlins
 Erie Canal from east of Rochester to Lyons



Specifics regarding guidelines for each land-use type are discussed in the previous section. See also Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

Land-Use Types

1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

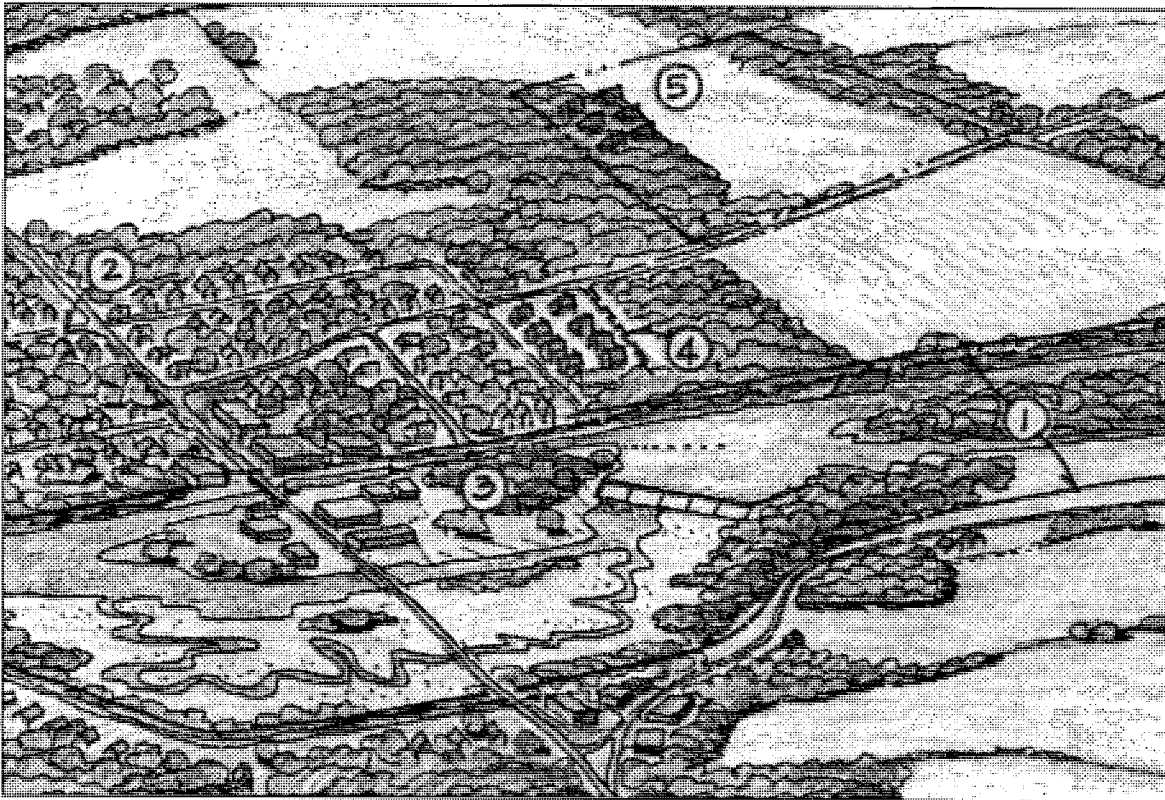
Guidelines

- Riparian greenways along river corridors and along streams tributary to the river.
- Trail accommodated in the canal greenway on abandoned rail rights-of-way or on the towpath of the historic canal, as shown above. Some trail portions are complete in this segment.
- Trail connection to settlements along Canal.
- New development to be within the existing roadway and infrastructure network or in extensions that retain the traditional local design character.
- New development to be sited and clustered to conserve farmland and open space and located away from the tops of any drumlins visible from the Canal.

Exhibit 6-5: Land-Use and Conservation Guidelines

Thematic Canal Region 5: Cayuga-Seneca Canal

Cayuga-Seneca Canal between Seneca Lake and Cayuga Lake; junction with the Erie Canal



Specifics regarding guidelines for each land-use type are discussed in the previous section. See also Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

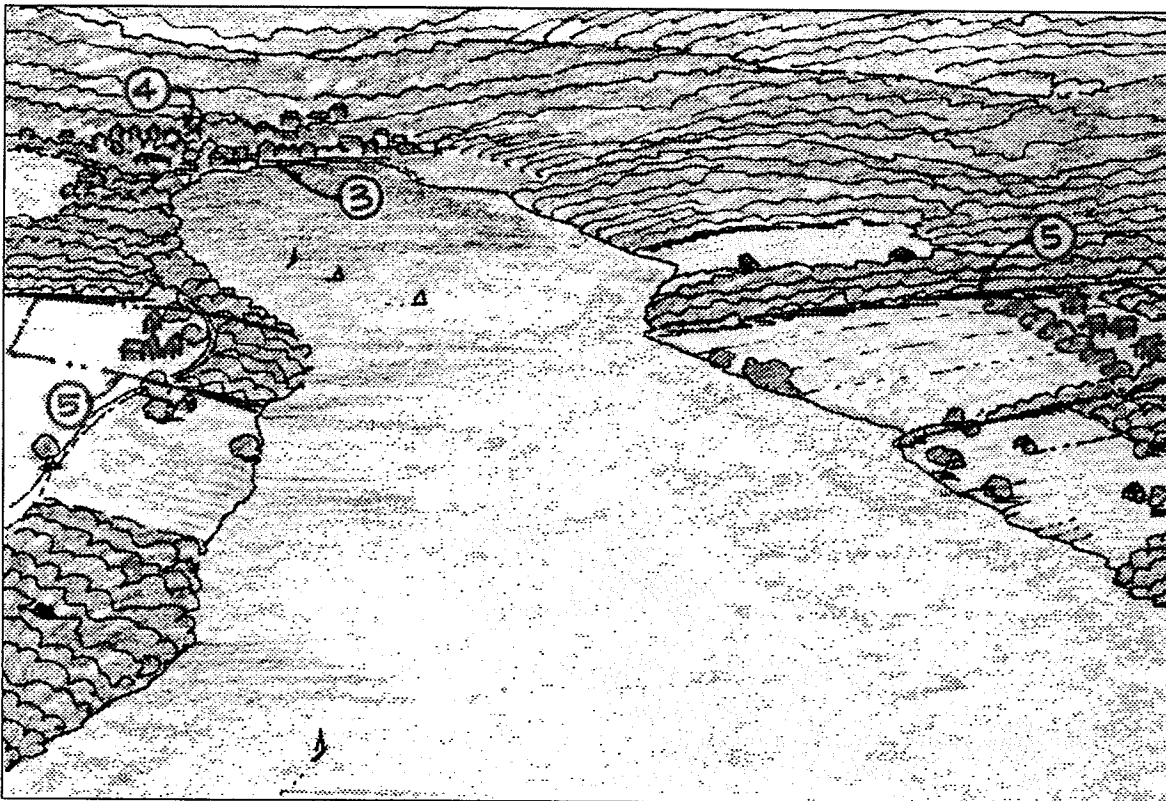
Land-Use Types

1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

Guidelines

- Riparian greenway protecting river banks; farmland preservation along the waterway.
- Trail to follow Canal-owned river banks, village streets and abandoned rail corridors.
- Accommodation and connection in settled areas and at existing canal facilities.
- New development to be within the existing roadway and infrastructure network or in extensions that retain the traditional local design character. Canal edge and open space to be conserved.
- New development to be sited and clustered to conserve farmland and open space as well as views from and to the Canal.

Exhibit 6-6: Land-Use and Conservation Guidelines
Thematic Canal Region 6: The Finger Lakes
 Cayuga-Seneca Canal through Seneca Lake and Cayuga Lake



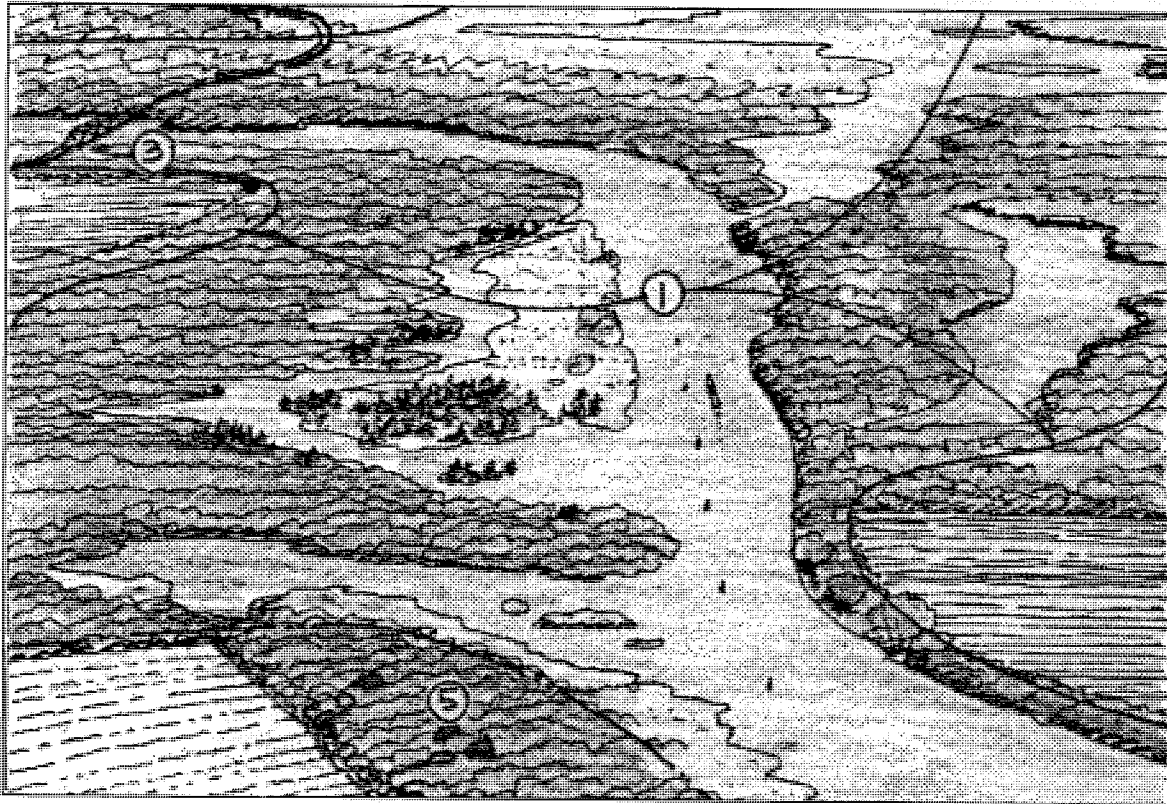
Specifics regarding guidelines for each land-use type are discussed in the previous section. See also Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

Land-Use Types

Guidelines

- | | |
|---|---|
| <p>1. Greenway</p> | <ul style="list-style-type: none"> • No greenway proposed on lake edges. Conservation of natural edge recommended. |
| <p>2. Canalway Trail</p> | <ul style="list-style-type: none"> • Canalway Trail follows existing highway routes adjacent to Seneca and Cayuga Lakes. Other related trail systems should be connected with the canal end-to-end trail where possible and appropriate. |
| <p>3. Access and Services for Canal Users</p> | <ul style="list-style-type: none"> • Accommodation at existing settlements. |
| <p>4. Existing Settled Areas</p> | <ul style="list-style-type: none"> • New development to be within the existing roadway and infrastructure network, or in extensions that retain the traditional local design character. |
| <p>5. Areas Not Currently Settled</p> | <ul style="list-style-type: none"> • New development to be out of sight when viewed from the lake. Lake-edge vegetation to be conserved from cutting as a screen for views from the water. |

Exhibit 6-7: Land-Use and Conservation Guidelines
Thematic Canal Region 7: Fish and Wildlife Conservation Area
 Erie Canal from Lyons east to Baldwinsville



Specifics regarding guidelines for each land-use type are discussed in the previous section. See also Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

Land-Use Types

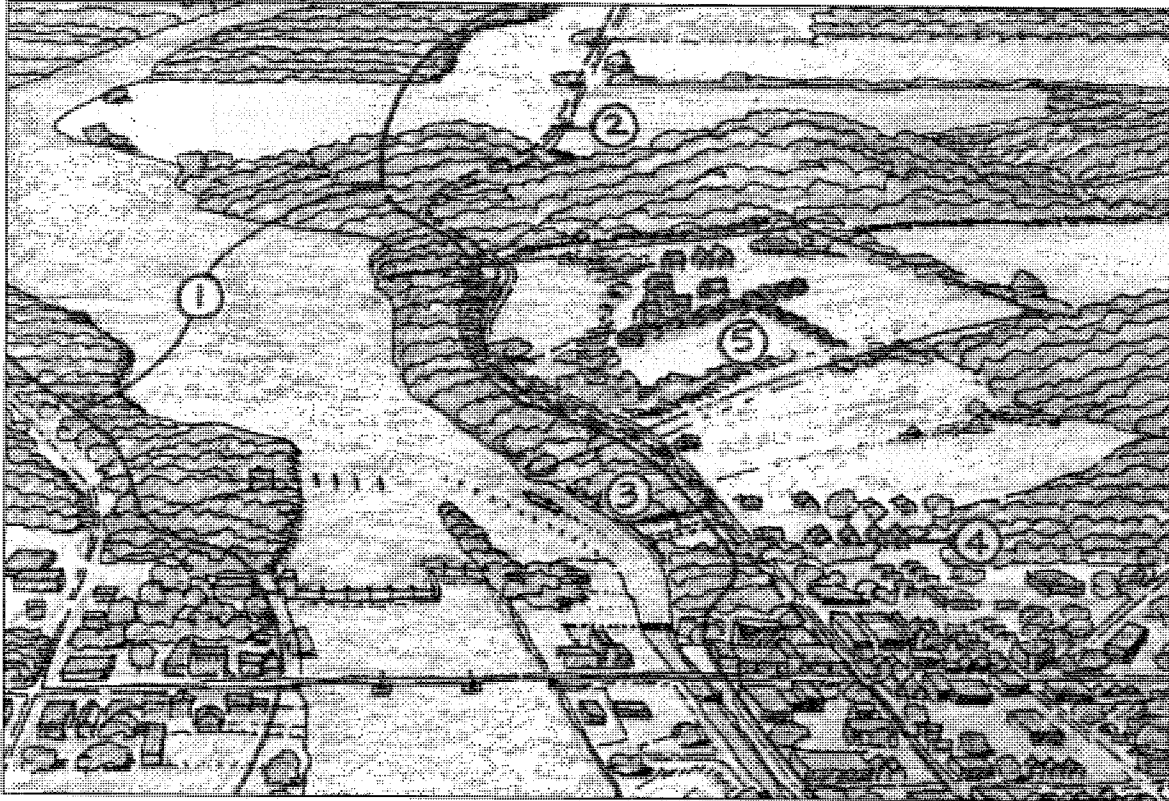
1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

Guidelines

- Wildlife and habitat preservation area. Greenway to be integrated with the Northern Montezuma Wetlands Project as it is implemented.
- Trail, which partially exists, follows the towpath of the old Erie Canal.
- Boating-access locations limited to intersections with existing roads. Trail services at communities along Old Canal alignment.
- N/A
- New development to be within wooded areas or behind buffers. Negative impact on the function of the habitat to be avoided.

Exhibit 6-8: Land-Use and Conservation Guidelines
Thematic Canal Region 8: Gateway to The Great Lakes

Erie Canal from Baldwinsville to Oneida Lake; Oswego Canal from Three Rivers to Lake Ontario;
 Onondaga Lake and Syracuse



Specifics regarding guidelines for each land-use type are discussed in the previous section. See also Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

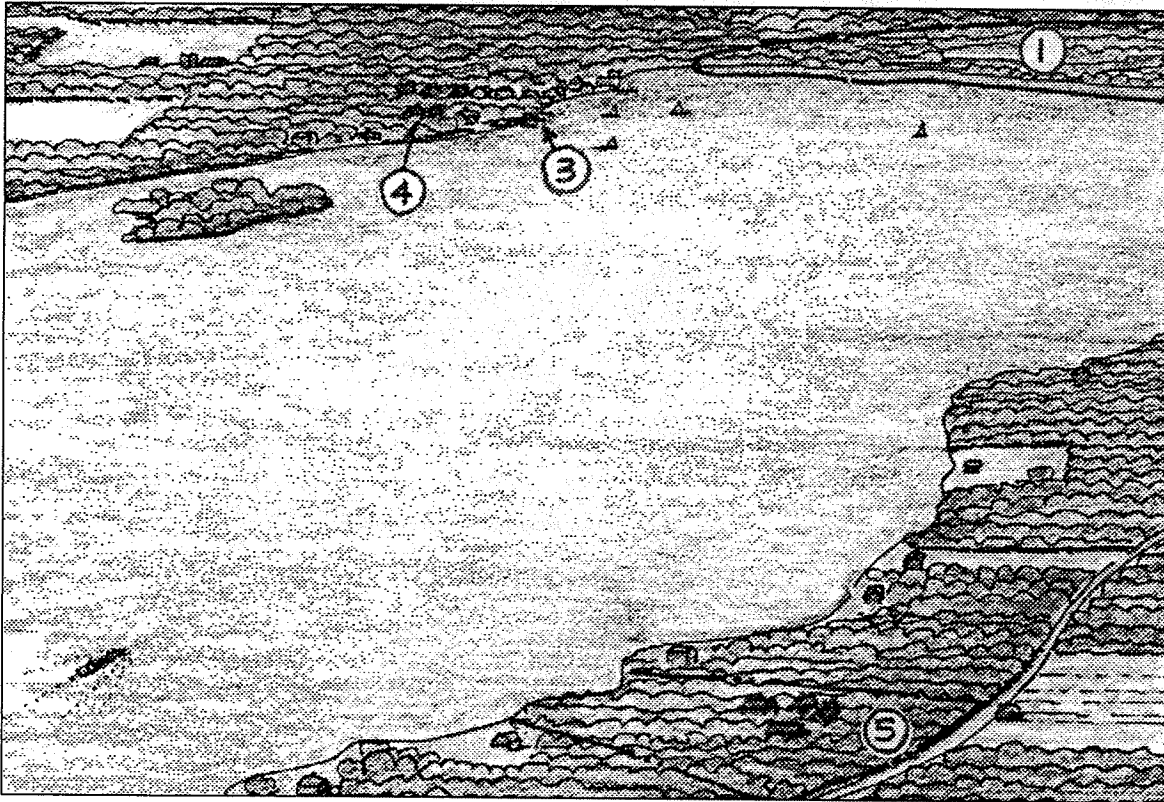
Land-Use Types

1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

Guidelines

- Riparian greenway predominates; aesthetic/recreational greenway where the edge is constrained by settlement; community greenway where the trail follows city or village streets.
- Trail to be created following the Old Canal alignment east and west of Syracuse, and city streets through Syracuse to connect to the Erie Canal Museum. Trail north to Lake Ontario is proposed around both sides of Onondaga Lake and thereafter on roadways, canal-owned land, and the canal banks.
- Facilities exist along the rivers. The proposed Syracuse Canal Harbor development will create a central gateway to the canal system.
- New development to be within the existing roadway and infrastructure network, or in extensions that retain the traditional local design character..
- New development to be sited and clustered to protect views from and to the Canal, and conserve existing open space and farmland. Direct connection to be provided to canal open space and trail.

Exhibit 6-9: Land-Use and Conservation Guidelines
Thematic Canal Region 9: Oneida Lake Recreation
 Erie Canal through Oneida Lake



Specifics regarding guidelines for each land-use type are discussed in the previous section. See also Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

Land-Use Types

1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

Guidelines

- No greenway proposed on lake edges. Conservation of existing wildlife-habitat preserves encouraged.
- No trail around Oneida Lake. Canalway Trail will follow existing tow-path in the Old Erie Canal State Park.
- Boating to be accommodated at existing marinas and public parks around Oneida Lake. A safe boating channel should be marked for the passage of small boats.
- New development to be within the existing roadway and infrastructure network or in extensions that retain the traditional local design character.
- New development to be screened from view from the lake.

Exhibit 6-10: Land-Use and Conservation Guidelines
Thematic Canal Region 10: Upper Mohawk Valley
 Erie Canal from west of Rome to east of Utica



Specifics regarding guidelines for each land-use type are discussed in the previous section. See also Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

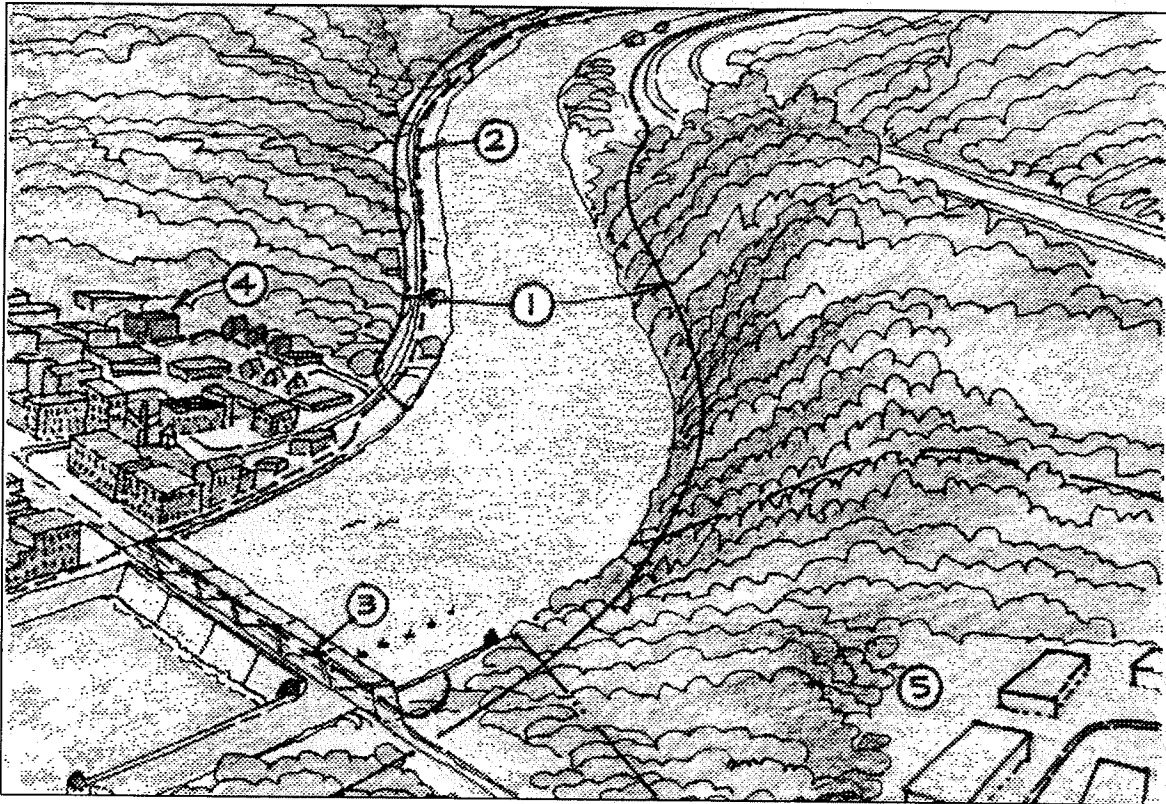
Land-Use Types

1. Greenway
2. Canal Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

Guidelines

- Riparian greenway with recreational/aesthetic greenways where the edge is constrained by settlement.
- Trail generally to be sited along current canal and Old Erie Canal.
- Existing services usually located in village centers along the Canal, with connection to the trail via routes that cross the Canal.
- New development to be a natural extension of the existing roadway and infrastructure network.
- New development to be sited and clustered to conserve significant topographic features along the Canal and Mohawk River.

Exhibit 6-11: Land-Use and Conservation Guidelines
Thematic Canal Region 11: Lower Mohawk Valley
 Erie Canal from east of Utica to the Capital District



Specifics regarding guidelines for each land-use type are discussed in the previous section. See Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

Land-Use Types

1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

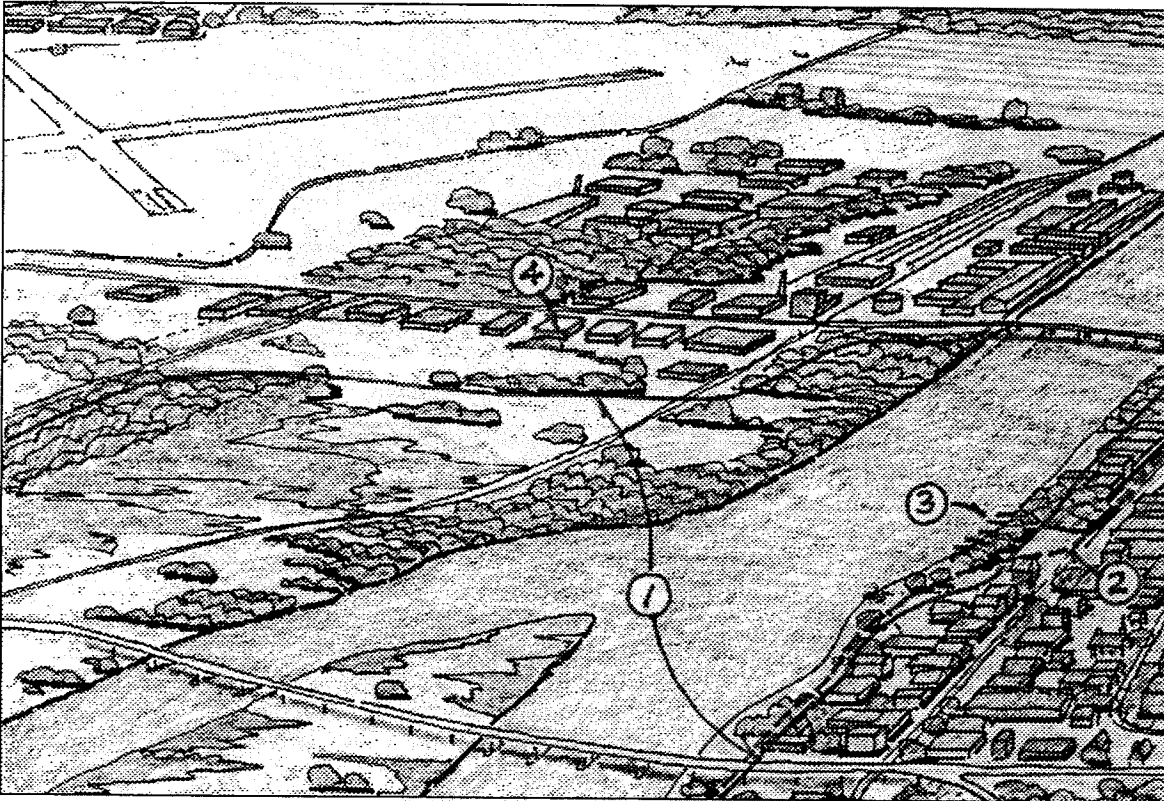
Guidelines

- Riparian greenways along the Mohawk River. Recreational/aesthetic greenways along the trail and where conditions do not create sufficient width to provide for a full trail environment. Community greenways where the trail traverses a settled area.
- Trail follows the canal bank, old towpaths, railroad rights-of-way, and/or city streets. Some trail segments exist.
- Canal amenities connected to the Canalway Trail and communities.
- New development to be within the existing roadway and infrastructure network or in extensions that retain the traditional local design character.
- New development to be sited to conserve farmland and open space and to protect significant topographical features and views from and to the Canal.

Exhibit 6-12: Land-Use and Conservation Guidelines

Thematic Canal Region 12: Eastern Gateway

Erie Canal from Schenectady to the junction with the Hudson River at Troy/Waterford/Cohoes



Specifics regarding guidelines for each land-use type are discussed in the previous section. See Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

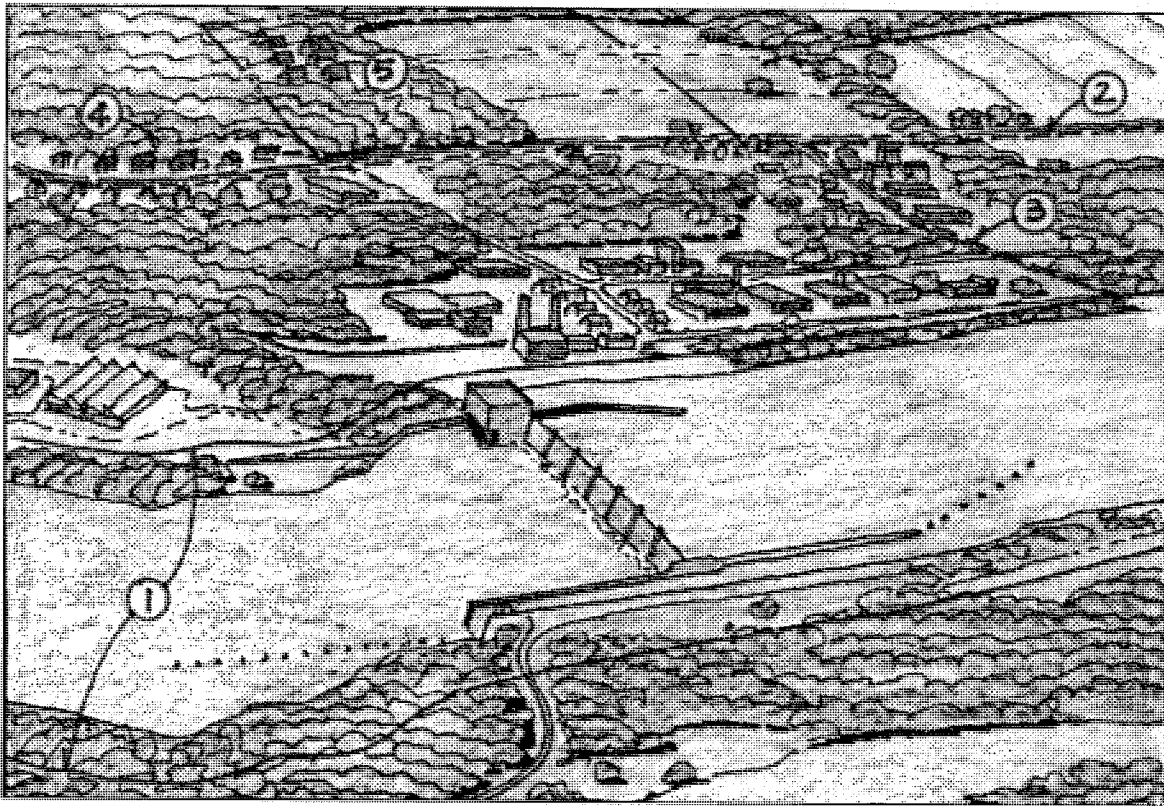
Land-Use Types

1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

Guidelines

- Riparian greenway with recreational/aesthetic greenway where development restricts river banks and community greenway where the trail follows city and village streets.
- Trail mainly established along abandoned railroad rights-of-way and former canal towpath. Trail complete from Schenectady through Cohoes.
- Services at locks and marinas interconnected with the Canalway Trail.
- Commercial and residential development to be sited within the existing roadway and infrastructure network.
- N/A

Exhibit 6-13: Land-Use and Conservation Guidelines
Thematic Canal Region 13: Upper Hudson River Valley
 Champlain Canal from Troy/Cohoes to Fort Edward



Specifics regarding guidelines for each land-use type are discussed in the previous section. See Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

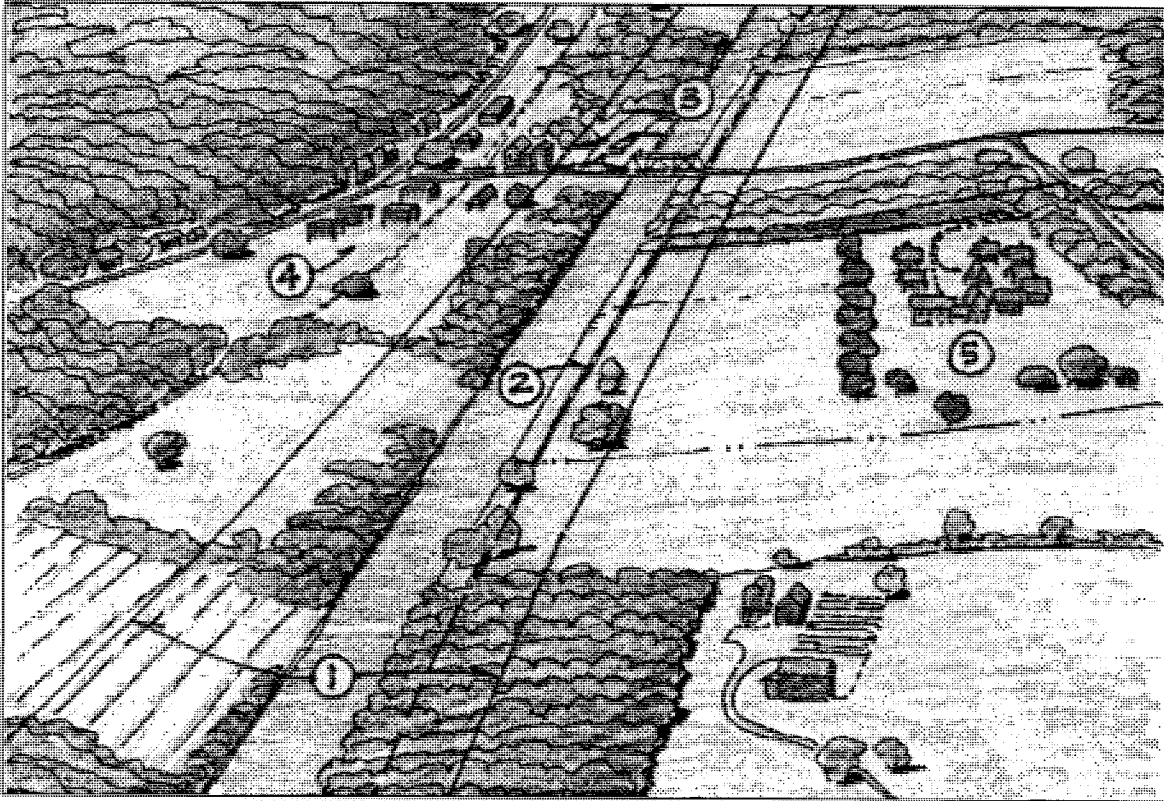
Land-Use Types

1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

Guidelines

- Riparian greenway with recreational/aesthetic or community greenway where necessary.
- Trail frequently to be aligned along roadways and abandoned Champlain Canal rights-of-way.
- Service and access connected to the Canalway Trail along roadways through community centers and/or roads that cross the Canal.
- New development to be within the existing roadway and infrastructure network.
- New development to be sited and clustered to protect views to and from the Canal and the trail and to conserve open space and farmland.

Exhibit 6-14: Land-Use and Conservation Guidelines
Thematic Canal Region 14: Champlain Canal
 Champlain Canal from Fort Edward to Lake Champlain



Specifics regarding guidelines for each land-use type are discussed in the previous section. See Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

Land-Use Types

1. Greenway
2. Canalway Trail
3. Access and Services for Canal Users
4. Existing Settled Areas
5. Areas Not Currently Settled

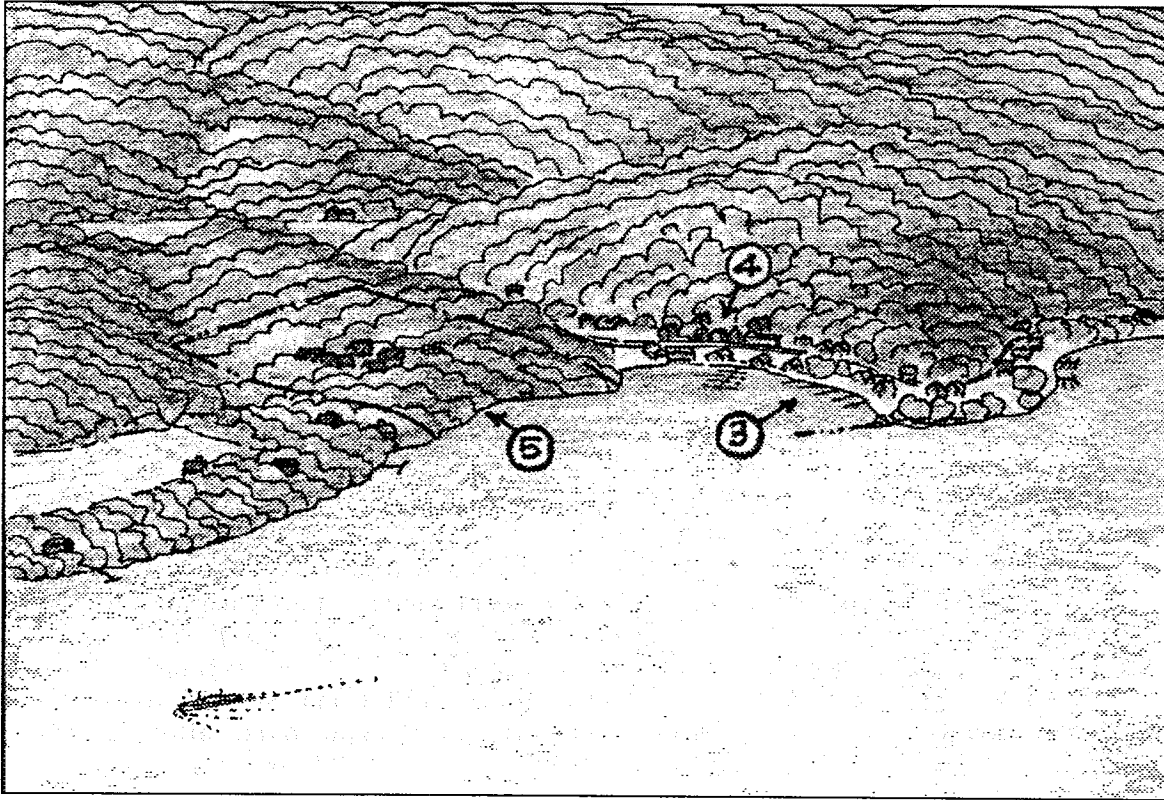
Guidelines

- Riparian greenway along the edges of the dug canal.
- Trail to be within the riparian greenway along canal service roads.
- Facilities to be connected to settled areas and the Canalway Trail along roadways.
- New development to be within the existing roadway and infrastructure network or in extensions that retain the traditional local design character.
- New development to be sited and clustered in a form consistent with traditional farmland- settlement patterns.

Exhibit 6-15: Land-Use and Conservation Guidelines

Thematic Canal Region 15: Lake Champlain

Champlain Canal through Lake Champlain



Specifics regarding guidelines for each land-use type are discussed in the previous section. See Appendix A6-a, "Design Guidelines." Region location is mapped in Exhibit 4-7, "Thematic Canal Region Locations."

Land-Use Types

Guidelines

- | | |
|--|---|
| 1. Greenway | <ul style="list-style-type: none"> • No greenway proposed on the lake edges. Conservation of a green edge encouraged. |
| 2. Canalway Trail | <ul style="list-style-type: none"> • Trail does not extend beyond Whitehall. State-designated bikeways anticipated to follow roadways bordering the lake. |
| 3. Access and Services for Canal Users | <ul style="list-style-type: none"> • Accommodation in lakefront marinas. |
| 4. Existing Settled Areas | <ul style="list-style-type: none"> • New development to be within the existing roadway and infrastructure network or in extensions that retain the traditional local design character. |
| 5. Areas Not Currently Settled | <ul style="list-style-type: none"> • New development to be screened when viewed from the lake. |

Adirondack Park

Canal reservoirs and lands in the Adirondack Park should be managed to satisfy the water supply needs of the Canal System. The water supply in the Canal System depends on the retention of and access to its dams.

It is further recommended that canal-owned land holdings located in the Adirondack Park be managed in accordance with existing laws governing the Park. Leasing of canal lands in the Park is prohibited by law. These lands are geographically separate from the Canal and are not connected to it by navigable waterways. They are therefore not integral to the Recreationway experience. In contrast, the Canal's Adirondack holdings are part of the experience and character of the Adirondacks and should be recognized as such.

As discussed in Chapter 4, the Canal Corporation, in consultation with the NYS Department of Environmental Conservation, is currently in the process of determining property ownership of canal lands in the Adirondack Park by undertaking a land-ownership survey as required by law. The survey is intended to provide a clear understanding of boundary configurations.

Once the survey is completed, the law requires the preparation of a study of the use of canal properties subject to permits, including identification of any structures or activities that are not allowed by law or permit. The Canal Recreationway Commission is then charged with making recommendations concerning the future use of canal lands within the Adirondack Park, including but not limited to utilization of existing properties under revocable permits, and identification of any property not needed for canal purposes that may be transferred to the NYS Department of Environmental Conservation.

The survey is expected to be completed in 1996, subsequent to the formulation of the Canal Recreationway Plan. Future planning recommendations for canal lands in the Park will be dependent on the survey results.

6.3 MAINTENANCE AND PROTECTION OF CANAL WATERS, INFRASTRUCTURE AND LANDS

The Canal's most basic elements are its waters, the surrounding land and its man-made structures. Since the Canal was constructed for the sole purpose of serving the navigational needs of commercial shipping, each of these systemwide elements must now be managed and maintained in a way that will accommodate its reinvention as a recreational resource.

Water Management

Planning Principles

The Canal's water resources are fundamental to its future development. Management of the canal water levels must balance multiple uses in a manner consistent with the primary need to maintain a navigable Canal System. All projects planned for the Canal must allow for the maintenance of a navigable system and should be sensitive to water-management issues including: erosion and pollution control, farm management of agricultural lands, flood-plain management, wastewater-management regulations, maintenance of water levels in wetlands, the protection of aquatic resources, and the necessity to dredge the system.

The following planning principles provide guidance with respect to water management:

- Most canal-owned lands are located in flood plains: NYS Department of Environmental Conservation regulations mandate that certain agencies manage state-owned lands to meet with flood-plain-management requirements of 6 NYCRR Part 502. Where applicable, these provisions should be addressed.
- Permits and leases should be discouraged for non-water-related uses within flood-plain areas.

- Uses on canal lands that are inconsistent with the Canal Recreationway Plan should be phased out by amortization.
- Water quality and canal fisheries should be maintained and enhanced wherever possible.
- Water levels should be maintained in the Montezuma Wetlands Complex and other areas to protect wetland ecosystems.

Water-Management Guidelines

Water-Pollution Control

Erosion-pollution control standards and guidance, provided by the State Non-Point Source Pollution Control Strategy and other NYS Department of Environmental Conservation and Soil and Water Conservation District documents, should be followed. The public should be educated about how to best protect the system's water resources. This can be achieved through a number of actions including:

- Offer incentives to encourage municipalities to incorporate erosion-control standards and setback requirements from surface-water resources.
- Work with federal and state agencies to promote best-agricultural-management practices and encourage continued water-quality monitoring of canal waters.
- Work with local lake associations, county water-quality coordinating committees, and similar organizations to develop watershed management plans.

In addition to erosion-pollution control, a program to evaluate water-quality conditions in highly congested areas of the Canal System should be launched to assess the impact of boat pollution. A determination should be made as to whether enhanced management measures are necessary to maintain and improve existing water quality. Additional pumpout facilities, strategically placed throughout the Canal System, should be provided. Efforts to educate boaters about the potential negative impacts of boat pollution should also be continued. Consideration should be given to working with appropriate

agencies to insure all boats meet minimum standards for pollution control.

Water-Level and Flood-Plain Management

A large percentage of canal-owned lands are located in areas identified as flood plains. The regulations of the NYS Department of Environmental Conservation mandate that certain agencies manage state-owned lands so as to meet with flood-plain-management requirements of 6NYCRR Part 502. Where applicable, these provisions should be addressed.

The Canal Corporation was not constituted as a flood-control agency. Recommended Canal Corporation activities related to water-level management follow:

- The Canal Corporation should serve as an information clearinghouse for all agencies involved with managing water in flood-prone areas. This effort should include establishment of regular monitoring and communication links with other regulatory agencies, to report water elevation, gate setting and flows throughout the Canal System.
- Regularly attend and participate in meetings of lake and river associations to provide up-to-date information.
- Support preparation of flood-control studies by others, such as the U.S. Army Corps of Engineers.
- Continuously monitor hydroelectric facilities to ensure operations are within the parameters of existing licenses.
- Establish comprehensive water-level operating guidelines for the system.

Canal Dredging

Dredging bottom sediments from the Canal is a recognized, essential activity which the Canal Corporation must undertake on a continuing basis in order to maintain adequate channel depths for effective navigation. In recent years, however, dredging has been constrained by the existence of toxic and hazardous chemicals in several locations

in the Canal System, in bottom sediments. Dredging in contaminated areas can stir up sediments, thereby spreading contamination of the aquatic environment, while leaving the sediments in the environment could also cause impacts to the biota. There is a risk of contaminated sediments being relocated, causing further damage to aquatic organisms, and a risk of biological accumulation in the entire food chain. On the other hand, if the entire Canal System is not routinely dredged, some areas will quickly become too shallow to support navigation.

Upland sites for disposal of dredge spoils are becoming increasingly scarce and the sites that are available may be too far away from some areas that need dredging to be useful. Further, it appears likely that at least some separate upland disposal sites may have to be acquired, constructed and managed as confined sites to accommodate contaminated sediments. Wet disposal of dredge spoils – that is, dumping in open water – poses environmental risks in areas where sediments are contaminated, the most significant of which is the possibility of creating newly contaminated areas.

On March 25, 1994, the NYS Department of Environmental Conservation issued a water-quality certification to the Canal Corporation, under Section 401 of the Clean Water Act, to allow dredging in most parts of the Canal System except where there are known high levels of contamination. This opened the way for a five-year maintenance dredging program, including the disposal of dredge spoils and canal-bank stabilization, through March 31, 1999. The Corporation has an ongoing program for sampling and testing the sediments at selected dredging sites, to identify the presence of toxic or hazardous substances.

The overall objective is to fully implement a comprehensive long-term dredging program for the entire Canal System, in a manner that is consistent with the state's environmental quality objectives. The Canal Corporation must plan its dredging work sufficiently far in advance to allow the Corporation to determine and prepare the appropriate dredging protocols and disposal sites

to be used, and to allow for the review and approval by the regulating agencies.

Exotic Species

Due to the transient nature of traffic on the Canal System, the introduction of exotic plant and animal species (e.g., Eurasian milfoil and zebra mussels) is difficult to control. Nevertheless, the spread of exotic species can be minimized by better educating the public about the impacts of these species on the system. A cooperative effort should also be established to study and evaluate methods to control nuisance vegetation.

Canal Fisheries

The Canal System is connected to 80 percent of all of the surface area of New York's freshwaters, which generate more than \$600 million yearly in economic value related to sport-fishing. The Canal System itself plays an important role in a much larger ecosystem, within the state and beyond it. Actions taken on any segment of this vast interconnected system can have a profound impact on the whole system. Fisheries are an important asset to the Canal, and the Corporation should continue to cooperate with the NYS Department of Environmental Conservation on their maintenance and enhancement.

Man-made land-cut reaches on the Canal System total 154 miles in length. These reaches support a variety of warm-water fish species, but their numbers are low because the canals are drained in most sections during the winter for maintenance purposes. Water is 12 to 14 feet deep during the navigation season and one to two feet deep in the winter. Despite the limitations posed by this fluctuation, popular localized fisheries exist in the land-cut segments. The Corporation should study the option of not dewatering parts of the Canal, to evaluate potential fisheries benefits. Oneida Lake, on the other hand, is New York's largest inland lake and the state's premier walleye fishery. Anglers harvest an average of 350,000 pounds of walleye from the lake each year.

The Oswego River is canalized throughout its entire length of 24 miles; and the lower 2.3 miles, below Lock O-8, supports the most popular and

highly developed fishery on the Canal System. About 150,000 anglers fish this section annually for a chance to catch fall chinook salmon weighing up to 30 pounds, winter steelhead up to 20 pounds, and fall and spring brown trout over 20 pounds. Large walleye, up to 14 pounds, are caught in summer. On the Champlain Canal, the 39-mile canalized reach from Troy to Fort Edward has been closed to fishing since 1976 because of elevated PCB levels. It is expected that the ban on fishing may be lifted soon, providing fishing opportunity on a catch-and-release basis. Indications are that this will be an outstanding sport-fishery, with trophy-size muskellunge running up to 15 pounds and larger.

The Mohawk River is 120 miles long from its confluence with the Hudson River to Rome, of which 64 miles is canalized. The Upper Mohawk River has ten movable dams, or lift gates, which are in place from May 1 to November 30, during the navigation season. During the winter and early spring, when the gates are raised, the river is free-flowing. Unlike the adverse impacts of winter drawdown in the land-cut reaches of the Canal System, the game-fish population in the Upper Mohawk is benefited by drawdown. Competition with panfish that are associated with summertime impoundments is reduced during periods of free flow, and game fish predominate.

The lower Mohawk River is an exceptional warm-water fishery, notably for smallmouth bass and walleye. The bass population is abundant and fast-growing because of the high-density, high-quality forage that is provided by migratory blueback herring. Adult herring enter the river each year in May and June to spawn and migrate upstream as far as Rome. Fish that survive spawning return to the Atlantic Ocean shortly thereafter. Juveniles remain in the river throughout the summer and migrate out in the fall. Maintenance of the blueback herring run in the lower Mohawk River is essential for continuance of the river's high-quality sport-fishery. Lockages should be increased, especially on the Waterford flight, to facilitate the migration of herring. Tournament bass fishing is an important part of this activity.

Hunting and Trapping

Informed wildlife management on the part of the NYS Department of Environmental Conservation in the promulgation of rules and regulations for hunting and trapping should be encouraged by the responsible advocacy of these activities. The extensive green areas of canal lands should be managed for enhancement of fish and wildlife resources of the state on behalf of all its citizens. This should be translated by the Canal Corporation into rules and regulations which encourage the development of special seasonal access rules, based upon the management techniques of the NYS Department of Environmental Conservation. Canal lands represent significant access to the wildlife resources for many citizens. These concerns should be specifically addressed since they are generally seasonal in nature and in many instances in harmony with the general access to the natural resources on the part of the public.

Trapping plays an important wildlife-management role in urban, suburban and rural areas of the Canal. The furbearing animals that tunnel into embankment sections can undermine the Canal. Although the Canal Corporation uses bank watchers in these canal sections, encouragement of legal trapping of furbearing animals is a further safeguard against this potential problem. By policy, the aid of trappers should be encouraged and facilitated as an investment in the security of canal infrastructure.

Canal Wildlife

In addition to serving as a conveyance for boats and a habitat for fish, the Canal is an important habitat for wildlife. At present the immediate canal environment preserves little of its original heterogeneous plant communities. Deforestation, agriculture, alien species, excavation, fill, drainage, pollution and human structures pervade the canal right-of-way. No known federally- or state-listed species of rare, threatened or endangered plants or animals occur in the immediate vicinity of the Canal.

Within the broader dimension of the study area and its numerous waterway branches, many

significant habitats do occur including major wetlands associated with the Seneca, Oswego, and Oneida Rivers in Central New York. National wildlife refuges are established to protect endangered species, migratory waterfowl, waterbirds, and other migratory birds with particular focus on the ecosystems within which the wildlife lives. While many of these important habitats have been identified and protected as parks and preserves, the opportunity exists to interconnect specific areas by use of the greenways discussed in Section 6.2 of this chapter.

Planning for increased recreational use of the Canal must include consideration of the benefits to those interested in watching wildlife. This involves habitat protection as well as planning of access for viewers. There are many places to see wildlife along the Canal. In some cases it is the Canal itself that provides these opportunities. Other viewing locations are adjacent to the Canal or a short distance away. All of these locations could be of interest to tourists using the Canal as a travel route. In planning for the positive, recreational benefits of wildlife observation, sites directly along the Canal as well as those somewhat distant should be identified for conservation and use.

Fish and Wildlife Habitat Concerns

The vitality of a large part of the State's biological resources is dependent upon enlightened operation and development of the Canal System. Threats to fish and wildlife habitat along the Canal System may arise from any one of the following causes:

- Water-level fluctuations (daily, monthly, seasonal), withdrawals and re-regulation.
- Land development and construction activity.
- Contamination from toxic and hazardous wastes.
- Disturbance of instream habitat by dredging.
- Disposal of dredged spoils in ill-advised sites.
- Flow-management operations, including hydropower facilities and locks.

- Introduction of exotic species.

These existing and potential threats can be mitigated by taking corrective actions, including:

- Understanding the system by supporting basic research and inventory activities to identify and evaluate biologic communities and by continual monitoring to ensure that mitigative strategies are working, including optimum base flows in feeder streams and main waterways.
- Building aquatic-habitat concerns into water-flow management.
- Exercising restraint in relation to land development and construction, by planning not only to protect habitat but also to enhance it.
- Limiting dredging and dredged-spoils disposal to those times, methods and places that will minimize impacts on biological communities.
- Enhancing safe fish passage by using new ways to pass diadromous (eels and herring) and certain resident fishes upstream and downstream and by supporting the NYS Department of Environmental Conservation when it approaches the Federal Energy Regulatory Commission to seek modifications in structures and flows for this purpose.
- Engaging purposefully and positively in comprehensive planning and management of fish and wildlife resources, including their habitats, under the provisions of a cooperative agreement between the Canal Corporation and the NYS Department of Environmental Conservation, whereby the DEC would provide technical assistance to this end.

Public Recreational Access

Approximately 80 percent of New York's population lives within ten miles of the Canal System and its connecting waterways. Unfortunately, a New York resident living near the Canal has less chance of enjoying its recreational, historic and natural attributes than a visitor from out-of-state who is transiting the

Canal by boat. For a state resident who doesn't live on the Canal or who cannot keep a boat in a marina with canal access, the only other option for physical access is to launch a cartop or trailerable boat on the System. There is a shortage of state-owned launching sites. Other facilities operated by municipal or commercial owners are available, but often they present limitations of cost or residency requirements. The situation with regard to public launching facilities is as follows:

- *Erie Canal:* The current total public day-use boat-access capacity along the entire length of the Erie Canal is less than 500 boats, as determined by combining the parking capacity of all state and municipally owned access facilities. Fifteen lock-to-lock segments have no boat-access facilities at all. Oneida Lake has two DEC boat-launch sites, each of which will be expanded to 200 spaces, and a third site for 100 spaces is to be constructed.
- *Champlain Canal:* There are no public day-use boat-launch facilities along the Champlain Canal, making it the most poorly served component of the entire Canal System.
- *Oswego Canal:* The Oswego Canal is also lacking public day-use launch facilities. The NYS Department of Environmental Conservation site at Three Rivers serves the Upper Oswego and Seneca and Oneida Rivers.
- *Cayuga-Seneca Canal:* There are public day-use launching facilities for 71 boats. Three of the four lock-to-lock segments have facilities on them.

In summary, to fulfill a minimum standard of one boat-access facility between each lock-to-lock segment would require the development of 37 new sites. While installing public launch facilities at all of these sites is not a realistic goal, the NYS Department of Environmental Conservation should work cooperatively with local governments and private marina operators to expand the number of publicly accessible launching facilities along the Canal System to better meet demand. Beyond this, shoreline fishing from canal structures, such as lock approach walls, dams, lift gates and bulkheads, represents a significant use which needs

enhancement. Better access can be achieved by amending canal regulations to allow for such use where safety is not a concern, by being alert to opportunities to establish pathways and providing parking and signage, and by retrofitting suitable structures for handicapped accessibility.

Canal Infrastructure

The Canal System has suffered through years of less than optimal public funding for its maintenance and repair. Indeed, the condition of the existing equipment is a tribute to the generations of employees who have lovingly maintained the system in spite of funding difficulties. To improve the structural condition of canal facilities, the state included the Canal in the 1983 "Rebuild New York" program. The Canal Corporation has extended this rehabilitation program by the adoption of an aggressive five-year Capital Plan. Its primary objective is to maintain the existing canal facilities in structurally safe operating condition. This program of renewal should be vigorously supported.

The Canal Capital Plan should be integrated with the recommendations contained in the Canal Recreationway Plan after it is approved by the Canal Corporation. Recreational and other non-operational canal projects should be designed to ensure compatibility with canal operations.

Canal-Owned Lands

Lands owned by the Canal Corporation are a critical resource for creating the Recreationway. The Corporation has the most control over these lands and can use them to directly implement the Plan. Prudent management of this resource requires articulation of clear policies and procedures governing the use and occupancy of canal-owned land by others.

The plan for canal-owned land has two components: (1) policies for real-property actions; and (2) suggestions for the use of key parcels of canal-owned land.

Policies for Canal Corporation Real-Property Actions

The Canal Recreationway Commission has recommended detailed policies for the Canal Corporation's real-property actions, presented in Appendix A6-b, "Policies for Use and Occupancy Permits, Leases and Abandonments of Canal-Owned Land," and summarized in the section following.

Planning Principles for Permits, Leases and Abandonments

- Actions should advance the development of the Canal according to the Canal Recreationway Plan.
- Abandonment of vacant land between clusters of development should be minimized in order to preserve open space and to protect the beauty and environmental integrity of the canal corridor for future generations.
- Flexibility for the applicant and the Canal Corporation should be sufficient to accommodate many kinds of future development and to take advantage of opportunities that may arise.
- The same use may be appropriate for a lease or a permit depending on the degree of permanency and/or financial commitment by the applicant.
- Generation of revenue to the Canal System Development Fund for use of canal-owned land is an important goal which must be balanced with the impact that fees or rents might have on development.
- Fairness and equity should be governing principles in establishing fees and lease payments and in the treatment of existing permit holders and upland property owners.

Policies

In general, permits and leases are the means preferred by the Canal Corporation for the use of canal-owned land. They offer the greatest control of proposed uses, both now and in the future. Permits will be renewable annually, but will continue to be revocable on 30-days notice, as is

the current policy. A lease may be appropriate where a long-term and costly improvement is proposed on canal-owned land or on property that abuts canal-owned land. Leases will be limited to occupancy greater than one year. While the term of a lease, by law, may not exceed 40 years, the Canal Corporation may wish to limit lease terms in some areas for minor improvements such as a residential dock, or for the "phase-out" of more substantial, but inappropriate existing uses.

While abandonment will generally not be the method for conveyance of property interest related to development, there may be instances where abandonment of canal-owned land is appropriate. Abandonments may be made if the Canal Corporation determines that there is no future need for ownership of the land for either the Canal or the Canal Recreationway, and a long-term lease is not appropriate. Abandonments may also be done on an exception basis, to remedy a significant hardship due to an encroachment, where canal operations and navigation are not compromised, and where a long-term lease is not appropriate.

Any person who has access to canal-owned land or to canal water from land may apply for a permit, lease or abandonment. Out of consideration for current permit holders or upland property owners, they may be given the option of first refusal for a permit, lease or abandonment of canal-owned land.

Holders of permits and leases will be granted the privilege of use and occupancy of canal-owned land and access to canal waters as specified in the permit or lease, subject to entry by the Canal Corporation as may be necessary for maintenance and operation needs, and any reservations for public trail use. Leases and permits can be for permanent or seasonal use which:

- does not interfere with navigation and the operation of the Canal;
- is consistent with the Canal Recreationway Plan and the Plan's recommended use of canal-owned land;
- considers security and public safety;

- provides for trail use and access where appropriate;
- is consistent with applicable flood-plain-management regulations¹;
- is consistent with any Canal Recreationway Plan standards for design, setback, sanitation, and maintenance;
- considers compatibility with local zoning regulations on adjacent land;
- provides for landscaping or natural vegetation to protect canal embankments from erosion, maintain view corridors and shade canal waters against algae accumulation.

Article 8 of Environmental Conservation Law contains the State Environmental Quality Review Act which establishes a template for reviewing certain actions and their impact on the environment. Certain actions of the Canal Corporation come under the purview of this act. As part of that process, the Canal Corporation will consider the impact of any action on property that is listed on or eligible for the National or State Registers of Historic Places.²

Fees will be based on the fair-market value of the land. An administrative-appeals process will be made available to resolve disputes related to the Canal Corporation's valuation. Lease rents may be negotiated as an inducement to implement a specific proposal of the Plan that might not otherwise be economically feasible. Fees may also be waived, or reduced for projects of municipalities or not-for-profit corporations, depending on the use, degree of public access and benefit, and the revenue potential of the project.

The Canal Recreationway Commission will adopt procedures for the review of proposed abandonments and leases for consistency with the Canal Recreationway Plan. As specified in the law, Commission review and comment on

¹per 6NYCRR Part 502, Floodplain Management Criteria for State Projects; and 44 CFR Part 60, Subpart B of the National Flood Insurance Program.

²per Sec. 14.09 of the Parks, Recreation and Historic Preservation Law.

proposed leases shall not exceed sixty days. The Commission may determine that certain categories of leases do not require its review. The Commission will consider, in its review, zoning on land adjacent to canal-owned land. The Canal Corporation will consider Canal Recreationway Commission comments and recommendations, but it has the final authority by law to issue or withhold leases and abandonments.

Key Parcels of Canal-Owned Land

As is discussed in Chapter 4, there are about 24,000 acres of developable canal-owned land (land not under water or in wetlands). The ability to use individual parcels to advance the Recreationway concept is determined by their location within the Canal System, size and configuration, and available facilities and infrastructure.

An inventory of key parcels of canal-owned lands with development potential was prepared as part of the Canal Recreationway Plan. Recreational and commercial (including shipping) opportunities were considered in developing this inventory. The primary source of information for the inventory was a set of aerial photographs of the Canal System flown in 1992. Other sources included the official "Blue Line" and "Residency" maps of the Canal System, the GIS inventory, permit records, National Oceanic and Atmospheric Administration navigational maps, regional canal plans, and information provided by Canal Corporation staff.

The inventory resulted in the identification of 100 key sites with apparent development potential. These sites are discussed below, and are tabulated in the attached Appendix A4, "Canal-Owned Lands - Key Development Parcels."

Among the most important of the canal-owned lands are the "terminal sites." These are the historic transshipment points where barges were loaded and unloaded and goods were stored for shipment. Terminals are generally located in the central business districts of historic canal villages and towns, giving them excellent economic development and tourism potential.

There are 47 terminal sites within the present Canal System. All have vertical walls, or wharves, extending from the shore into the water, creating docks for vessel tie-up. The dock walls are generally in good condition and are an important asset, not only because of their usefulness for boating, but also because of their considerable replacement value.

A number of the terminal sites have historic canal warehouse buildings, currently used primarily for storage, which are small in scale, traditional in feeling, and built on skids rather than permanent foundations. They would be relatively easy to rehabilitate and or replicate, and their open interiors might be used for a variety of purposes. For these reasons, these structures have potential as signature buildings for the Canal Recreationway.

There are also three masonry terminal buildings, located in Syracuse, Utica, and Whitehall. These are larger, more substantial structures with high interior vertical clearances. The Syracuse and Utica buildings are currently used for canal maintenance purposes, and the Whitehall building serves as the visitor center for the Whitehall Urban Cultural Park.

The typical terminal site is small. The majority are one acre or less, and most others are no more than three acres. However, there are several larger sites where canal maintenance yards are located, including Syracuse (42 acres), Fonda (34 acres), and Utica (19 acres).

The urban locations of terminals offer potential for increased boating activity in downtown areas and commercial revitalization of central business districts through development of restaurants, marinas, shops, and lodging facilities for canal visitors. Importantly, these activities can be undertaken by the private sector, furthering the goals of community economic development and generating canal revenue through leasing.

In addition to the terminal sites, 53 other parcels of canal-owned land have been identified as having key recreationway development potential. Sites were selected on the basis of their usefulness for boating, recreation, and other

activities important to the Recreationway; site size and shape appropriate for development; location relative to other facilities and infrastructure; and potential for revenue generation through leasing.

The non-terminal key sites are generally larger than the terminals, averaging about 25 acres. Size varies significantly, however, from as small as one acre to as large as 60 acres. Locations are not as central as are those of the terminals, and sites are most often in suburban or rural areas. At many locations, road access, dredging, and/or other substantial improvements will be necessary to achieve full development potential.

Many of the sites are suitable for boating, marina, and associated landside business and/or recreational use. Eleven are at canal locks and could be used to enhance visitor services and recreational facilities at these busy locations. Of particular interest is Lock E-13 in the Mohawk Valley, a 40-acre site directly accessible from the NYS Thruway, with potential for a shared Canal/Thruway service center.

Several sites have potential for industrial or commercial shipping use, including canal access sites at the former Griffis Air Force Base, currently under redevelopment; and the Rotterdam Junction site, which provides Canal, Thruway, and Conrail access in an industrial area.

Many sites have excellent potential for interpretation, including those at Seneca Falls, site of the National Women's Rights Historical Park; the Poorhouse Lock of the Enlarged Erie Canal, where a complex of historic canal buildings and structures is being restored; and the Schoharie Crossing State Historic Site.

Suggested uses for key sites of canal-owned land have been utilized to determine locations of the recommended Canal Recreationway projects discussed in Chapters 7 and 8. Because canal-owned parcels are often limited in size and not necessarily well located for Recreationway purposes, land assembly may be required to accomplish a number of the Recreationway projects.

It should also be noted that the key-sites inventory is not intended to be exhaustive. As the Plan is implemented, other parcels of canal-owned land may prove to have development value, depending upon local conditions, funding availability, developer interest, local municipal priorities, and other factors. The size of some of the key parcels may differ from those indicated in this report when precise boundaries are determined.