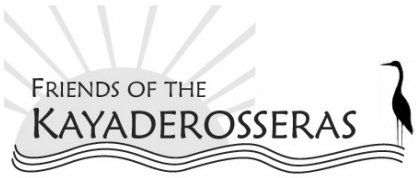
Protecting the Kayaderosseras Creek through Better Buffers

Recommendations for Municipalities



Conservation Committee
October 2005

Introduction

The Kayaderosseras Creek is a superb natural resource that flows through much of Saratoga County, New York, from its headwaters in Corinth, through Greenfield, Milton, Malta, Ballston Spa, and Saratoga Springs, to its outlet in Saratoga Lake. Seven municipalities in the creek's watershed are part of the county's MS4* Stormwater Management Program. The creek is also a recreational and scenic resource for the people in our region. It provides excellent habitat in and around its banks, with the potential to serve as a regional riparian* and greenway* corridor for people and animals. It is in our best interests to take care of the Kayaderosseras, keeping its water clean and our communities healthy.

Vegetative buffers* protect the stream

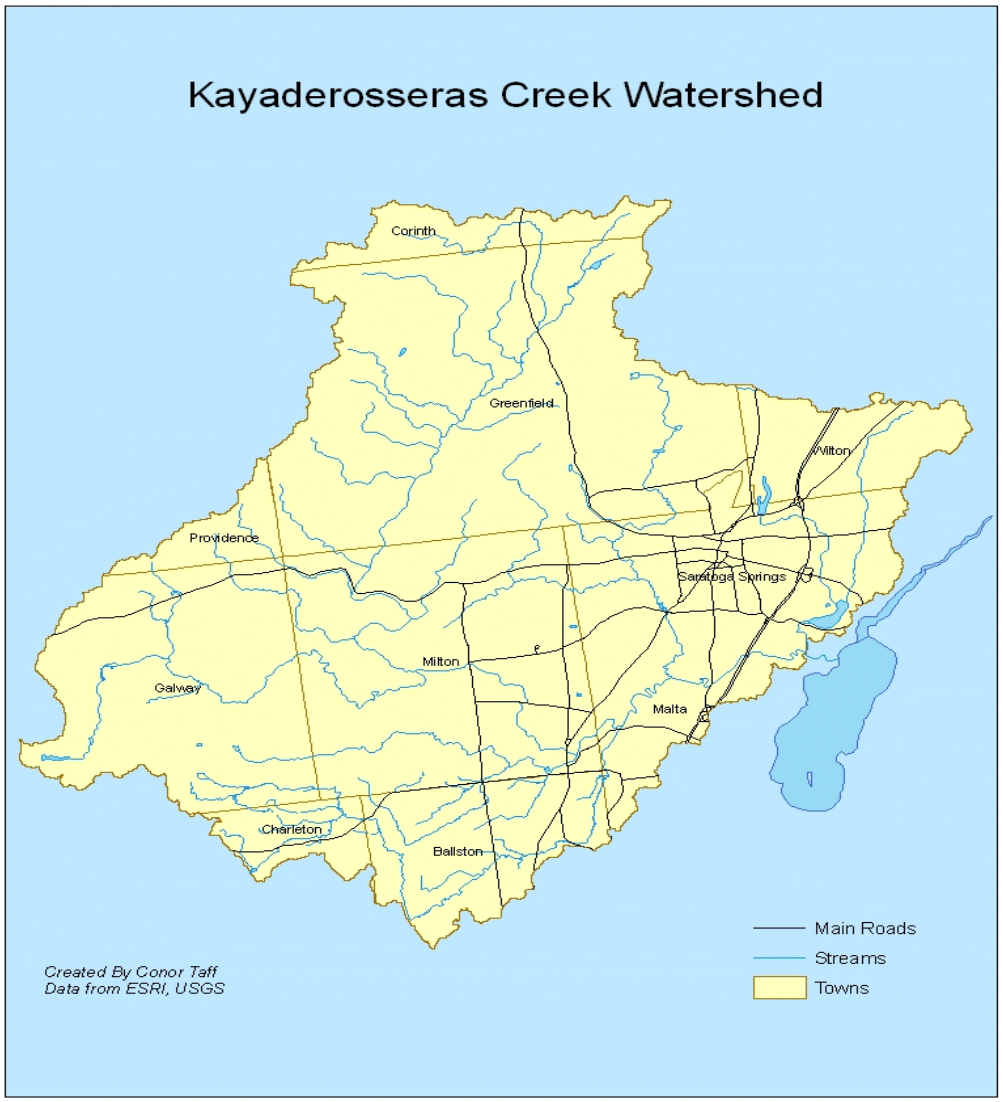
The largest threat to developing watersheds, like the Kayaderosseras Creek system, is improper land use and development: development too close to the stream corridor and wetlands; erosion from poorly managed construction sites, turf grass and other semi-pervious and impervious surfaces adjacent to the stream; and unmanaged stormwater runoff* from urbanized areas. These are becoming major sources of pollution in the Kayaderosseras Creek watershed. The best way to counteract the effects of development and increased runoff is using vegetative buffer zones, including trees, shrubs, and ground covers, adjacent to the water on both sides. Such vegetative buffers:

- ✞ absorb nutrients and pollutants from storm-water to keep the stream clean
- ✞ slow storm-water runoff to prevent erosion of the land and siltation in the stream
- ✞ have healthy roots that provide structure to the stream channel and prevent bank erosion, wash-outs and changes in the shape of the channel
- ✞ include low places and wetlands that hold water to reduce downstream flooding and increase groundwater (aquifer) recharge
- ✞ provide shade to keep water cool for trout and other cold-water species
- ✞ add food and shelter for aquatic life when leaves and branches fall into the water
- ✞ provide habitat for wildlife
- ✞ provide scenic beauty and recreational opportunities for people

*see Glossary on page 7

Friends of the Kayaderosseras **suggest that to maintain a healthy Creek, establishing vegetative buffers* along both sides of the Kayaderosseras from beginning to end should be a goal of all communities that share the Creek. We urge the policy makers of these communities to consider planning and zoning tools that will encourage the creation and maintenance of such buffers.**

An open space network should be viewed as a key component of a community's infrastructure, just like the transportation network or the sewer and water systems. We believe that open spaces are planned, functional networks which enhance a community's long-term health and beauty. To create such networks, municipalities must bring land conservation to a priority level similar to other, more traditional, infrastructures. The most effective and cost-efficient time to implement such policies is now, when the Kayaderosseras Creek system remains largely intact.



The Kayaderosseras Creek system is the largest tributary to Saratoga Lake.

How big should the buffer be?

There is no easy answer to this question. It depends on the slope of the ground, the soil type, the function the buffer is intended to fulfill, and a variety of other variables. Studies have shown that even very narrow buffers, such as 25', can help to reduce pollution and improve water quality. On the other hand, increasing the width to 250' accomplishes a drastic reduction in pollutants and sediments. In order to accommodate the nesting sites of some species of turtles that live in the water but lay eggs on land, one recent study concluded that almost 1000' of buffer is required. It seems that the best rule for buffer width is the wider the better.

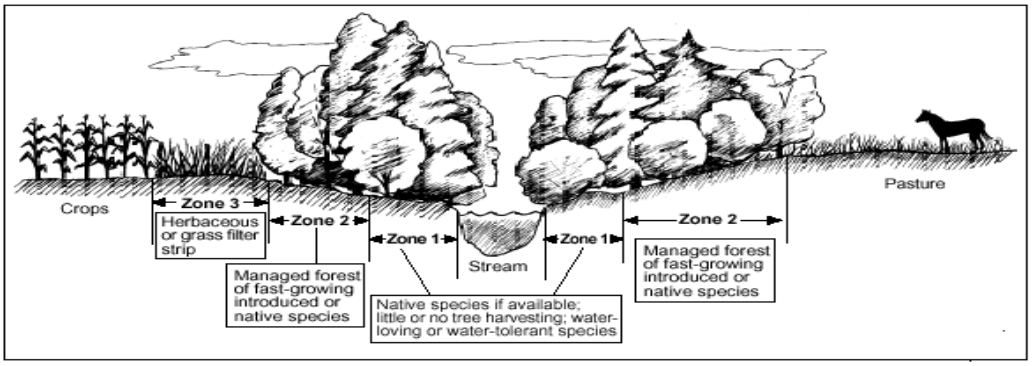
New York State conservation law generally requires wetland buffers of 100' but does not require buffers on all streams. **We recommend 100' as a minimum figure for the Kayaderosseras, and we suggest that a width of 250' be used whenever possible, and a width of 1000' in environmentally sensitive areas, floodplains, and those areas where conservation easements or purchases can be obtained.**

The 100' minimum is wide enough to provide good shade, plant cover, partial pollution / erosion control, and a basic visual screen for people and wildlife.

The larger buffers would accomplish more complete pollution control and better habitat value and recreational opportunities.

Buffer width and appearance do not have to be uniform along the entire Creek. We recognize that some property-owners have already removed vegetation and converted Creek banks to other purposes. In areas with intense prior disturbance of the riparian zone, we suggest a gradual system of buffering: native vegetation with no cutting allowed in the first 50', no disturbance of the soil in the first 100', and no use of chemicals such as fertilizers and pesticides within 250' of the Creek, for example. In areas of less development, where riparian vegetation is still intact, pre-emptive regulations can be used to maintain a greater buffer area.

A common complaint property owners have about vegetative buffers is that they block the view of the Creek. It is possible for buffer guidelines to accommodate viewsheds by allowing the trimming of tree branches up to a certain height above the ground along a narrow (say 25' wide) corridor from the house to the stream. Discrete, narrow, winding paths for access are also acceptable.



Mechanisms to encourage the creation of vegetative buffers

Friends of the Kayaderosseras is a citizen conservation group, not a legal firm. Municipalities should always consult their own legal counsel to be sure that their actions are consistent with local and state regulations. However, we offer the following as examples of policies that have been successfully used for conservation purposes in at least some locations. We note that many are not restricted to stream buffers but can be used for a variety of open space goals. Some may require county or state-level cooperation.

Some of these mechanisms may be more or less acceptable to property-owners, but all can be legitimate methods under appropriate conditions. To quote Daniels (1999, p. 266): "Land is not only an asset in a portfolio; it is a piece of a community. While landowners have the right to develop their land, the density and type of development may legally be limited by community land-use policies. Communities and regions should recognize they are under no obligation to allow excessive development or development in the wrong place just to fill the bank accounts of a few landowners."

Friends of the Kayaderosseras does not suggest that any of these tools is appropriate for any particular municipality, much less all municipalities. Instead, **we offer the following list as a menu of possible options available for consideration**. It is always a challenge to find the perfect set of measures to fit the needs of any given location. We appreciate your willingness to consider our suggestions, and we thank you for the important efforts that are already underway in our communities to conserve our Creek.

Menu of Buffer Options

A. Guidelines to limit impacts to the Creek.

Conservation zoning can be used to ensure the public health and safety. Most of the following are likely to satisfy that definition. These can be voluntary or required, and they can be incorporated into subdivision regulations.

1) In agricultural zones, restrict tilling and chemical use adjacent to the Creek.

2) For individual homeowners, restrict soil disturbance, construction, and chemical application close to the Creek.

3) Restrict impervious surfaces within 1000 feet of the Creek and require a combination of constructed wetlands and filter strips in locations where this buffer is infringed upon.

4) Establish local regulations that restrict clearing and building in and around wetlands adjacent to the Kayaderosseras Creek and in the 100-year floodplains shown on FEMA maps.

5) Exercise diligent regulation of on-site septic systems in areas around the Kayaderosseras. Consider prohibiting on-site systems within 1000 feet of the Creek. Require regular maintenance of all septic systems.

6) Include tributaries of the Kayaderosseras Creek in protective measures.

("Menu" sections B-D follow)

B. Methods to ensure new developments do not infringe on Creek buffers. The goal is to ensure that open space is conserved in new developments in ways that contribute to the buffering of the Kayaderosseras.

1) For developments adjacent to the Creek, require clustering of houses outside the Creek's established buffer zone.

2) Provide density bonuses (more development rights than the zoning allows) in return for permanent preservation of the Creek buffer, through donation to the municipality, a land trust, or a homeowner association. In the case of land donation, also consider density bonuses for endowment gifts that would cover the costs of trail construction or other long-term management.

3) Require mandatory dedication of open space for all new developments. For new developments adjacent to the Creek, the preserved open space should be the creek buffer. For developments in other locations, allow the developer to substitute open spaces in identified priority areas like the Kayaderosseras.

4) Create a riparian zoning overlay around the Kayaderosseras Creek and its tributaries. This allows the implementation of streamside zoning requirements and construction restrictions without changing underlying municipal zoning. Create minimum frontage requirements for the Creek, similar to minimum road frontages. This can reduce streamside clearing.

C. Methods to preserve land adjacent to the Creek by managing growth and development.

1) Investigate use-value taxation for property that is designated as Creek buffer for some period of time. For example, if a property owner agreed to leave 1000' along the creek in natural vegetation for 10 years, he would be eligible for a reduced tax rate on that acreage for that period of time. One option is to offer a 100% abatement of local property taxes for that portion of a property that is in perennial conservation easement for Creek buffer.

2) Establish a program allowing the transfer of development rights (TDR) from parcels adjacent to the Creek to parcels not associated with the municipality's open space goals. This requires establishment of sending areas (where open space is desired) and receiving areas (where higher densities are allowable). In many such programs, developers pay landowners directly for the development rights so that public funds are not involved. In others, the municipality establishes a public bank that can buy development rights from those wishing to sell them and re-sell to developers. In mandatory TDR programs, the sending area is zoned very low density and the landowner can then sell development rights as a way of avoiding economic loss because of the re-zoning. Some localities also have voluntary TDR programs. It is possible to require clustering in the sending areas of voluntary programs.

3) Many state and local governments operate programs for the purchase of development rights (PDR). Local programs are typically financed through property taxes, sales taxes, or bonds. Although taxpayers' immediate reactions may be negative, such programs are not fiscally unsound, given the difference in the cost of public services that must be provided to

developments compared to those required by parklands and open space. The public chooses to either subsidize development or to preserve open space.

4) Accept the donation of conservation easements from landowners. This can have tax advantages to the donor if the restriction serves a public purpose and reduces the economic value of the land. (Note that clustering and density bonuses as discussed above are intended to eliminate any reduction in the economic value of the land, so they would replace any tax advantage.) Also the American Farm and Ranch Protection Act of 1997 provides for estate tax reduction on farms with donated permanent conservation easements.

5) Work with land trusts (like the local group, Saratoga PLAN) to encourage their pursuit of properties and conservation easements in the Kayaderosseras corridor. Such donations can result in the tax deductions to property owners noted above, and land trusts have the advantage of not involving government or public funds. Municipalities can leverage scarce open space funds by providing endowments for donated development rights. This makes possible donations by land-rich but cash-poor donors.

D. Funding sources for community land conservation efforts.

1) Limited state and federal programs provide funding for the purchase of property or development rights for outdoor recreation and open space. Federal programs that assist with land conservation are the Land and Water Conservation Fund, the Wetlands Reserve Program, and the Conservation Reserve Program.

2) Impact fees on new developments can be dedicated to help pay for conservation of open spaces such as the Kayaderosseras.

3) Land-conversion taxes, collected when open space (farms and forests) are developed, can be dedicated to conservation of open spaces.

4) NYS Agriculture and Markets PDR program and Saratoga County Open Space and Farmland protection grant programs.

5) Municipalities should be prepared to implement a real estate transfer tax when and if the NYS legislature approves this funding source.

6) Annual budget appropriations.

7) Wetlands banking and wetlands mitigation funding from the Army Corps of Engineers.

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Glossary

Riparian - pertaining to stream banks

Greenway - a natural corridor, such as a stream valley; an open space connector linking parks, nature reserves, cultural features, or historic sites with each other and populated areas; or a local strip or linear park designated as a parkway or greenbelt.

Stormwater runoff - rain or melted snow that flows over the ground, picking up and carrying pollutants from a variety of diffuse sources such as paved surfaces, lawns, farm fields, construction sites and leaking septic tanks. Stormwater runoff does not flow to a treatment plant; it flows through the stormdrain system directly into our streams and lakes.

MS4 - Municipal Separate Storm Sewer System, a permit program of the NYS Department of Environmental Conservation under federal law to manage the content and volume of stormwater runoff from urban areas on a regional basis. It is coordinated in Saratoga County by Cornell Cooperative Extension.

Vegetative buffers - riparian lands covered with deep-rooted plants and maintained immediately adjacent to streams or lakes to protect water quality, fish habitat, and other resources.

For technical assistance in establishing buffer areas, please contact:
Saratoga County Soil and Water Conservation District
50 West High St.
Ballston Spa NY 12020
(518) 885 - 6900

For information on how municipalities can reduce pollutants and other damage from stormwater runoff, please contact:
Mr. Blue R. Neils, Stormwater Management Coordinator brn5@cornell.edu
Saratoga County Cornell Cooperative Extension
50 West High St.
Ballston Spa NY 12020
(518) 885-8995 ext 224
Website: http://www.saratogastormwater.org

For information on conservation easements and transfer of development rights, open space protection and greenways, contact:
Saratoga P.L.A.N.
110 Spring Street
Saratoga Springs NY 12866
phone: (518) 587-5554
fax: (518) 587-6467
Website: http://www.saratogaplan.org

To join the citizens' watershed group and to participate in its projects, contact:
Friends of the Kayaderosseras
PO Box 223, Ballston Spa NY 12020
Website: http://www.kayaderosseras.org/