Watershed Development and Wildlife - Part IV

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Parts I, II and III described wildlife habitat requirements within the Keuka Lake watershed from a landscape perspective. Part IV explores ways of enhancing/preserving essential wildlife habitats within the Keuka Lake watershed while weighing perspectives of different categories of landowners: farmland owners; forestland owners; lakefront homeowners; upland homeowners; and public land managing agencies. The underlying premise is that for a diverse wildlife community to thrive within the Keuka Lake watershed, there need to be large, interconnected blocks of forestlands containing diverse assemblages of tree and shrub species in different successional stages (shrub lands, small diameter trees, larger diameter trees, old maturing forests), from ridgetop to lakeshore. The challenge is to meet the needs of the complex variety of landowners while addressing the habitat needs of diverse wildlife communities within the Keuka Lake watershed.

A first perspective is the physical characteristic of the land: the slope (steepness), soil type, exposure, and dissection (flat with wide meandering streams or steep with narrow plunging streams and waterfalls). These physical characteristics, which may be classified in zones within the Keuka Lake watershed (See Fig. 1 below), determine the degree of attractiveness of lands to each of the landowner categories ***and to wildlife***.

Zone 1, Lakeside, is moderately-sloped to flat land, at the interface of the lake and forestland. It is the most attractive for lakefront homeowners and is also of high value to wildlife as the riparian interface connecting lake and forest. Lakeside lands are the final barrier to soil erosion and run-off for the lake.

Zone 2, **Mid-slope**, is the steepest, heavily dissected, and heavily forested. This is the biggest block of watershed land, and of high importance to wildlife because of the large contiguous forest blocks and the variety of habitats. Steepness and requirement for forest clearing make these lands less attractive to upland homeowners. Mid-slope forestland is an important filter strip above the lake, catching rain and snow run-off, preventing erosion and siltation, and acting as a sponge, holding and releasing water slowly over time, reducing potential for flooding, and lengthening the period of water flow in dry periods. Lower potential for residential development, lower tax rates, and larger blocks of contiguous forestland make these lands attractive to forest landowners.

Zone 3, Shoulder, is the narrow band of forest/farm land sandwiched between the flat ridgetops and steeper sloping land. It is prized for upland homeowners for the spectacular views of Keuka Lake and sheltering forestland. Shoulder lands are valuable for growing grapes and fruits, and connect farmlands and forestland for wildlife.

Zone 4, Ridgetop, is the broad, flat land on hill tops. Ridgetops are easily farmed and of high value to farm landowners. Upland homeowners like them too for the vistas and openness. Primarily farmland, ridgetops are important to “farmland” wildlife.

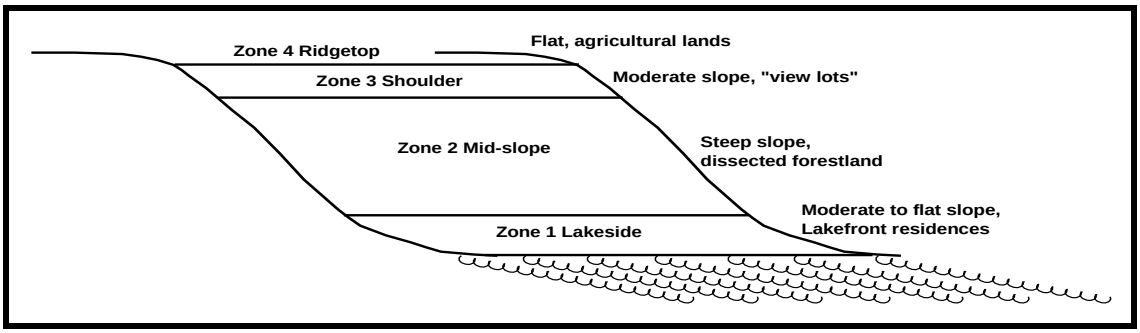

Figure 1. Land zones in the Keuka Lake watershed.

The second perspective is existing development. The degree to which land is "developed" or converted from original forestland to other uses (farming, residences, commercial) determines value to humans, impact on wildlife, and forms a basis for potential actions to maintain/enhance habitat and wildlife and to protect water quality in the lake.

Lakeside: The most heavily developed and impacted zone from a wildlife perspective is the thin strip of waterfront consisting of side-by-side residences with driveways, lawns, and developed beaches that have nearly eliminated the *riparian* habitat of emergent vegetation (cattails, water lilies, sedges, sphagnum moss), water-loving trees, leaf and other persistent ground litter, and snags and logs (in the water as well as on the land adjacent to the water). One never, or rarely, sees wildlife that inhabit the forest-lake edge like otters, minks, muskrats, beavers, turtles, snakes, frogs and salamanders, loons, grebes, rails, bitterns, ospreys, eagles, and wood ducks.

Ridgetop and Shoulder: The next most developed part of the watershed is agricultural/forest lands on gentler slopes, spanning the range of grazing and grass/hay growing, vineyards, and vegetable and fruit crops. Developed at the expense of contiguous forestlands, Ridgetop and Shoulder lands none-the-less comprise unique wildlife habitats in themselves, filling some if not all the habitat needs of the "farmland" wildlife community (pheasants, deer, rabbits, doves and turkeys). Current farming practices emphasize proper use of chemicals (fertilizers, herbicides) to minimize/eliminate impact on soils, vegetation and wildlife.

Mid-slope: The least developed part, and comprising the largest block of existing forestland, is the land between the lake shore residential band of development and the ridgetop/shoulder forest/farm land. It is within this block that most wildlife species fulfill their habitat needs – some are found only within the large contiguous forest blocks, others utilize farmlands and/or lakeshore habitats as part of habitats that must also include contiguous forestland.

The last perspective – ownership exchanges. The tie that connects kinds of development with the physical characteristic of the land, and the way by which habitat and wildlife may be enhanced, is what happens when lands are exchanged, *and where these lands lie within the Keuka Lake watershed*.

N**o exchange**: 1) public lands such as National Forest lands (Think Finger Lakes National Forest on the east side of Seneca Lake) and NY Department of Environmental

Conservation forest lands (think state forests such as Pigtail Hollow and Urbana State forests on the south east side of Keuka Lake) remain as forestlands managed for multiple benefits, including wildlife and wildlife habitat; 2) farmlands are sold and continue to be managed as farmlands; and, 3) forest lands are sold and continue to be managed as forest lands. No actions are needed for **No Exchanges**, except maintenance of existing status: continued encouragement for retention of public and private forest and farmlands.

Lakefront Exchanges: change in ownership of residential lands on the lakefront. When these lands change hands the only existing protection for habitat (and water quality in the lake) is when existing septic systems must pass inspection before exchanges may occur. For residences on community sewage systems, there are no actions to enhance habitat. The highest negative impact occurs where single dwelling residential lots are converted to multiple dwelling condominium lots. Potential actions in this zone include regulation of conversions from single to multiple dwelling status, converting areas of lawns to areas of trees, replacing groomed beaches and breakwalls with emergent vegetation, and slowing run-off from roofs and driveways by catching run-off in "rain gardens" (information on "rain gardens" in last issue of KLA Newsletter) For these latter actions to occur, there need to be economic incentives ("tax breaks") to reward habitat enhancement and training for how-to-do information.

Ridgetop, Slope, and Mid-slope Exchanges: Greatest potential for negative impact is where forest and farmlands are converted to residential developments ("view lots"), with loss of wildlife habitat. Exchanges that guarantee maintenance/enhancement of wildlife habitat are: 1) conservation easements whereby landowners are sometimes granted reduced taxes or other economic incentives to retain their lands in farm/forest management and, 2) outright land purchases by organizations such as the Finger Lakes Land Trust or the Nature Conservancy which keep or sell the lands to agencies that will manage the land as farm/forestland. Forest landowners might be encouraged to retain mid-slope areas as forestlands with tax incentives for retaining land in forest and with educational programs for creating additional sources of revenue from sustainable uses of wood products. Other potential actions in these zones include requiring minimum acreages for residential lots, and changing tax structure of converted lands at the time of transfer to reflect real estate value of "view" lots. Increased tax rates for converted lots might be off-set by tax reductions for retaining forest/shrubland on residential lots rather than conversion to lawns or other non farmland, non forestland types.

Developing a consistent framework for designing and implementing actions to preserve/enhance habitat, wildlife, and water quality in the various Keuka Lake Watershed zones will require communication, cooperation, and coordination among the many affected publics: forest landowners, farm landowners, lakeside and upland homeowners, landowner associations, developers, and township, county, and land-managing agencies and administrations. Without such a framework and resulting forest and farm land conservation/enhancement actions, habitat, wildlife, and water quality may decline to unacceptable levels in the future in the Keuka Lake Watershed.