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WETLANDS DEMYSTIFIED

Wetland Buffers, Part II

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We explained in Part I of this article that there are fundamentally two kinds of wetland and/or watercourse buffers: riparian, which is defined as an upland strip of land or corridor left in its natural vegetative state (i.e., forest and its undergrowth) and vegetative filter strips which are land areas planted either by design (i.e., lawns, pastures, etc.) or land previously cleared but now no longer cultivated. The purpose of both of these buffers is to improve surface water quality by reducing the amount of sediment, nutrients and chemicals that can reach wetlands or watercourses from surface runoff or enter groundwater. In addition to filtering out substances that can impact a waterbody, riparian buffers also provide shade to waterbodies, thereby keeping water temperatures low enough to retain critical oxygen levels for fish. The riparian buffer also provides leaf litter, which, as it decays, is an important nutrient source for animals that live in or depend on wetlands or streams as part of their natural habitat. These buffers provide wildlife corridors or zones through which bird and animal migration has some protection from the ever-continuing development of the natural landscape into smaller and smaller isolated areas.

These buffers can reduce direct human disturbance on wetlands and streams by separating these protected areas from other developed environments. Wetland disturbance may be avoided by discouraging the dumping of debris, removal of vegetation or by trampling. Studies have shown that direct human and farm animal activities in these environmentally sensitive areas adversely affects not just wetlands vegetation, but the wildlife species that are dependant on that vegetation as well. While more could be added as to why buffers are important, it should be evident that the fundamental function, and thus their real value, is to safeguard the health of important wetland areas and watercourses. Water quality, groundwater hydrology, fish, wildlife and plant species diversity in our Town can be better protected by buffers if recognized by land owners and properly managed as part of their land stewardship responsibility.

The width of a riparian or vegetative filter strip buffer (or a combination of both) is somewhat judgmental and often dictated by circumstance. Our wetlands regulations provide for minimum separating distances from wetlands and/or watercourses (unless the applicant for a wetlands permit can demonstrate that “no significant impact” to wetlands and/or watercourses will result from the proposed activity) for various kinds of construction on a building lot. For example, a single residential house requires a 100-foot setback; the setback from the driveway and parking area is 75 feet. The septic system requires a 100-foot setback. Technically, these separating distances are buffers as such, but rarely do they protect wetland function. So called “lawn creep”, landscaping

and a “pet” farm animal or two, are good examples of how development may adversely impact these buffers. By understanding the benefits of wetlands and what activities can harm them we are more likely to ensure these buffers are protected. The Wetlands Commission may impose a buffer strip as a land use restriction to ensure protection of a wetland or watercourse as a condition of its approval of a wetlands permit. The intent of these buffers, when required by the Commission, is to protect important wetlands and/or watercourses in our Town, not to restrict the thoughtful homeowner from enjoying his or her property. In fact, riparian and vegetative filter strips can bring added enjoyment to a homeowner by attracting animals and birds to their property. Once these vegetative areas are gone, animals and birds may leave.

The Connecticut Department of Environmental Protection (DEP) recommends that the width of riparian and vegetative strip buffers should be based on slope, soil drainage class and hydrologic group, upland watershed size, land use, and the nature of the ground surface. These features affect the channel and rate at which surface and groundwater flow over and through the buffer area, and unless monitored and corrective actions taken when necessary, the value of these buffers will be compromised The DEP establishes a minimum width of 50 feet in well-drained soils and up to 150 feet where upland soils are moderately drained [see “Wetlands Demystified” Vol.1. No.2, *The Pomfret Times*, Vol. 10, No.8, November 2004]. There can be some adjustments to these distances when a vegetative filter strip is established in conjunction with a riparian buffer. According to one authority, buffer width should be increased by 5 feet for every 1 percent increase in slope. However, narrow buffers in the 50-foot range may work so long as the soil clay content is not great in terms of sediment drift and other conditions are not a major limiting factor. Fortunately, most Pomfret soil types have low clay content.

Unlike the riparian buffer, the vegetative filter strip may be mowed for hay or lawn maintenance or even grazing during the drier part of the summer when the ground is firm. In the case of grazing, the DEP recommends that fencing be used to keep farm animals and equipment away from an adjacent riparian buffer. It should be added that the use of vehicles of any kind to maintain the buffer should be avoided if possible especially, during the wetter portions of the year. Other disturbances should be avoided in these areas also if they are to function properly.

To summarize, we discussed in Part I of this article the importance of Pomfret’s wetlands for water purification, flood protection, groundwater recharge stream flow maintenance and wildlife habitat [see Wetlands Demystified Vol. 2, No.1, *The Pomfret Times* Vol.10, No.10, January 2005]. In this part, we discussed the importance of buffers for protecting our groundwater and surface water resources. Buffers when established and correctly managed provide a significant first line of defense to these critical wetland areas not just for us but also for the survival of creatures that would not exist otherwise. One might argue that the establishment of buffer areas is a conservation issue not a wetlands issue, and wonder whether the Pomfret Inland Wetlands Commission has any real authority to

establish and insure the maintenance of these corridors? Indeed it does, and that responsibility is mandated under Connecticut's land use laws and court decisions. In future articles we will address some of these mandated responsibilities. For example, we will address conservation easements, which may include riparian and/or vegetative filter strip buffers, and the Commission's enforcement authority to ensure such buffers are maintained as specified in the wetlands permit.

The seed catalogs are beginning to arrive in the mail. Does this mean that spring is in the air? Not quite, but it surely will come. For this reason in the March issue of the *Pomfret Times* we will discuss a unique spring event, the Vernal Pool. One might ask, "Why is the Pomfret IWWC concerned about such things?" Vernal pools are temporary water bodies that provide an important breeding place for their inhabitants in the spring, but who live most of their lives in upland areas during the remainder of the year. What does this have to do with wetlands if these water bodies are only temporary? Would it not be better to just fill them in? The answer is because the State legislature saw fit to protect these temporary water bodies for their unique nature and value to the environment under its wetlands laws. While challenged in the courts by developers, the legislature has reaffirmed that these pools and their inhabitants are to be protected. Stay Tuned!