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Town of Preston
Planning and Zoning Commission
April 26, 2022

Dear PZA,

How many minor disturbances does it take to create a major one? This is a land use question that in 2022 we no longer have the luxury to ignore. We have for months now discussed and argued over buffers, setbacks, upland review areas - concepts that fit neatly into our vision of land use but are meaningless to the needs of the natural world. Any impact on a system that begins at Amos Lake, flows through Avery Pond, Indian Brook, and Poquetanuck Cove and into the Thames River is our concern. The Conservation Commission has and will continue to advocate for protection of this valuable wildlife corridor and watercourse.

Eliminating or restricting the Blue Camp project's intrusion within the 100-foot wetland review area is necessary in our view to minimize negative impacts on this system. Achieving this goal of limited intrusion will only be reached by compromise not regulation. Our Commission, which includes agricultural concerns, notes the proposed loss of 28 acres of prime farmland to preserve a wildlife and watercourse corridor. The abutting residents are being asked to compromise their quality of a peaceful neighborhood life. The Conservation and Agricultural Commission is asking for the applicant to also compromise on the scale and scope of their proposal.

Any campsites located in a wetland review area guarantees the use of pesticides to create a marketable glamping area. This activity is advised against on page 15 of the applicant's paper, "The Scientific Basis for Wetland and Watercourse Buffer Zones." It has been and will be argued that Preston's boards and commissions have no legal basis to impose these restrictions. Our view is that compromise needs no legal authority. An agreement between all to create an ethical use of our limited natural resources will be upheld by not only the courts but by generations yet to come.

If the applicant cannot complete this project with the respect and compromise the land requires and still make it financially viable, perhaps they have the wrong location.

Gary Piszczek, Chairman

Preston Conservation and Agricultural Commission

**THE SCIENTIFIC BASIS
FOR WETLAND & WATERCOURSE BUFFER ZONES**



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*for
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5.0 TOXIN MOVEMENT AND DEGRADATION IN WETLAND BUFFERS

5.1 Pesticides

The NRCS-USDA document, *Conservation Buffers to Reduce Pesticide Losses* (March 2000), recommends a 100-foot setback from farm fields to streams, as noted in Section 3.1 (Footnote 16)²⁷. The stated rationale is to allow sufficient dilution and degradation, on average, to protect aquatic resources. This paper also emphasizes the need to protect intermittent streams, pointing out that smaller streams combine to provide the water source for perennial streams with fish populations – the watershed perspective. The impacts to wetland biota of toxins such as pesticides and PAHs have already been discussed in Section 4.1. This section provides more detail in support of the buffer needs to protect wetland resources.

Because *soluble pollutants move readily through saturated soil*, it is important that setback distances be measured from the wetland boundary, not the bank of the watercourse. In evaluating a proposed setback to regulated activities, the perennial question is as follows: Will fertilizers and pesticides from the lawn or farm field reach the downgradient aquatic resources in sufficient concentrations to harm aquatic organisms or plants? Will they harm invertebrates in wetland soils? Sub-lethal effects of neurotoxins should also be considered.

Although highly persistent organochlorine pesticides (e.g., DDT) are no longer available in the USA, numerous products are still in use with high aquatic toxicity, rapid mobility in soil, high solubility in runoff, and/or long persistence (i.e., half-lives over 60 days). Even pesticides with a “rapid” breakdown rating have half-lives of several days to a week. Based on their physical properties, several commonly used turf chemicals can be expected to pass too rapidly through narrow setbacks, for breakdown to occur. For example, the time needed for 75% to 100% breakdown of the herbicide 2,4-D is four weeks. The popular, soluble grub pesticide Imidacloprid (Merit), linked to honeybee decline, takes 48 to 190 days to break down. A study evaluating herbicide removal by a 20-meter (i.e., 66-foot) wide grassed buffer strip under natural rainfall, showed reduction of Atrazine by only 9% to 12%, of Metolachlor by 15% to 27%, and of Cyanazine by 7% to 21% (Arora et al. 1993). Moreover, initial breakdown products of pesticides and herbicides may still be toxic if the biologically active functional groups are still intact²⁸.

²⁷ available on the internet from the USDA web site

²⁸ Judy Singer, CTDEP Pesticide Division, personal communication, December 2000.