Buffer Options for the Bay

NAVIGATING REGULATIONS

WHY PROTECT SMALLER RIVERS & WETLANDS?

Water resources are firmly linked to quality of life in New Hampshire, and the land bordering rivers, streams, and estuaries provides many benefits that support strongly held, local values.

According to BOB's community assessment of community perspectives in the Exeter-Squamscott subwatershed, these values include a need to protect public health, preserve community character, ensure access to water and views, provide clean water for drinking and recreation, maintain wildlife and forests, avoid future costs, and support economies that make communities desirable places to live and do business.

Unfortunately, approximately 85 percent—or 16,000 miles—of the state's streams are 1st, 2nd or 3rd order and beyond the reach of state and federal regulations to protect. Natural resource managers are increasingly aware of the importance of these smaller streams in relation to the benefits that align with stakeholder values. Research has shown that buffers along headwater streams have a greater influence on overall water quality than buffers adjacent water body. For example, headwater streams exert control over nutrient exports to rivers, lakes, and estuaries and have a profound influence on shaping downstream water quantity and water quality.

Riparian habitat is at particular risk from conversion as these areas are often highly suitable for agriculture and desirable locations for human development. In the United States, ~1 percent of riparian areas were lost from 1972 to 2003. While this figure may not seem high, it is important to recognize that this represents a

continued loss of habitat on top of historical loss in many places. In coastal New Hampshire, much of this land conversion can be attributed to a growing human population as a result of proximity to the expanding greater Boston area. From 1990 to 2010, the population in the Southern New Hampshire region grew by 19 percent with a concomitant 120 percent increase in impervious cover (representing 9.6 percent of the land area).

WHICH BUFFERS ARE REALLY VALUABLE?

A buffer's perceived value is linked to the ecosystem services that it supports and the value that stakeholders place on those services and associated benefits. (See Buffer Basics).

The BOB team created a set of municipal scale maps that identify and prioritize buffer areas in the Great Bay watershed according to their capacity to support four categories of benefits: water quality, flood storage and risk mitigation, wildlife habitats as designated in action plans and co-occurrence of benefits. Ostensibly, the more benefits a buffers supports, the higher its potential value, making co-occurrence maps particularly useful for assigning value to a particular buffer.

The Local Prime Wetlands Designation process (under RSA 482-A:15 and Administrative Rules Env-Wt 700) provides a way forward for communities interested in protecting a high value buffer area. This regulation allows a municipality to designate wetlands as “prime” if they are determined to be of high-quality, i.e, of large size, unspoiled character, and able to sustain populations of rare or threatened plant and animal species.