

## THOUGHTS ON THE POTENTIAL FLOOD STORAGE CAPACITY OF WETLANDS WITHIN THE TOWN OF CENTER HARBOR NH

### Salient Points of Reference:

A one – acre wetland can typically store three acre-feet of water or a **million** gallons. Trees and other wetland vegetation help slow the speed of flood waters. This action, combined with water storage, can actually lower flood heights and reduce the water’s destructive potential. (EPA).

FEMA encourages the use of wetlands for stormwater detention in lieu of, or in conjunction with, traditional flood control measures.

Although a small wetland might not store much water, a network of many small wetlands can store an enormous amount of water. The ability of wetlands to store floodwaters reduces the risk of costly property damage and loss of life (EPA).

“Freshwater wetlands act as natural flood regulators by temporarily storing floodwaters and then slowly releasing the stored waters downstream (attenuation). During heavy rains and rapid periods of melting in late winter, the water entering the wetland from rainfall, surface runoff and stream flow is temporarily stored in wetland depressions and slowed down by shrubs, trees, emergent vegetation and surface topography. This reduces the quantity of water in the downstream river system at the peak of the flood, and ensures the floodwaters from tributaries do not reach the main river at the same time. In this way, wetlands help protect adjacent and downstream areas from flood damage. The loss of upstream floodplain wetlands can significantly increase downstream flooding and damage.” (NH Method, Van de Poll, et.al.).

Flooding – “ Recent rain events have proven...an increasing concern as additional development is contributing to flood hazards. As areas are covered with impervious surfaces, less water is allowed to infiltrate, evaporate or be transpired by vegetative growth and more directly runs off into surface drainages and water bodies. This increases the likelihood of flash floods and substantial overland flow. Of greatest concern are the waterfront properties on the lakes, ponds and associated tributaries.” (Center Harbor 2014 Hazard Mitigation Update, pg. 100).

In the 2014 Center Harbor Hazard Mitigation Update, FLOOD was identified an overall HIGH hazardous risk.

### Conclusion:

The Town of Center Harbor currently boasts 1090 acres of documented and mapped wetlands. If each acre has a potential to store up to a million gallons of water during a flood related event (totaling up to 1 billion 90 million gallons of potential

storage!), the significantly positive impact of the flood storage ability and capacity of these wetlands is one of Center Harbor's greatest natural assets. It is likely the Town's best tool in the toolbox and the best weapon of defense against flooding disasters.

Even though there seemed to be a focus on the Prime Wetland Complexes in the 2014 Hazard Mitigation Update, I believe that we need to look at the significant and irreplaceable value of ALL wetlands in Center Harbor in reference to their collective potential in reducing and minimizing property damage and human morbidity and mortality during a flooding event.

Respectfully submitted,  
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