To: House Committee on Natural Resources, Fish and Wildlife

From: Cheryl Joy Lipton, Chester VT

Date: March 9, 2022

Re: H606 - An Act relating to community resilience and biodiversity.

Dear Chair Sheldon and Committee Members,

Thank you all very much for your work on such an important piece of legislation for the health of our state. This is seminal work with the scope of the coexistence of people and habitat. I am an Ecologist and Landscape Designer and have spent my career working on the intersection of the anthropocentric landscape and the needs of functioning ecosystems, in the fields of Landscape Architecture and Ecology. I am heartened by this Act, which is coming none too soon.

I am writing to advise that the committee return the phrase: "across at least nine percent of Vermont forestland" to the end of the last sentence of 2802. (b), so that the statement would read as it did in Draft No. 2.1: "In order to support an ecologically functional landscape with sustainable production of natural resources and recreational opportunities, the approximate percentages of each type of conservation area shall be guided by the conservation targets within Vermont Conservation Design, including the use of biodiversity reserves to protect highest priority natural communities and maintain or restore old forests across at least nine percent of Vermont forestland." I also recommend an additional sentence which addresses the extremely minimal amount of primary forest that still exists in Vermont: "Additionally, any remaining primary forestland in Vermont shall be identified and one hundred percent protected in the Ecological reserve area category."

One of the reasons for the catastrophic loss of biodiversity is the tremendous reduction of ecosystems and habitats, including primary forest in Vermont being almost extirpated and old growth forest in critical danger of the same. The loss of old growth forest has been implicated as one of the primary causes in the extinction of the Passenger Pigeon and it is the reason for the loss of the largest woodpecker, the Ivory Billed Woodpecker, finally declared extinct last year. Old growth forest, itself, is endangered, and it supports species that are in decline, rare, threatened and endangered. It provides habitat that younger forests do not, for birds such as nuthatches, barred owl, winter wren, red shouldered hawk the chimney swift which is a Vermont Bird of Special concern, and more. Many bird species are much more abundant in old growth forest than other habitats. For example, Black Throated Green Warblers are three times as abundant in old growth forest and Black Burnian Warblers are 45 times more abundant in old growth. The Vermont state bird, the Hermit Thrush, finds better habitat in old growth forest. The endangered American Marten requires old growth habitat, one of the reasons the reintroduction and recovery has been slow and very limited, and was the reason for their decline. Biodiversity in the herbaceous layer of the forest is also much higher in old growth forests, with the herbaceous community still recovering at 150 years after logging. Trillium species reproduce and increase in old growth where in young forests they hold steady at most. Lichen species are old growth indicators as well, with woodlands of recent origin having 40 or less lichen species and forest that is very old supporting 120 to 150 lichen species per square kilometer. The less common lichen species don't begin to appear until a forest becomes old growth, about 150 to 200 years. Old growth forests provide microsites and structural heterogeneity that is not available in younger forests, providing for many different species. Old growth and primary forest ecosystems are needed for continuation of biodiversity and keeping viable intact populations at levels that are self-sustaining. There is also a great amount of information that old growth forests hold that has yet to be discovered, interactions, species, benefits and more, that should not be lost.

This is just a small amount of the information available to show how very important it is to protect remaining primary forests and increase old growth. The Community Resilience and Biodiversity Protection Act is strengthened to its actual intent with the inclusion of old growth and primary forest statements.

Respectfully, Cheryl Joy Lipton