Dear Representative Sheldon.

I am contacting you about H812, a bill to protect endangered species. As way of background, I retired last April as the Botanist for the Fish and Wildlife Dept, a position that I held for over thirty years. I will address each of the main provisions in turn but will focus on plants as that is where my expertise lies.

Revise the list every 3 years. This is reasonable. At present FWD choses to update the list when there is a "critical mass" of species to be added or removed. Each species with a proposed change in status must have a corresponding Species Documentation Form completed. This form is quite detailed and entails researching the life history and status of each species. The form is then reviewed by the appropriate Scientific Advisory Group and then by the Endangered Species Committee (ESC) which makes a recommendation to the ANR Secretary. In the past some species have languished in a legal gray area after a positive recommendation by the ESC for listing or delisting, but lacking rulemaking by FWD.

Designating critical habitat for every listed species would be a huge logistical hurdle for FWD. Speaking only for plants, there are currently ca. 153 listed species and only a single botanist on staff to designate critical habitat. When the current statute was amended to include this category, myself and another outside botanist attempted to designate critical habitat for a few plants. It was not easy or straightforward. Certainly the sponsor's intentions are good, and it appears beneficial in theory, but it quickly becomes very subjective at least for many plants. One easy option that would afford additional protection, would be to designate critical habitat around each known listed plant occurrence of 10 or 20 ft. Presently you need a permit only for a taking which comprises actually removing some part of the actual plant. We had instances where placing a road with a few feet of a listed plant did not constitute a taking nor require a permit.

Prohibit sale or transport of listed species. As you are probably aware, a number of our listed plants also exist in the horticultural trade and are widely planted. Some of these are cultivated within the state while others are transported into the state from nurseries around the country. As you might imagine, this has caused complications since legal protection is afforded only to natural populations and not those grown horticulturally. In some cases it can be difficult to determine the provenance when plants escape from a garden setting or are planted in the wild, and there is rarely, if ever, any documentation. Prior to retiring I was able to restrict planting of listed species in projects undergoing Act 250 or Section 248 permits, but otherwise we had no legal authority. I always strongly recommended that planting listed and rare plants be avoided, or if not, then planted only in horticultural settings and never in the wild.

Authorized Takings: Taking for scientific purposes is typically used to issue permits to researchers and grad students. While the research may result in enhancing propagation/survival, this is typically not the focus. It is more often directed to genetic analysis at least in regard to plants. Some years ago we issued ECHO a permit to exhibit spiny softshell turtles and Champlain beachgrass for educational purposes. Incidental take is the justification for most development related permits that are issued. One recently issued T&E plant permit allowed for ca. 80+% of a population to be taken. We required transplantation and seed banking, but there is no guarantee for the success of either of these practices. This project met bullets 1 and 2 on the

amended bill. For bullet 3 they did not minimize the project but instead were mandated to perform the mitigation I mentioned. For 4, we are uncertain how the population will fare over time. We typically don't assess success until at least five years after transplanting to ensure that the population is self sustaining.

Silvicultural and Agricultural exclusion. It has always been vague as to what constitutes accepted silvicultural and agricultural practices. Requiring a rule to articulate what would be allowed is clearly needed. Such a rule however, will undoubtedly result in significant pushback from the Agriculture Agency as demonstrated by the current proposal to ban neonicotinoids.

General Permits: FWD has rarely issued these although there is a strong desire among utility companies, especially VELCO, for such a permit. Utilities somewhat regularly encounter state listed plants that have colonized their ROWs, and thus need to request an individual T&E permit for their ongoing management activities. I recall that section C was inserted to account for this desire. That said, despite extensive meetings with VELCO, we were never able to reach consensus on a general permit for ROW maintenance and to my knowledge one has not been issued to them.

Please feel free to discuss further at your convenience. And you are welcome to distribute these comments as you see fit.

Sincerely, Robert Popp (802) 454-1514