



June 30, 2020

Alexandra Dapolito Dunn
Assistant Administrator
Office of Chemical Safety and Pollution Prevention
Environmental Protection Agency
Docket Center (EPA/DC), (28221T)
200 Pennsylvania Ave. NW
Washington, DC 20460-0001

Re: Draft Endangered Species Act (ESA) Biological Evaluations: Carbaryl Registration Review; Docket Number EPA-HQ-OPP-2020-0090

Dear Ms. Dunn:

The California Citrus Quality Council (CCQC) and California Citrus Mutual (CCM) represent approximately 1,500 citrus growers and 80 packinghouses in California, whose total farmgate value of California citrus production including oranges, lemons, mandarins and grapefruit in the 2018-19 marketing year was \$2.1 billion. The industry employs over 21,000 people on a full-time basis. We appreciate this opportunity to comment on the ESA biological evaluations for carbaryl.

While the California citrus industry appreciates the Environmental Protection Agency's (EPA) efforts to improve its methodology to assess the impact of pesticides on endangered species, we believe it falls short of what is necessary to conduct an accurate assessment. Of the 1,745 listed species, and 776 designated critical habitats, EPA asserts that carbaryl is likely to adversely affect 86 percent of endangered species and 90 percent of critical habitats. Given the wide range of species and habitats evaluated, we find it implausible that carbaryl substantively harms such a wide range of species and vast scope of habitat.

We believe that EPA's use of worst-case scenarios throughout the assessment and the use of overly conservative assumptions accumulate in the analysis in a way that greatly exaggerates the effect of carbaryl on listed and threatened species. One example of EPA's conservative approach is the construction of its model, which assumes that a vulnerable water body is adjacent to the application site. This scenario would also incorporate a highly conservative estimate of spray drift that would then cause exposure to species in the theoretical vulnerable water body. However, bodies of water are rarely found in citrus production areas where carbaryl is used.

EPA's analysis also misrepresents the scope and range of species and habitat to include areas as large as whole states. California is a geographically diverse state that has several mountain ranges, coastline, deserts, rivers, wetlands, estuaries, grasslands and forests. If the habitat of each species is estimated to be the size of the entire state, then the methodology would assume that carbaryl

applications on citrus would affect all the species in each of these habitats. This scenario is highly unlikely, if not impossible.

Using worst-case scenarios in every case throughout the analysis creates scenarios that are unlikely to happen in reality. This methodology uses a construct which itself is improbable. By structuring the analysis in such a conservative manner EPA cannot logically determine what is likely to occur, since the estimate inputs are improbable. The methodology conflicts with the objective of making decisions about how species are *likely* to be affected.

EPA could significantly improve its analysis by defining the species that are present in areas where applications occur. This could be achieved by overlaying accurate county level species maps with counties where carbaryl applications occur. This would generate a better estimate of whether a species is reasonably likely to be exposed to an application. Species biology could also be used to better determine whether carbaryl use would be likely to adversely affect a species.

Another factor that undermines the accuracy of the carbaryl evaluation is the uncertainty of EPA's estimates. The uncertainty around EPA's estimates is measured by the strength of evidence assigned to its classification of likely to adversely affect estimates. Ninety percent of the Agency's likely to adversely affect estimates for species and critical habitat are based on weak or moderate evidence. These classifications strongly suggest that EPA does not have a clear picture of carbaryl's effect on endangered species or habitat. EPA could improve the confidence of its estimates by refining the analysis to include more realistic inputs regarding use rates, spray drift and more accurately matching use sites to species overlay maps.

EPA's estimates are also structured to determine carbaryl's effect on an *individual* in a species population. The Agency evaluates the impact on individuals using factors such as mortality and sublethal effects; the impact of percent crop treated; population rates; pesticide toxicity; species range data; pesticide use data; incident reports; habitat exposure and spray drift. Using such a broad scope of factors to assess the impact of carbaryl is much more likely to affect an individual than many individuals in a given population. We believe the decision to focus on individuals is an overly conservative standard, since the vast majority of endangered species populations are not substantively harmed by the loss of a single individual.

CCQC and CCM appreciates the opportunity to comment on this important matter.

Sincerely yours,



James R. Cranney, Jr., President
California Citrus Quality Council



Casey Creamer, President/CEO
California Citrus Mutual

cc: CCQC Board of Directors