BLUEBIRD NESTING STUDY – 1988 Philip K. Gaddis Northwest Ecological Research Institute NERI Report 88-04

ABSTRACT – In order to evaluate secondary effects of chemical insecticide spraying for grasshopper control, nesting success of Western and Mountain Bluebirds (Sialia mexicana and S. currucoides) was monitored. Because bluebirds feed grasshoppers and other invertebrates to their nestlings, the broad-spectrum insecticide planned for the control project could be expected to reduce both primary and alternate food resources and could decrease nest success. A total of 273 nest boxes were placed at four treatment sites and four control sites in Wheeler County, Oregon, and were monitored every two weeks. However, due to late spring rains grasshopper numbers were lower than anticipated and the spray program was cancelled. Baseline data on bluebird nest success could be useful if spraying occurs in future years. The boxes yielded 43 Western Bluebird, 27 Mountain Bluebird, and two unknown bluebird nests. The overall nest success rate was 59.7%. For the Mountain Bluebirds, earlier nests were more successful (first eggs laid before May 21), while for Western Bluebird, nests with eggs laid between May 21 and June 16 had the highest success. Of the total number of bluebird nests, 74% were in boxes with a density of zero to five trees within 50 feet of the box. Bluebird nests in boxes with one to ten trees within 50 feet had the highest success. Most of the boxes with 11 to 15 trees within 50 feet were occupied by House Wrens (Troglodytes aedon).