

Supplemental Figure 1. Cumulative human WNV cases (n=903) by hexagon in Cook and DuPage Counties, Illinois from 2005-2016. The three study regions analyzed were UFS (outlined red), local (outlined yellow) and county (entire map extent). Regions with no visible hexagons are location with no human population, and are mostly comprised of nature preserves and parks. Of the 5435 hexagons assessed, only 1 (located in south-central Cook County) experienced two human cases in the same epidemiological week*year combination.

Supplemental Figure 2. Generalized linear model fit, displayed as studentized residuals by predicted values, for UFS (A), local (B), and county (C) scales. Cumulative human WNV predictions underpredicted actual reported cases at each scale. Cumulative predicted human cases, actual cases, and difference (n, %) by scale are: UFS: 38, 46, -8, 17.4%; local: 134, 156, -22, 14.1%; county: 895, 906, -11, 1.2%.