<u>Oregon Grasshopper and Mormon Cricket Survey for 2014 - Summary</u>

This year surveying began on 13 May and completed on 22 August. Nymphal survey takes place early in the season and is used to locate potential outbreak areas for the current year. Adult survey (this year 7 July - 22 August) is used by ODA and APHIS to make predictions for the following season, estimating economic levels as 8 or more grasshoppers per square yard. In 2014, a total of **1,767** sites were visited. Of the total stops **914** were during the period for nymphal grasshopper survey and **853** during the adult period. Approximately 1.03 million acres across 19 counties in eastern Oregon were estimated to be economically infested. Up slightly from the previous year.

This does not mean the resurgence is evident across all regions. Lake and Harney Counties had areas with the highest densities and collectively showed the largest increase in economically infested acreage estimates. Other areas like Klamath Marsh continued the pattern of population decline.

Though we found a slight increase in the economically infested acreage during 2014 it remains well below grasshopper densities found at the peak in 2011 when a region-wide outbreak occurred. Currently localized pockets of high density were found scattered across the eastern counties. The much larger areas of economic density found in Harney and Lake Counties drove the overall acreage increase. We cannot accurately predict where grasshopper outbreaks will occur because they depend greatly on many environmental factors at the time of hatch and early development, variables that cannot be accurately forecast. Based on the observed trend, we consider it likely, in spite of the slight increase in grasshopper acreage this year, that overall the pattern of density will remain low into 2015.

Oregon Grasshopper Survey Statistics from 2005 through 2014. Economic infestation $\geq$ 8 grasshoppers / yd^2.

Year	Number Counties Infested	Acres of Econ. Infest.	Grasshopper Sites Surveyed				Samples w/Econ Density	Mean GH / yd^{2*}	Number of GH Surveyors
			Total	Nymph	Adult	Treatment			
2014	19	1,031,673	1,767	914	853	0	333	29	2.5
2013	15	869,857	1,489	462	935	92	280	50	2.5
2012	17	1,178,872	1,135	387	748	34	526	34	2.5
2011	18	2,888,455	3,139	1880	914	345	1093	20	6
2010	12	1,910,222	1,905	795	750	360	488	21	6
2009	11	151,974	998	491	507		108	18	4
2008	12	1,129,820	2,722	1116	1606		360	29	6
2007	13	798,358	1,585	706	870		298	18	6 (+2)
2006	14	97,399	1,368	750	618		100	16	6
2005	9	64,751	859	306	423		115	15	5

*Mean of economically infested samples

However, we encourage land managers, especially those in areas where high or building populations persist, particularly those in Harney and Lake Counties, to be proactive in early 2015 if they are concerned about grasshopper impacts to crops and rangeland. Control is most effective on young grasshoppers. Contact us or your local Extension Office to report grasshopper populations, for grasshopper/Mormon cricket management advice, or for survey and suppression assistance.

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Oregon's grasshopper and Mormon cricket survey program and full version of this report:
http://www.oregon.gov/ODA/programs/IPPM/SuppressionEradication/Pages/SuppressionEradication.aspx

APHIS Rangeland Grasshopper and Mormon cricket program:
Go to http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/planthealth/sa_domestic_pests_and_diseases/sa_pests_and_diseases/
then click on Grasshopper / Mormon cricket

ARS resource page for grasshopper and Mormon Cricket:
http://www.sidney.ars.usda.gov/grasshopper/

Density (/ sq. yd.)
- Economic
- Non-Economic
- No Grasshoppers
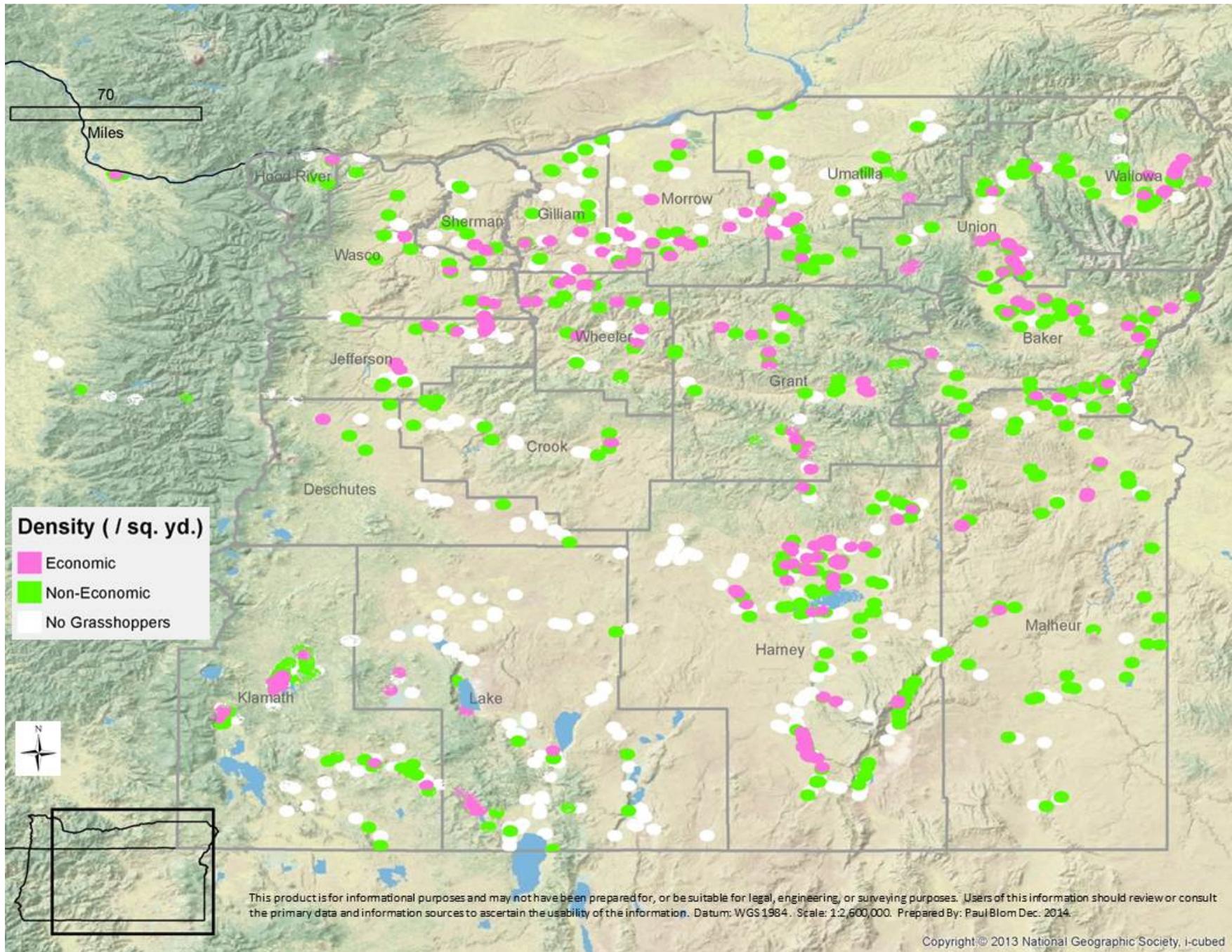
2014 estimated areas surveyed showing three economically classified levels of infestation. Economic infestation ≥ 8 grasshoppers / yd^2.