R10 Umatilla Petition

Figures from Petition Appendices

02 27 2020

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Figure 2-1

Location and Boundaries of the Lower Umatilla Basin Groundwater Management Area

Second LUBGWMA Action Plan

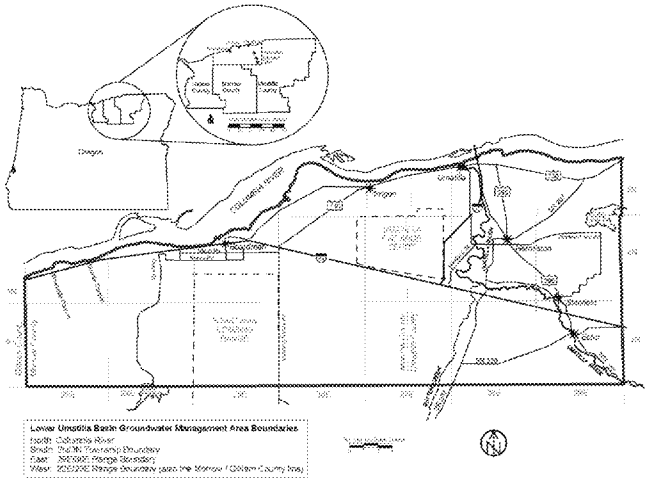

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Figure 2-3
Nitrate Leaching Potential Rating of the Lower Umatilla Basin Groundwater Management Area
Second LUBGWMA Action Plan

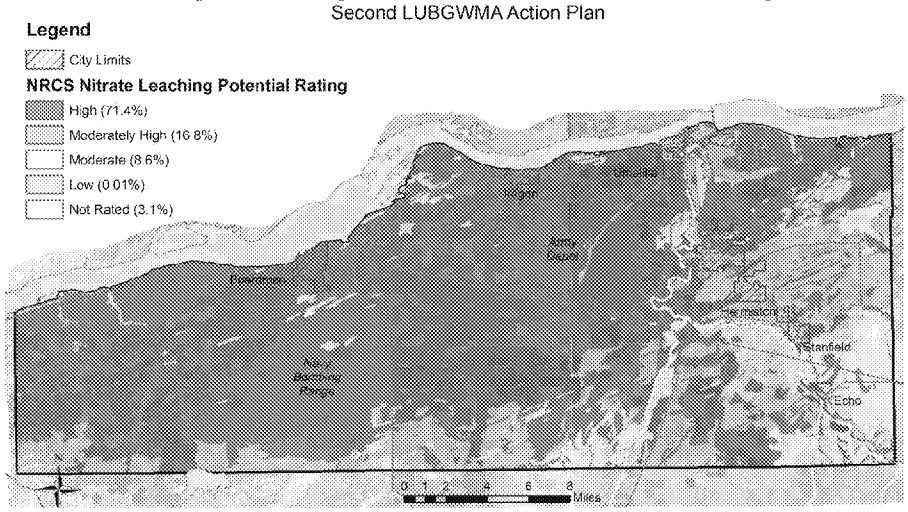

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Figure 2-5
Estimation of Nitrogen Leached to Groundwater
Second LUBGWMA Action Plan

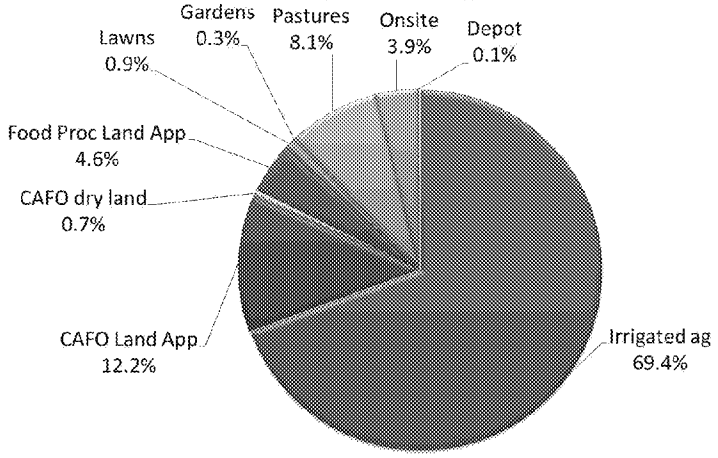

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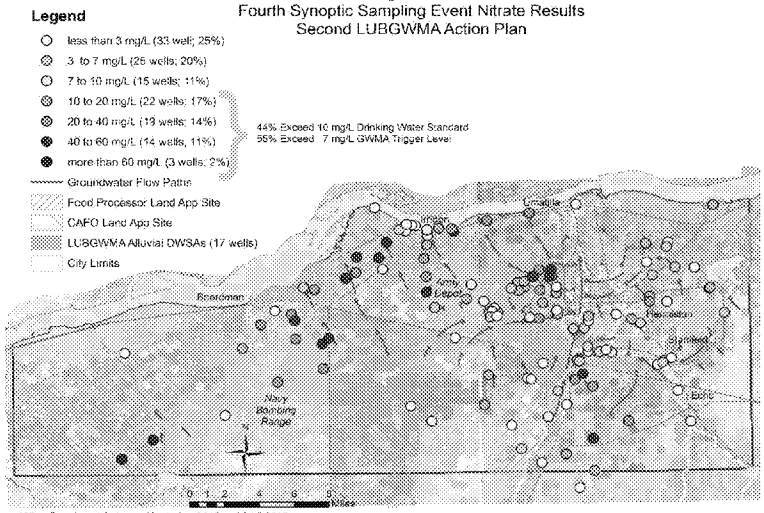
Figure 2-9
Fourth Synoptic Sampling Event Nitrate Results
Second LUBGWMA Action Plan



133 wells sampled between November 2015 and April 2016.

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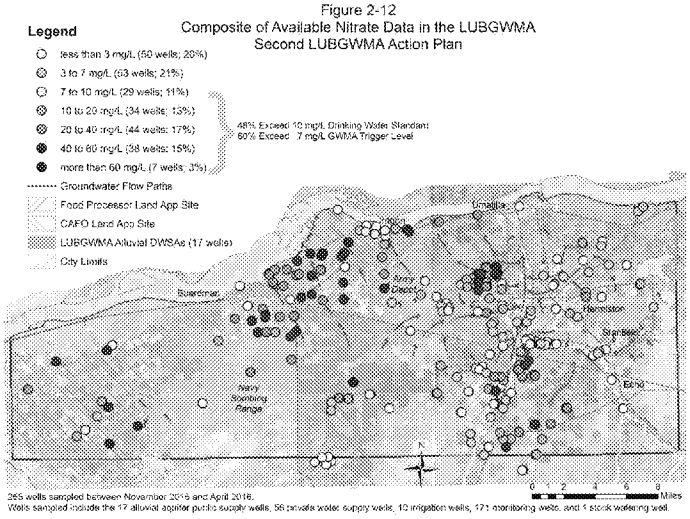
Figure 2-12
Composite of Available Nitrate Data in the LUBGWMA
Second LUBGWMA Action Plan



265 wells sampled between November 2014 and April 2016.
Wells sampled include the 17 alluvial aquifer public supply wells, 56 private water supply wells, 10 irrigation wells, 171 monitoring wells, and 1 stock watering well.

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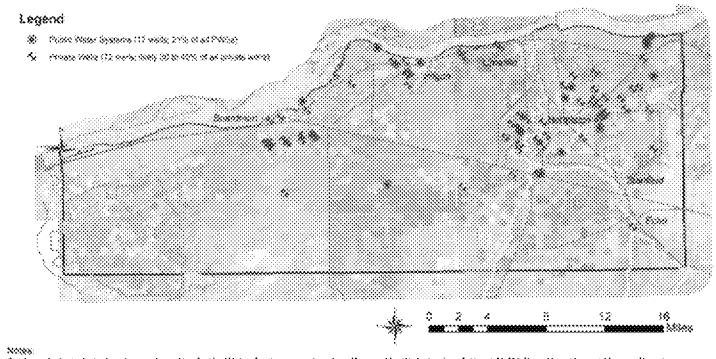
Public and Private Drinking Water Wells that Have Exceeded the Nitrate Drinking Water Standard
Lower Umatilla Basin Groundwater Management Area



Notes:
Public wells include both active and inactive Public Water Systems monitored by Oregon Health Authority. Of the 163 PWSs in Umatilla and Morrow County, 18 (10%) have exceeded the nitrate drinking water standard at least once. 37 of these wells (64%) are within the LUBGWMA. Of the 81 PWSs in the LUBGWMA, 31 (21%) have exceeded the standard at least once. These percentages do not take into account which aquifer these wells tap. Because some PWS wells are likely completed in the basalt aquifer, the percentage of PWS wells with high nitrate that utilize only the alluvial aquifer is likely higher than 21%.

Private wells on this map include 30 wells from the Real Estate Transaction monitoring, 14 wells from the regular LUBGWMA Network wells, 7 domestic wells that were included in the 2009 Synoptic Sampling Event, and the Navy Sampling Range well. Approximately 13% of the RET results show nitrate values over the standard. Because the RET database is known to contain results from treated samples and bottled water, it is likely not a good indicator of the magnitude or extent of nitrate contamination. Approximately 42% of the domestic wells in the LUBGWMA network show nitrate values over the standard. Approximately 30% of the domestic wells sampled during the 2009 Synoptic Sampling Event showed nitrate values over the standard.