

Kent Fire Department Response Density

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For these maps I utilized both kernel density and contour intervals. That is to say I took the original point data sourced from the NFIRS and rasterized it into 50 square mile cells, colored according to the number of points in each cell, creating a density grid. Then using this raster, it was possible to outline this grid with contours set to density intervals to increase readability and group areas of similar density. The contour intervals vary for each map, as they must be adjusted to the scale of the data.

These methods were used and are effective because they increase the readability and comprehension of dense point data such as the data used in these maps. By condensing and color-coding these many points into a readable grid it is easier to see patterns and groupings in a less cluttered manner. However, a density grid on its own can be difficult to interpret as the sliding color scale does not allow for any interpretation of exactly where the middle values fall in terms of density. The only color explicitly described would be the highest and lowest values. This is circumvented by using contour lines that not only accentuate groupings of similar density, but put a value on that grouping.

In all of these maps, incidents appear in their highest concentration in the areas around stations 71 and to a lesser extent 74, and then radiate outwards with smaller epicenters at stations 73 and 75. But in terms of what is different, while other maps have significant density all around the county, structure fires are remarkably isolated to a few key centers around stations 71, 73, 75 and 76. The service calls map is unique in that it has two distinct areas that fall under the highest classification around stations 71 and 74 as opposed to 1 epicenter. The haz-mat map in comparison to the others has remarkably small contours that fade rather quickly. It is still contiguous unlike structure fires, but the areas between the higher density groups fall under lower values than the maps of service calls and rescue.

Kent Fire Department 2016 Incidents

All Emergency Responses

KFD Fire Stations
■ Existing
■ Kent Fire Department

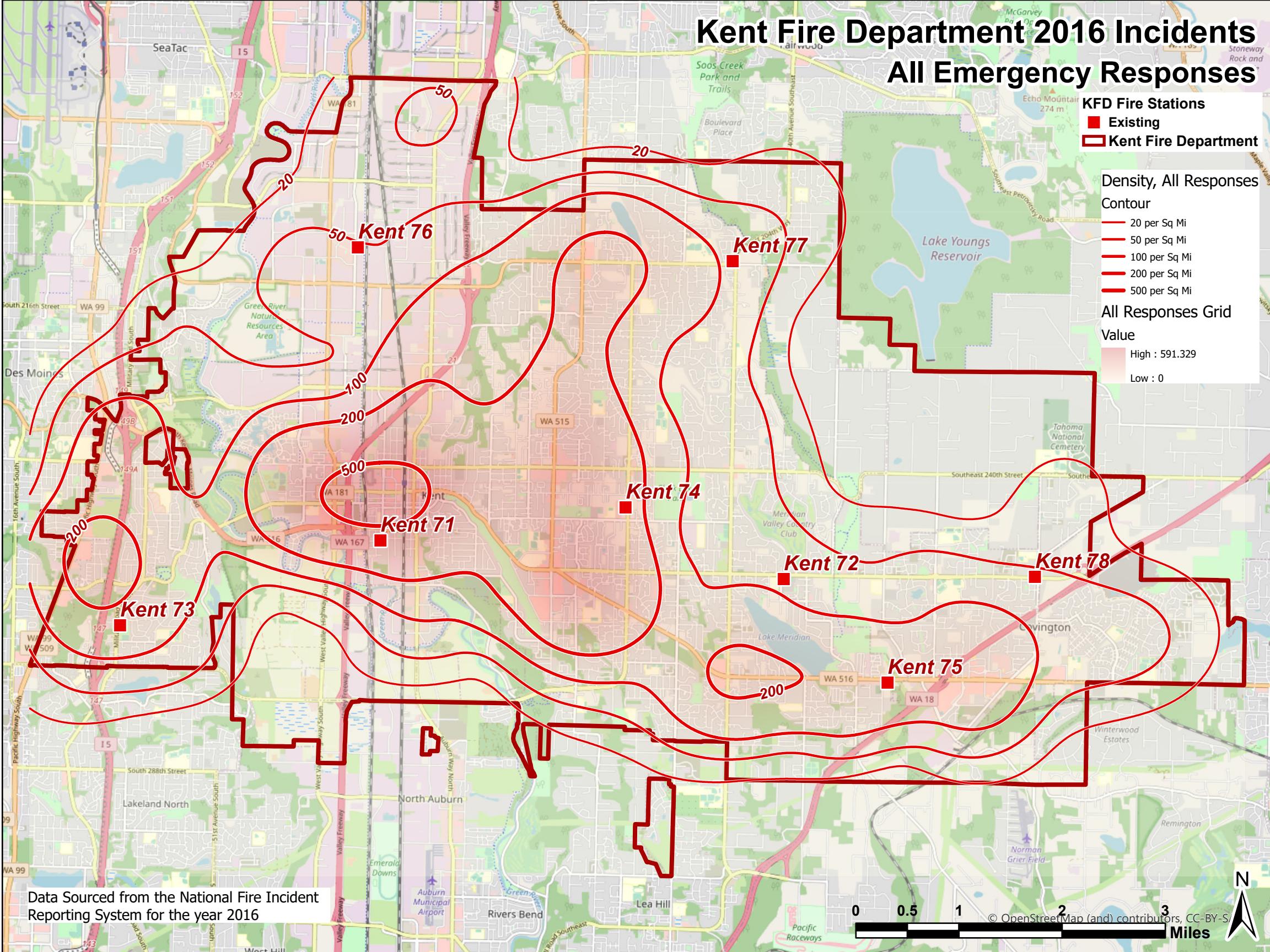
Density, All Responses
Contour

- 20 per Sq Mi
- 50 per Sq Mi
- 100 per Sq Mi
- 200 per Sq Mi
- 500 per Sq Mi

All Responses Grid

Value

High : 591.329
Low : 0



Data Sourced from the National Fire Incident Reporting System for the year 2016

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Miles

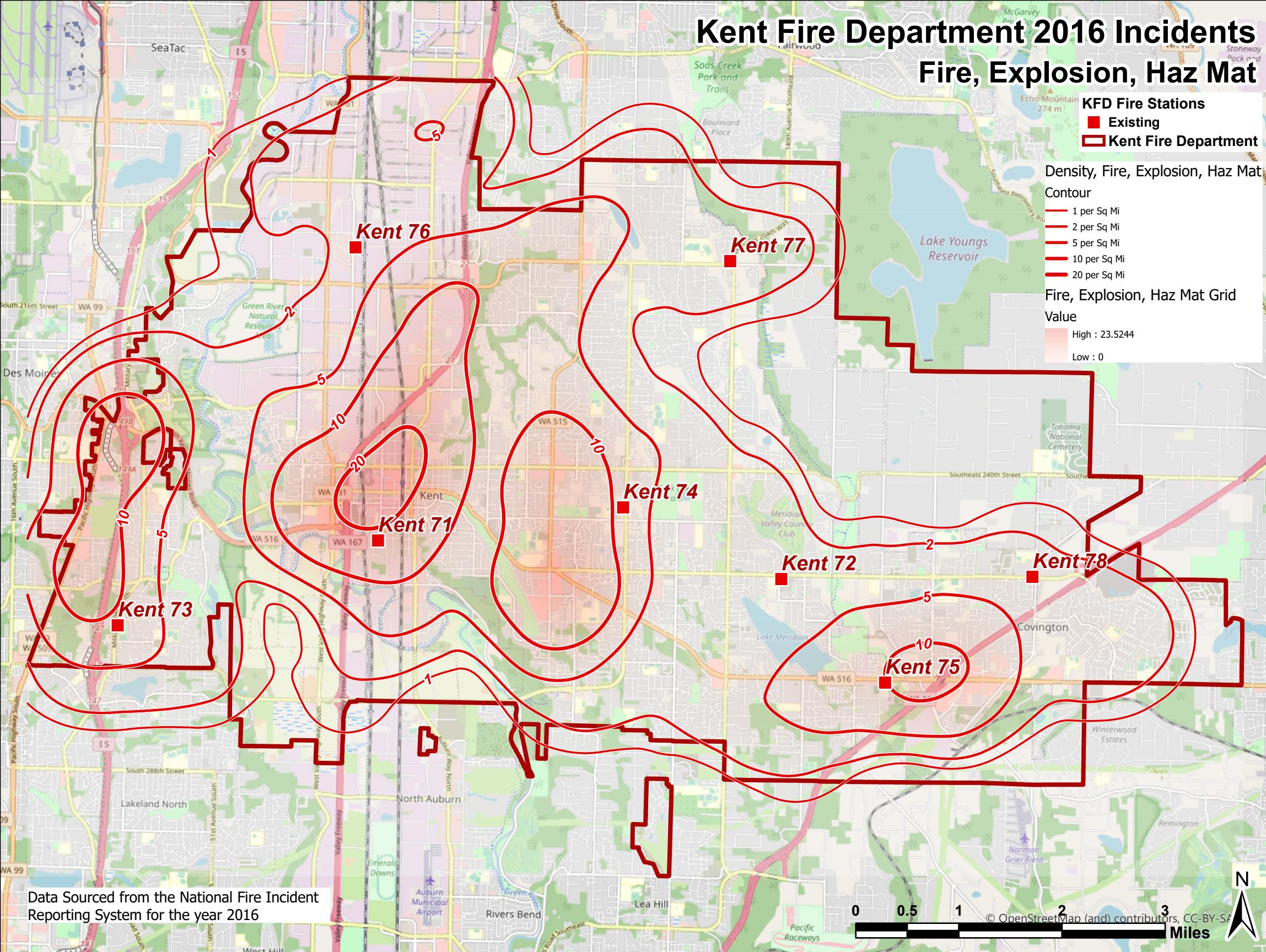
Kent Fire Department 2016 Incidents

Fire, Explosion, Haz Mat

KFD Fire Stations
■ Existing
■ Kent Fire Department

Density, Fire, Explosion, Haz Mat Contour
— 1 per Sq Mi
— 2 per Sq Mi
— 5 per Sq Mi
— 10 per Sq Mi
— 20 per Sq Mi

Fire, Explosion, Haz Mat Grid
Value
High : 23.5244
Low : 0



Data Sourced from the National Fire Incident Reporting System for the year 2016

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Kent Fire Department 2016 Incidents

Structure Fires

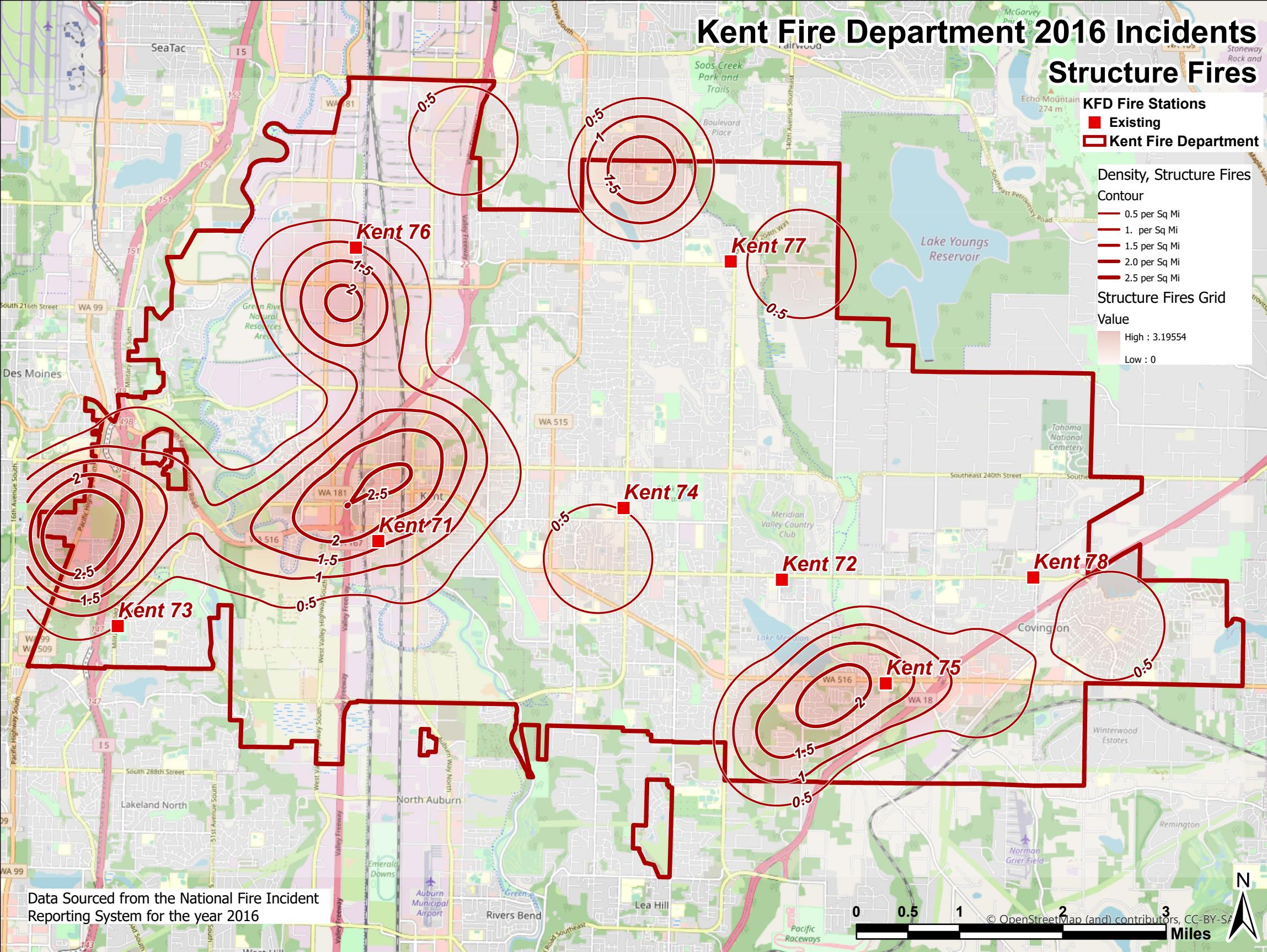
KFD Fire Stations
■ Existing
■ Kent Fire Department

Density, Structure Fires
Contour

- 0.5 per Sq Mi
- 1. per Sq Mi
- 1.5 per Sq Mi
- 2.0 per Sq Mi
- 2.5 per Sq Mi

Structure Fires Grid

Value
High : 3.19554
Low : 0



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Kent Fire Department 2016 Incidents

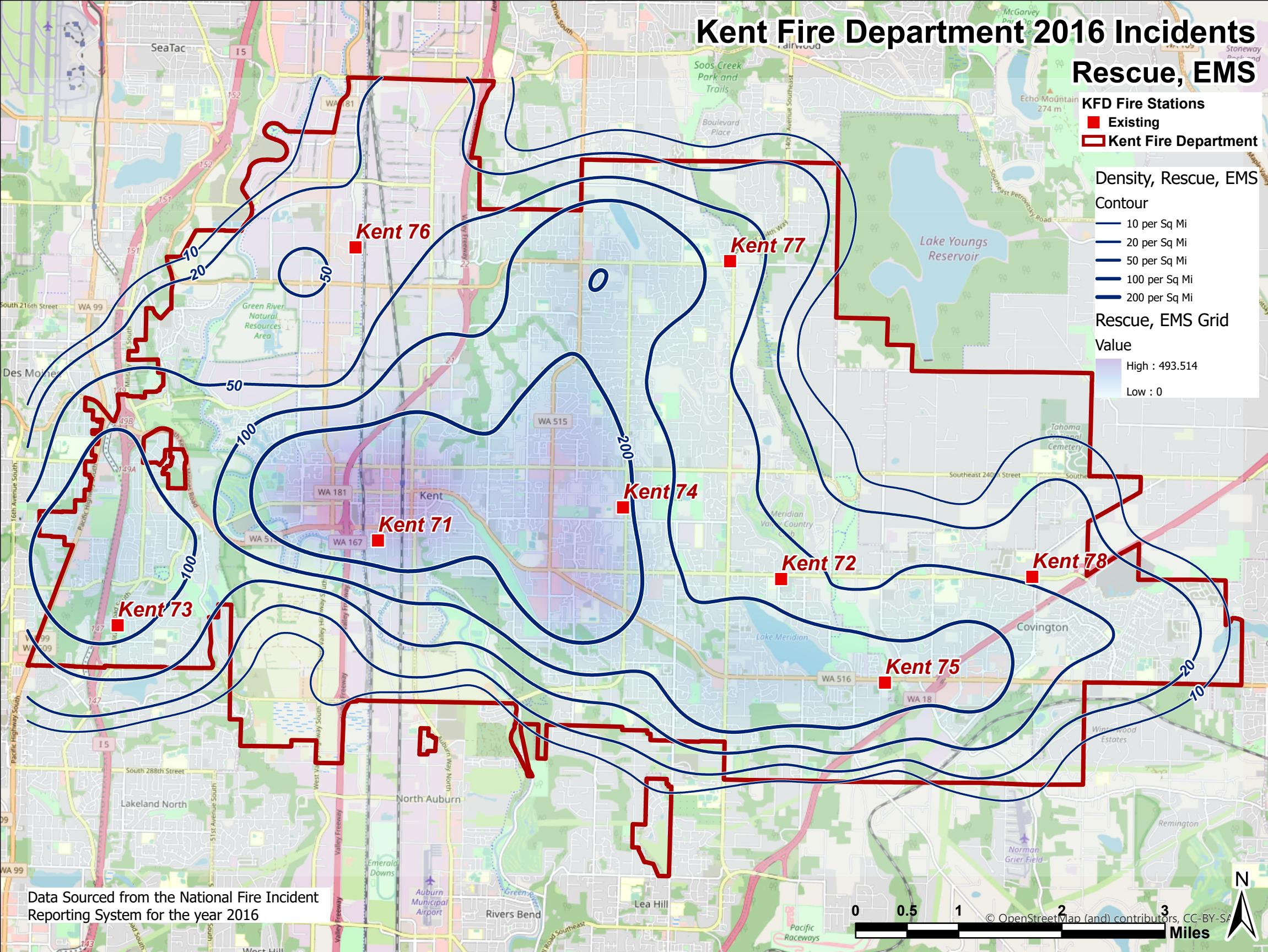
Rescue, EMS

KFD Fire Stations
■ Existing
■ Kent Fire Department

Density, Rescue, EMS Contour
— 10 per Sq Mi
— 20 per Sq Mi
— 50 per Sq Mi
— 100 per Sq Mi
— 200 per Sq Mi

Rescue, EMS Grid

Value
High : 493.514
Low : 0



Data Sourced from the National Fire Incident Reporting System for the year 2016

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Kent Fire Department 2016 Incidents

Service Calls, Other

KFD Fire Stations

- Existing
- Kent Fire Department

Density, Service Calls, Other Contour

- 2 per Sq Mi
- 5 per Sq Mi
- 10 per Sq Mi
- 20 per Sq Mi
- 50 per Sq Mi

Service Calls, Other Grid Value

- High : 80.2108
- Low : 0

