

# PermianMAP

## Methane Emission Rate Scale

Each emission measurement is organized according to a color-coded scale:

|   |                  |
|---|------------------|
|  | >1000 kg/hr      |
|  | 100 – 1000 kg/hr |
|  | 2 – 100 kg/hr    |
|  | <2 kg/hr         |
|  | Below Detection* |

For context, the average U.S. well emits between 1 – 2 kg/hr.

It is important to note that some PermianMAP measurements are taken at a single well -- via the University of Wyoming ground surveys -- while others at multiple-well clusters (via the Scientific Aviation aerial surveys).

Thus, a measurement in the White bin (for a single-well measurement) and in the lower range of the Yellow bin (for a multi-well measurement) is within the normal, expected range. By contrast, if a measured area with 10 wells falls in the red bin, the average emission rate per well is roughly 100 times that of an average well.

\*Below Detection: Because the detection limit varies depending on the method used to collect the data, the gray “Below Detection” bin does not necessarily mean low emissions. For Scientific Aviation’s aerial measurements, preliminary data indicate that the detection limit may be as high as 40 kg/hr in the complex Permian environment. Therefore, multi-well areas labeled “below detection” could have relatively high emissions. On the other hand, because University of Wyoming’s ground survey measurements have a much lower detection limit, near 0.036 kg/hr, single-well measurements categorized as “below detection” most likely have low emissions.

[See full methodology for more details.](#)