

Figure 4:

We use figure 2 to describe the relationship between the fire size and the number of wildfires. According to this plot, we can see that there are about 80000 fires' sizes are between 0 and 99.9 acres, the proportion of these fire sizes is about 97.2 percent of the total. Among these fire sizes, there are more fire sizes are in the range of 0.26-9.9 acres, the proportion of this fire size is about 48.4 percent of the total. And the number of 0-0.25 acres fire sizes is three times as much as the number of 10.0-99.9 acres fire sizes, the number of fire size between 0-0.25 is about 30000. There are nearly 10000 wildfires' fire size is between 10.0-99.9. About the number of wildfires in fire size of great than 100 acres, the greater the fire size of wildfires are, the fewer the number of wildfires. We can clearly see that there are only hundreds or even dozens of wildfires occurred which size are greater than 100 acres.

We can conclude that the number of wildfires is related to the fire size. The figure of fire size and number of wildfires is like a parabola with one peak. In the beginning, the number of wildfires become greater because of the increasing fire size, but then the number of wildfires become less.

Figure 6:

NWCG_GENERAL_CAUSE is a variable that describe the reason why a fire occurred. We use Figure 4 to describe the relationship between the event or circumstance that started a fire and the number of wildfires. According to this plot, we can see that this is a decreasing bar chart. Except the situation that missing data, not specified and undetermined, we find that debris and open burning is the most common cause of starting a fire, with more than 500000 incidents a year. Then the natural and Arson/incendiarism are the 3rd and 4th reasons that lead the wildfires occurred, both of them are more than 300000 times every year. And the 5th, which is also the last reason that result in a wildfire and more than 100,000 times a year is the equipment and vehicle use. The number of rest of what caused the fire all do not more than 100000 times a year, such as recreation and ceremony, misuse of fire by a mirror, smoking, etc.

Figure 7:

This plot shows the relationship between the cause of the wildfires and the mean size of the wildfires. The biggest mean size of wildfires is caused by natural, on average, over than 300 acres have been affected by the wildfires every times. The firearms and explosives also lead to the large mean fire size, it is about 270 acres every times. The rest of the factors leading to the wildfires, in addition to power generation/transmission/distribution the average of the sire size is a little higher than 100 acres, others are all 50 acres or less.