

**Seacliff Neighborhood
Characteristics
and
Fire Prevention Week Activities**

National Fire Protection Association says more than **one in six** home fires start from **heating equipment**, which is the **second most common** cause of a fire behind cooking.

Old furnace could have higher chance of causing fire.

Six Type of Neighborhoods in Seacliff

- 1. New houses with newly installed furnace**
- 2. Less dense and far from retail center**
- 3. Suspiciously cheap houses**
- 4. Installer of new furnace**
- 5. Less dense but close to retail center**
- 6. Old and quite**

Three neighborhood segmentations and their proportion

Combining PCA and K-Means, we could divide neighborhood into three segmentations:

Neighborhood Spaced Old: Low population density living in older houses and have old furnaces, far from retail center. **8.1%**

Neighborhood New Comer: Medium population density living in newer houses and have new furnaces. **35.1%**

Neighborhood Dense Popularity: High population density living in moderate age houses with not so many new furnaces, close to retail center. **57%**

Key Findings and Potential Interpretations

1. According to PCA analysis, 45% of population living in a newer home with newer furnaces, 30% lives in a less dense area that is far from retailer center, 5% are new installer for furnace, 3% lives in a less dense but pretty close to retailers.
2. New Comer has more new houses than other segmentations
3. Spaced Old is far from retail center compare with other two
4. Newer house tend to have new furnace installed
5. Older neighbor tend to have less citations.

Recommendations For Activities

Spaced Old

- Give away smoke detector: Older furnace will have higher chance to catch on fire, a smoke detector could send early alarms
- New furnace install promotion: Could collaborate with local heating company to increase new furnaces' installation percentage

New Comer

- Door to door visit: A relatively dense neighborhood could save some walking distance for firefighters
- Distribute flyers with fire prevention knowledge: Not so eco-friendly, but raise the awareness
- Radio and billboard commercial: With closer distance to the retail center, this neighbor has higher chance seeing those commercials compare with Spaced Old

Recommendations For Activities (cont'd)

Dense Popularity

- Give away smoke detector: Older furnace will have higher chance to catch on fire, a smoke detector could send early alarms
- New furnace install promotion: Could collaborate with local heating company to increase new furnaces' installation percentage
- Door to door visit: A relatively dense neighborhood could save some walking distance for firefighters
- Retail center commercial: With the closet distance to the retail center, this neighbor has highest chance seeing those commercials compare with other two