

# **Assessing King County Housing Market**

## **for Amy Williams**

**Patrick Kuntze, 2025-07-11**

# About Myself - Patrick Kuntze

- Studied Physics, PhD in Meteorology
- New Data Sientist at neuefische
- First EDA Project

# **Client - Amy Williams**

## **Overview**

- Experienced “business woman” who wants to sell high value assets in the inner city of Seattle
- “Social anxiety, persecutory delusion”: likes to keep low profile, moves frequently, especially avoids confrontation with security forces

# **Client - Amy Williams**

## **Research Questions and Hypotheses**

- **A - Selling high value assets in the inner city:**
  - When is the best time to sell the assets? What prize can be expected?
    - H1: House prices differ from month to month.
    - H2: There is a general trend of increasing house prices in the city centre.

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  - When is the best time to sell the assets? What prize can be expected?
    - H1: House prices differ from month to month.
    - H2: There is a general trend of increasing house prices in the city centre.
- **B - Residences in Low Profile Neighborhoods:**
  - Where best to look for average houses in the outskirt regions of Seattle?
    - H3: There is a sufficient sub set of suitable houses within the data set after considering location, accessibility and public surveillance.

# **A - Selling high value assets in the inner city**

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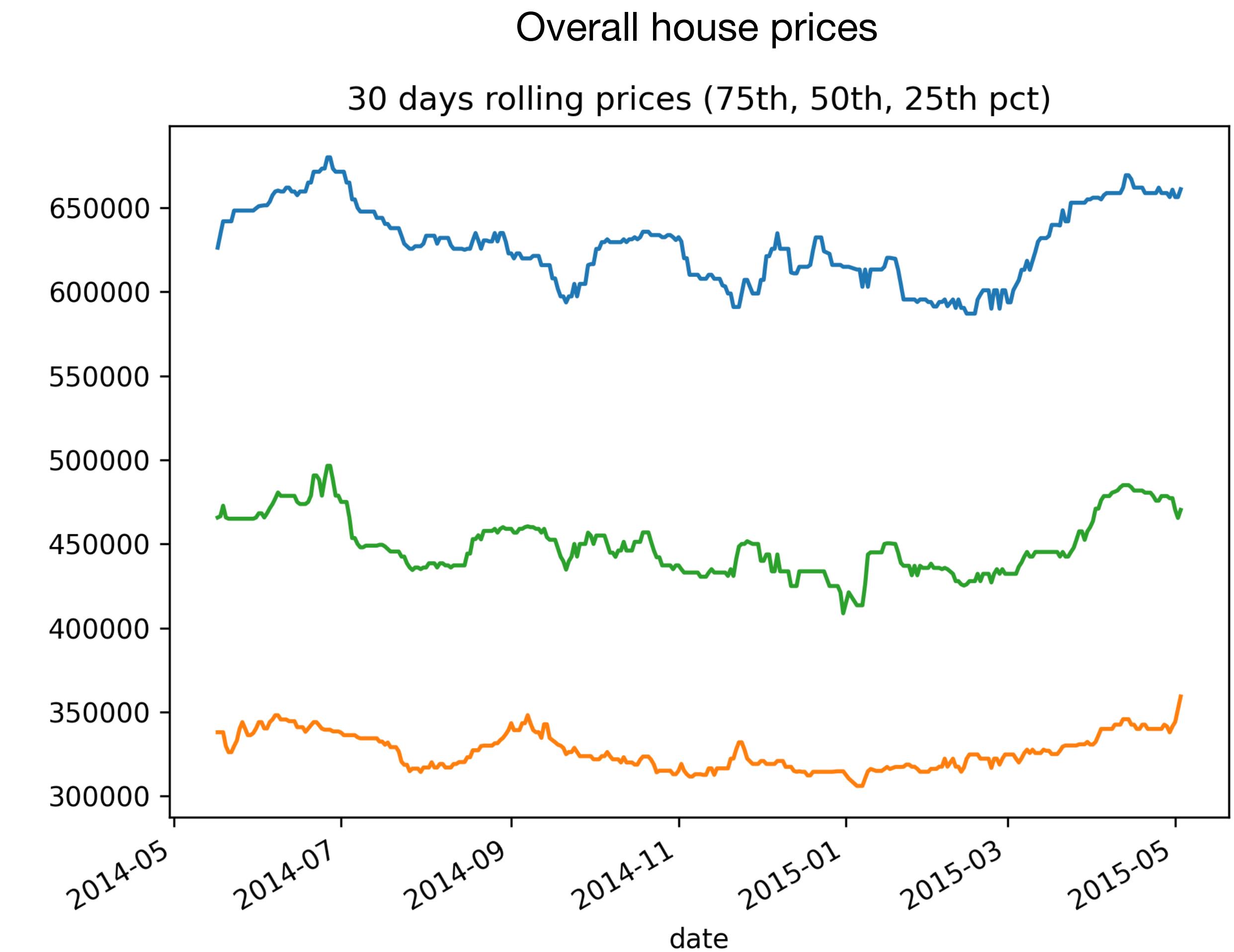
## Data

- King County housing data set including all sales (~20000 sales) from the last 12+ month
  - Most valuable data from the set: zip codes, house prices, time of selling
- Missing data does not effect requirements for EDA in this case

# A - Selling high value assets in the inner city

## Analysis

- From end of November to Februar prices are generally lowest and highest from April to June



# A - Selling high value assets in the inner city

## Analysis

H1: House prices differ from month to month.

**Partly PROOVED!**

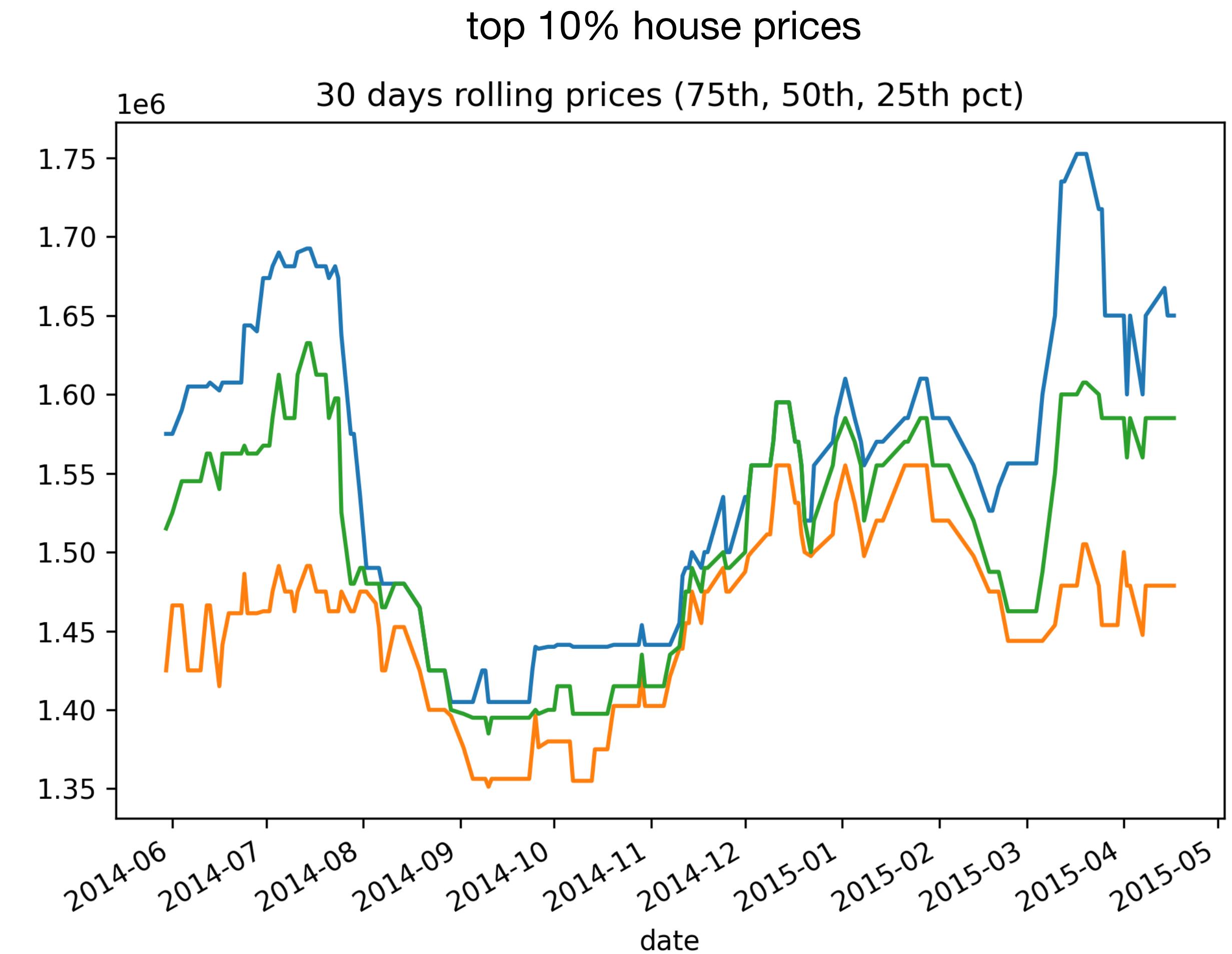
But data set is too small to yield a significant trend



# A - Selling high value assets in the inner city

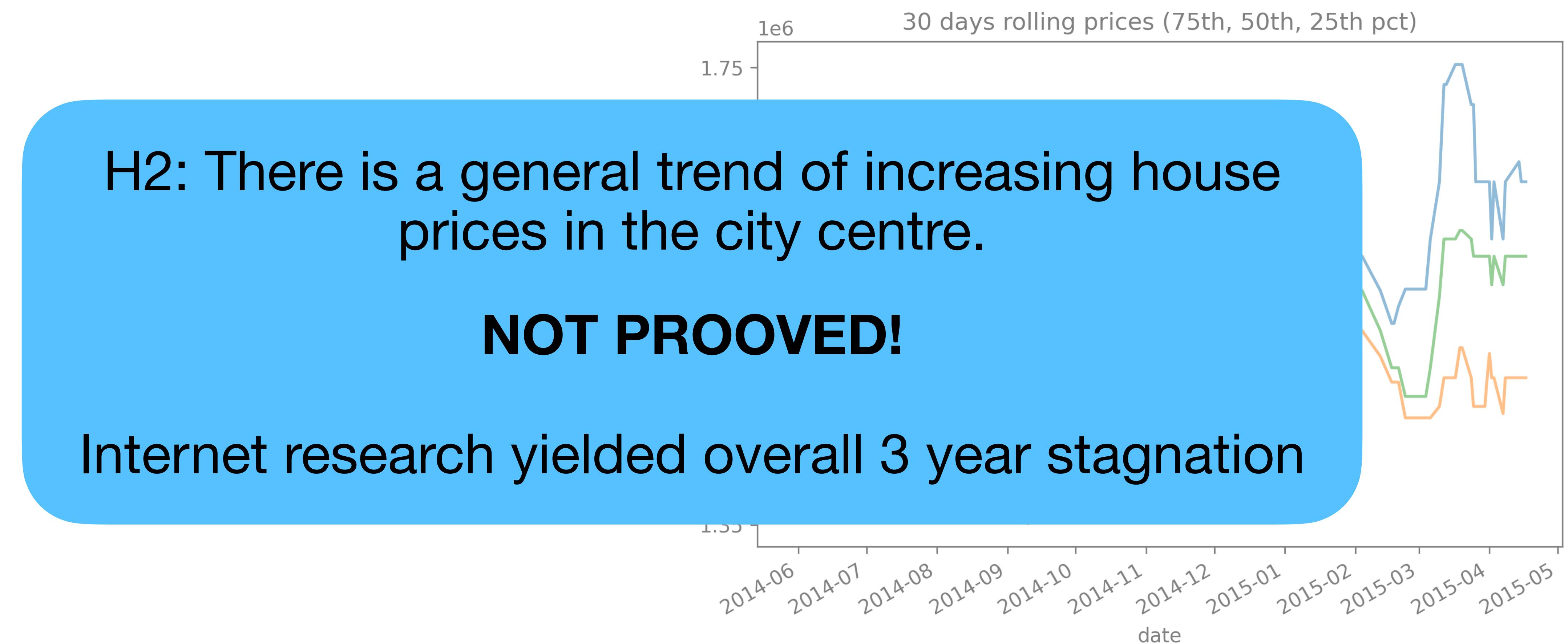
## Analysis

- no clear trend over time for top value, inner city assets
- expected price: ~ 1.5 mio. \$



# A - Selling high value assets in the inner city

## Analysis



# **B - Residences in Low Profile Neighborhoods**

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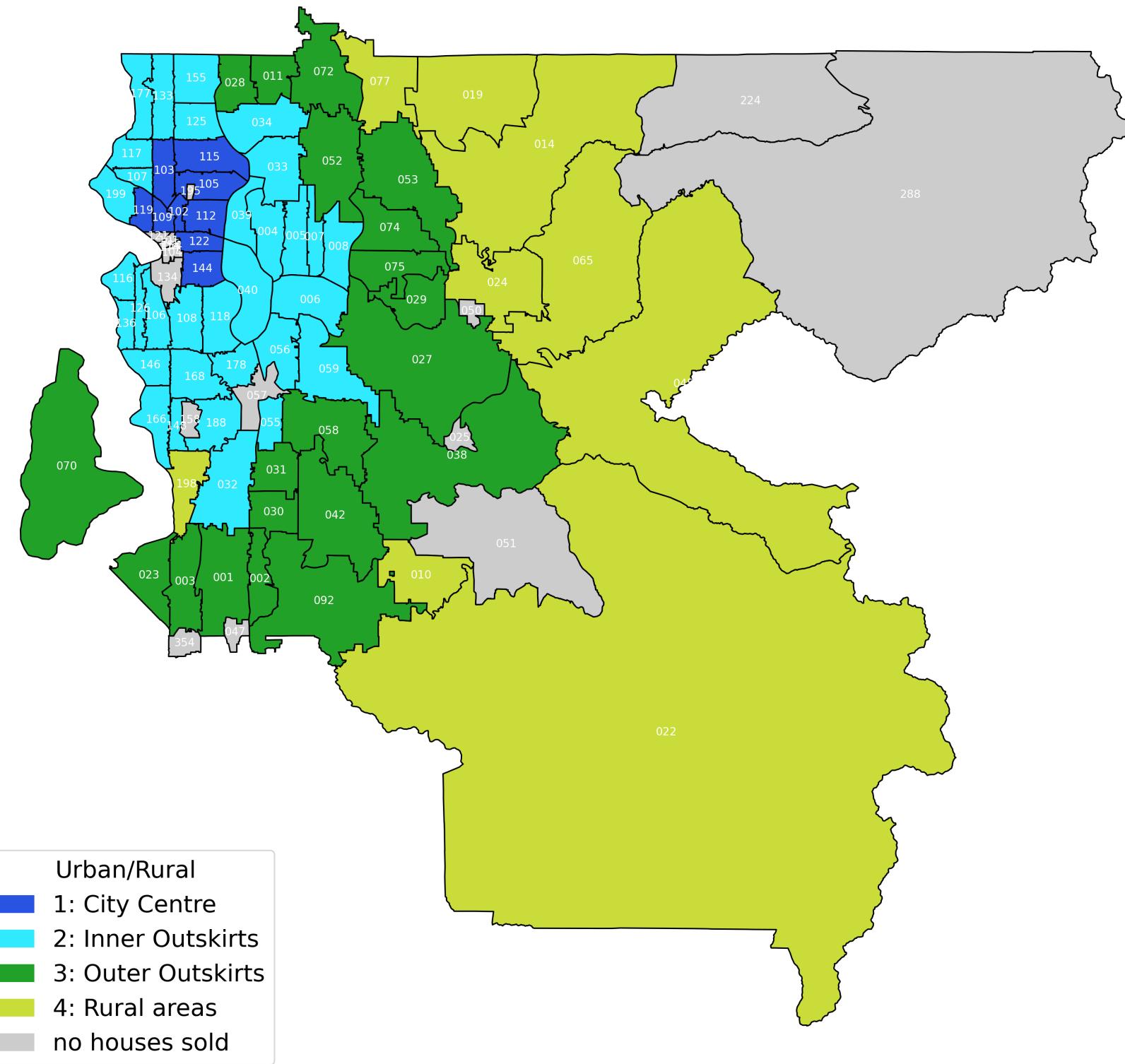
## Data

- King County housing data set including all sales (~20000 sales) from the last 12+ month
  - Most valuable data from the set: zip codes, living area, lot area, no. floors, no. rooms, prices
- Additional categorial data on a King county neighborhood level (zip codes)
  - geographical areas (urban - rural)
  - accessibility (Highways, Airports)
  - public surveillance

# B - Residences in Low Profile Neighborhoods

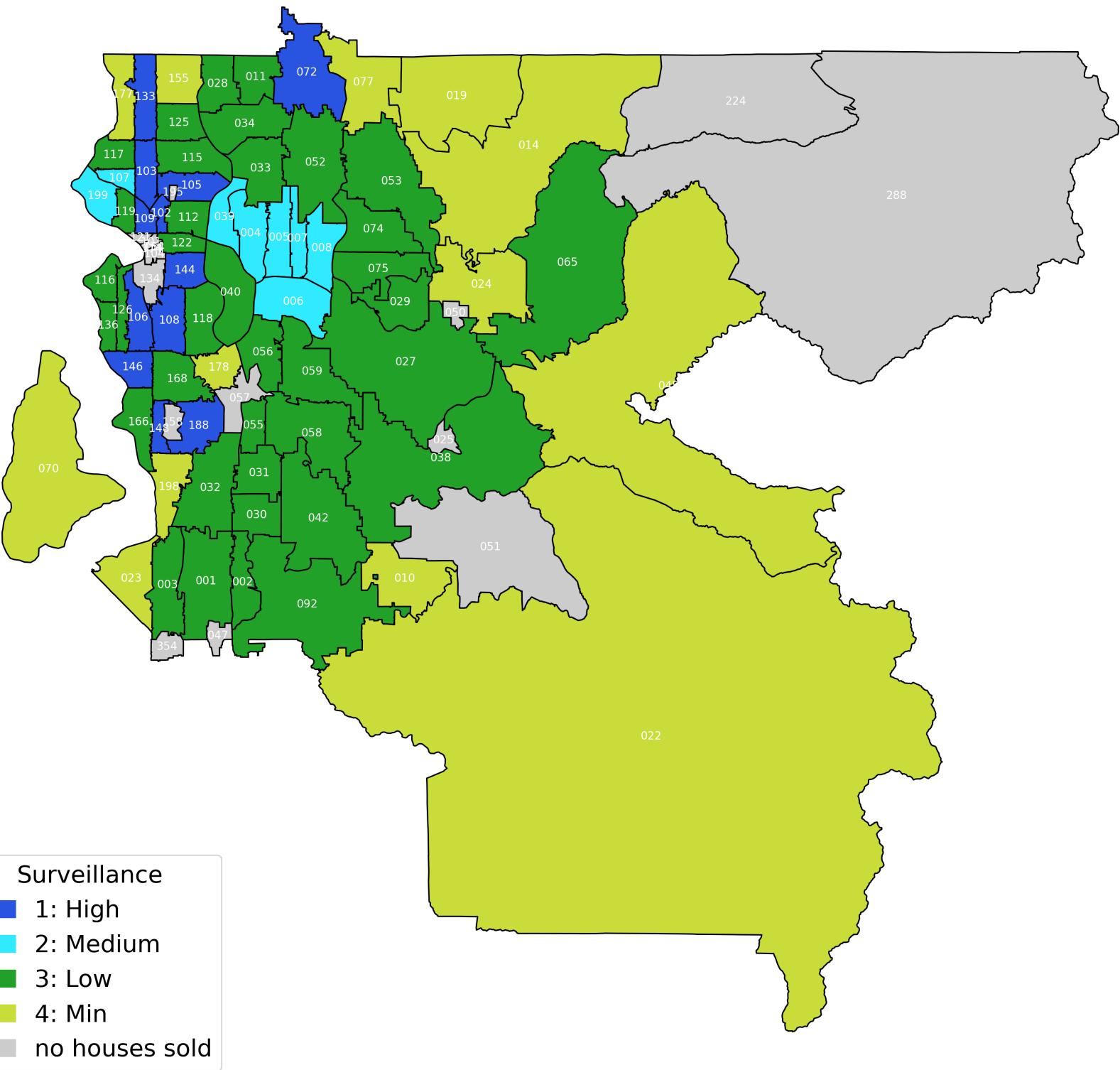
## Data

Geographical area by ZIP Code in King County, WA



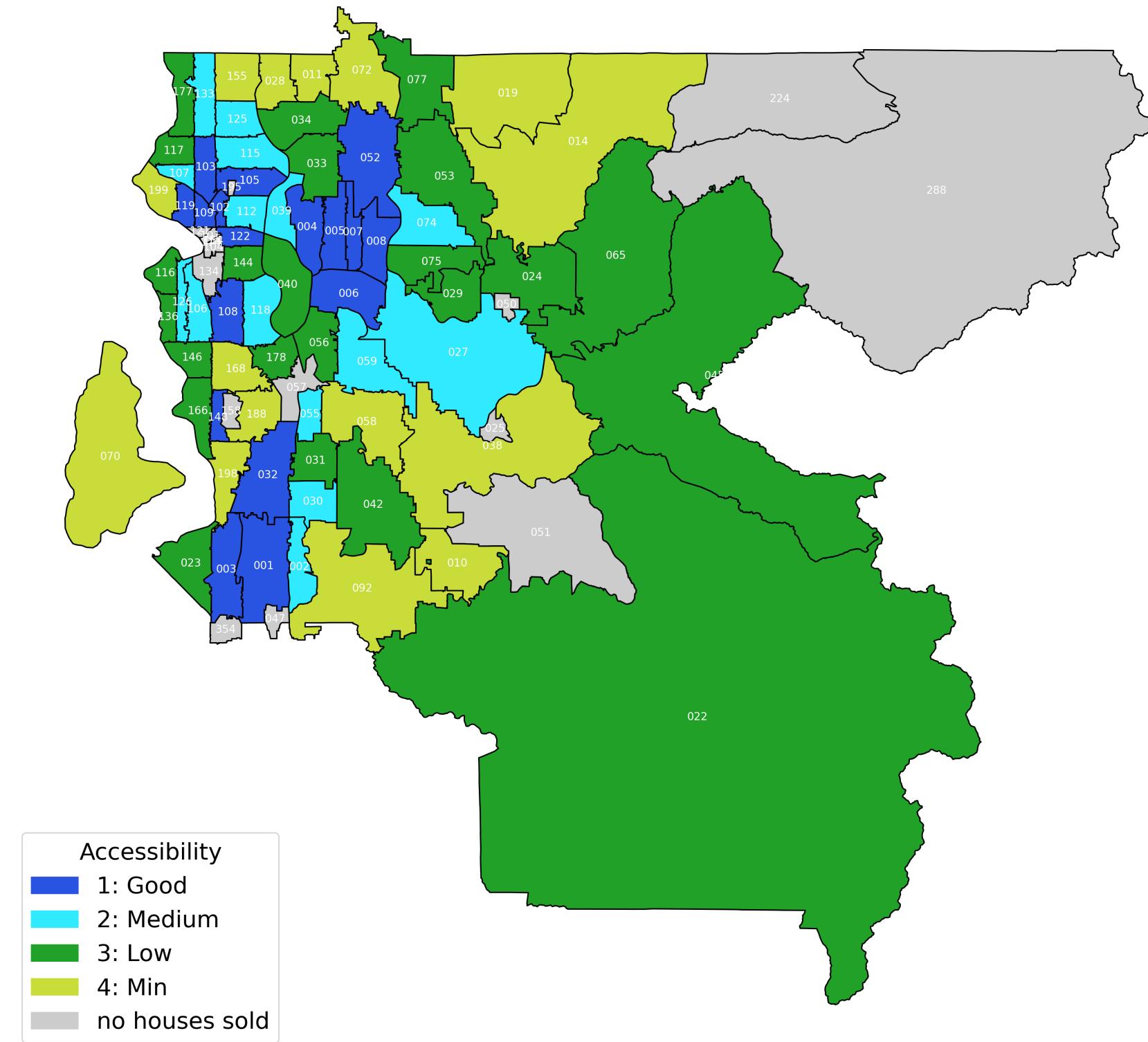
Suitable levels (Outskirts): 2 & 3

Public surveillance level by ZIP Code in King County, WA



Suitable surveillance levels: 3 & 4

Accessibility by ZIP Code in King County, WA



Suitable accessibility levels: 1 & 2

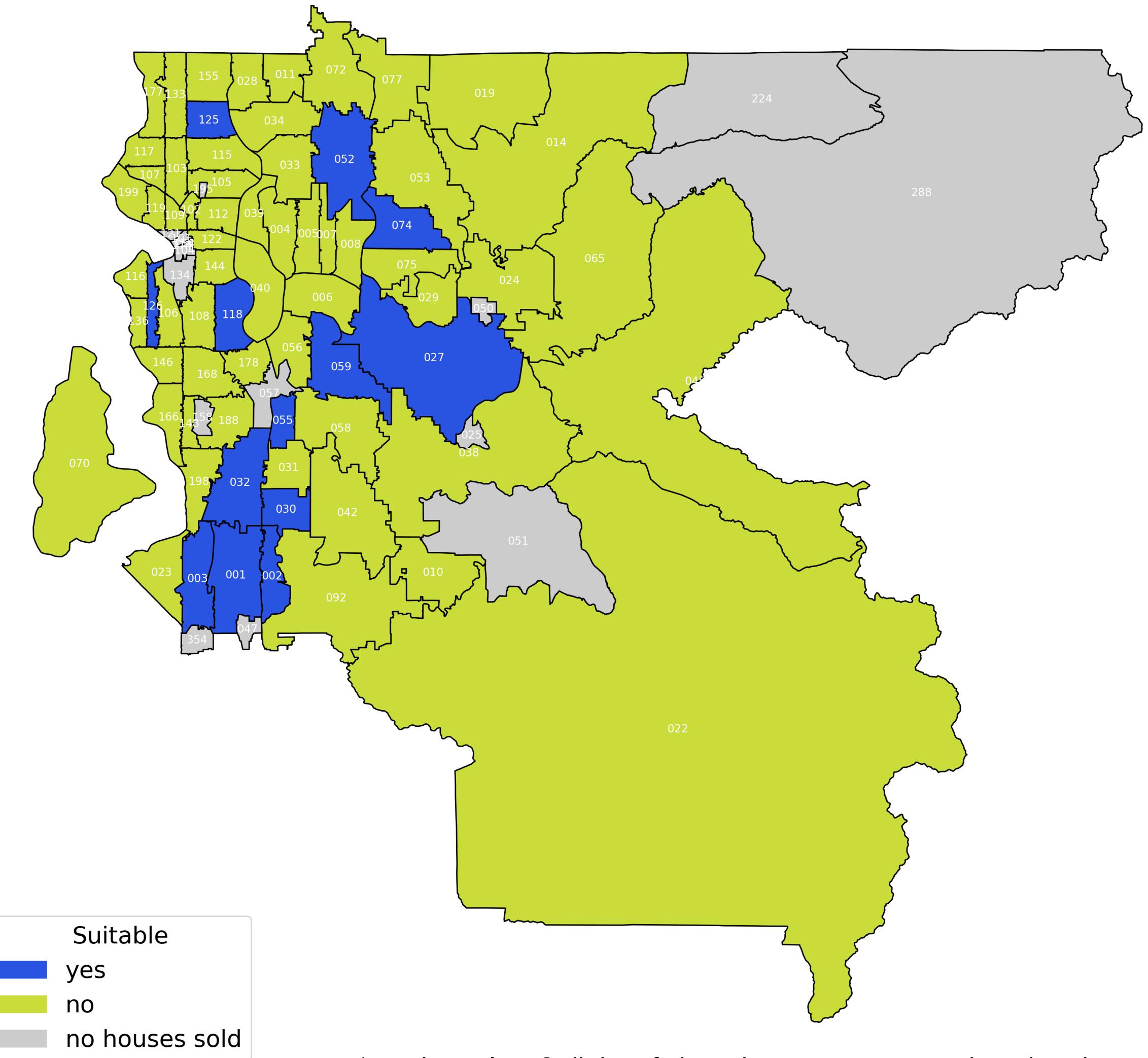
\*numbers: last 3 digits of zipcodes, grey areas: no housing data available

# B - Residences in Low Profile Neighborhoods

## Data

Suitable neighborhoods by ZIP Code in King County, WA

- Combining all Datasets to find suitable neighborhoods



# B - Residences in Low Profile Neighborhoods

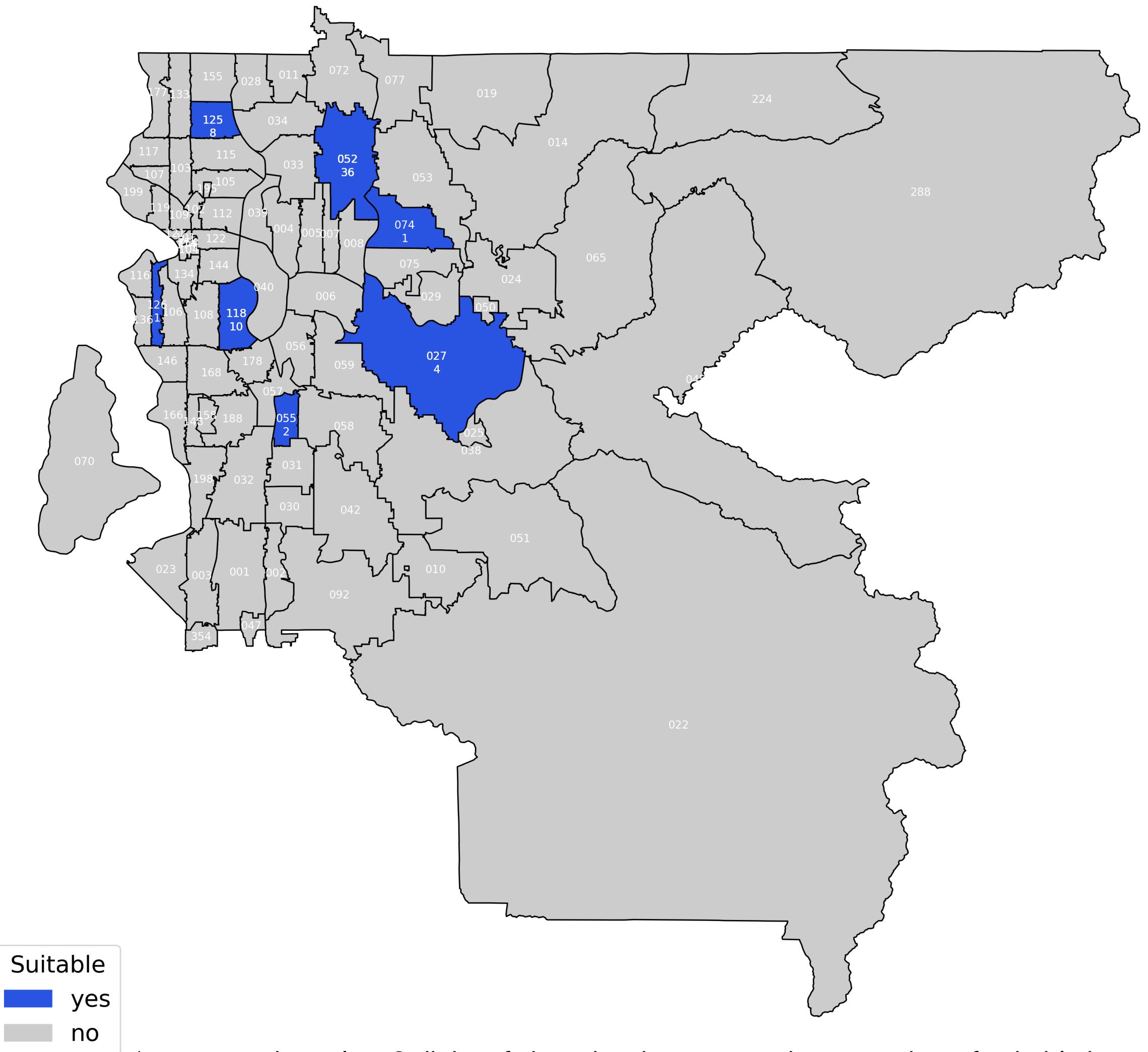
## Analysis

- Looking for low profile houses in selected neighborhoods

Characteristics of average houses

feature	long name	range
sqft_above	square footage of house apart from basement	1000 - 2000
sqft_lot	footage of the lot	5000 - 10000
sqft_lot15	The square footage of the land lots of the nearest 15 neighbors	5000 - 10000
sqft_living	footage of the home	> 1000
floors	floors (levels) in house	< 3
bathrooms	# of bathrooms	> 1
bedrooms	# of bedrooms	> 1
condition	How good the condition is (Overall)	> 2
grade	overall grade given to the housing unit based on King County grading system	> 6
price	price sold for	400000 - 800000

Suitable neighborhoods by ZIP Code in King County, WA



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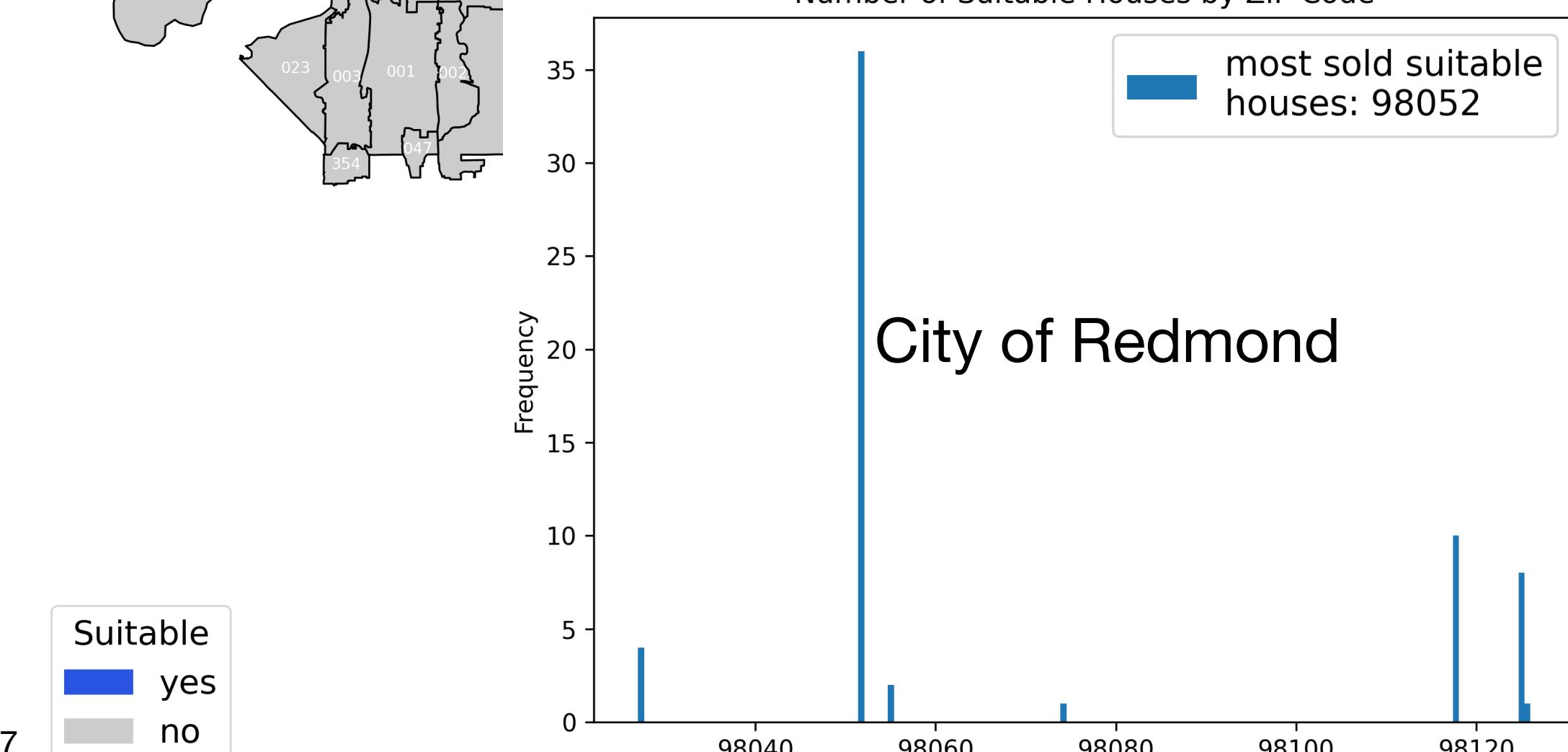
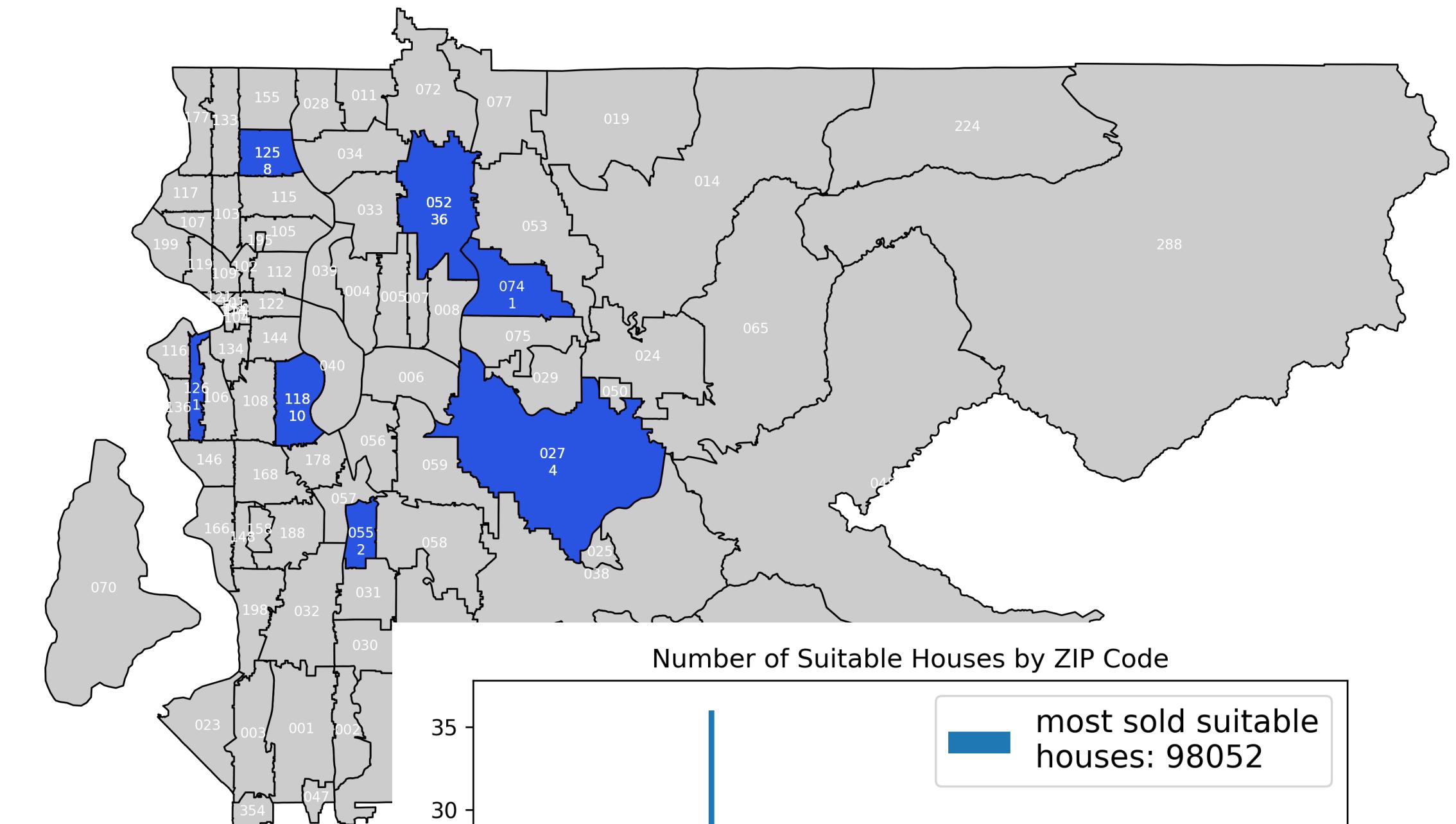
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Suitable neighborhoods by ZIP Code in King County, WA

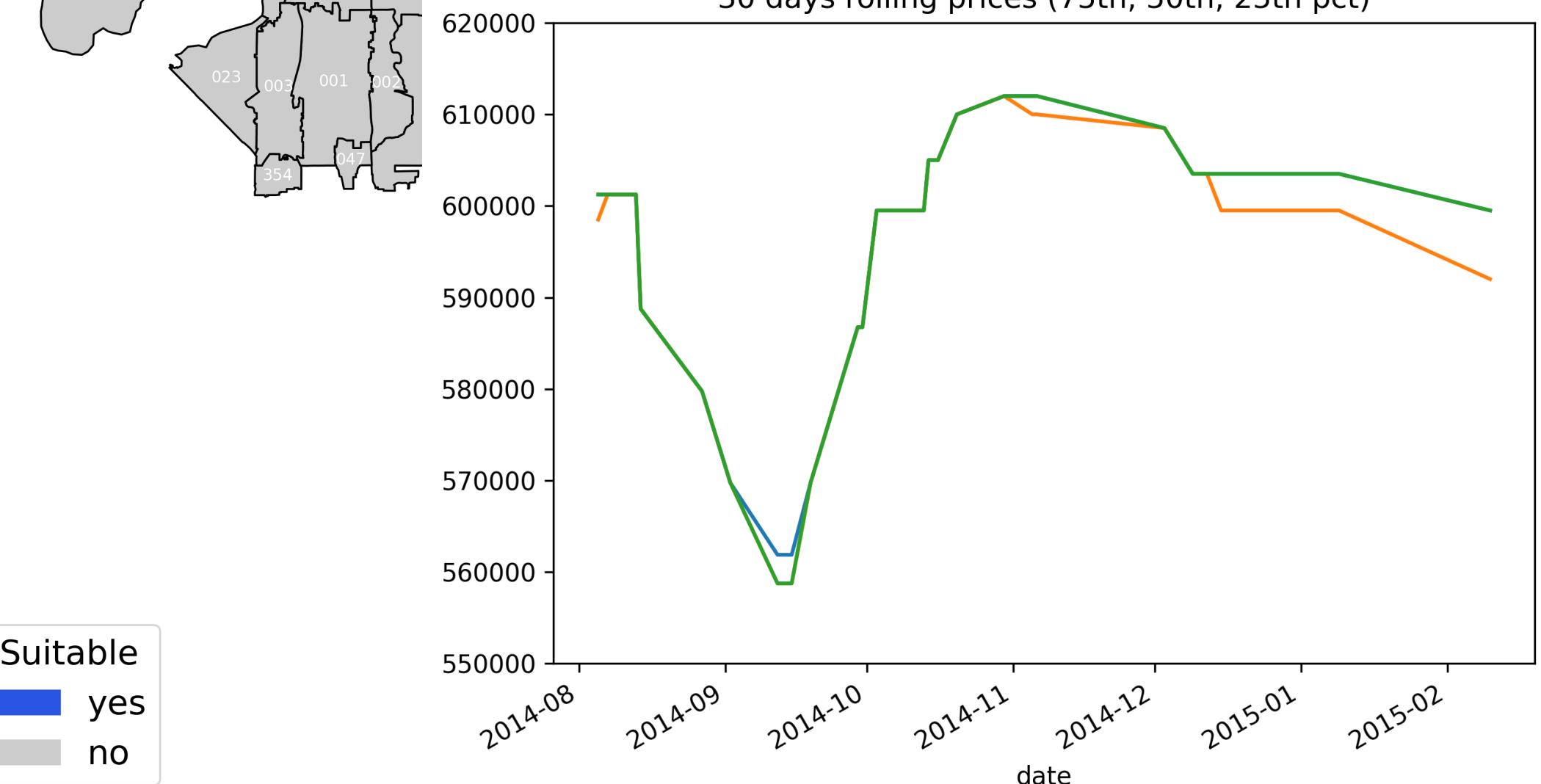
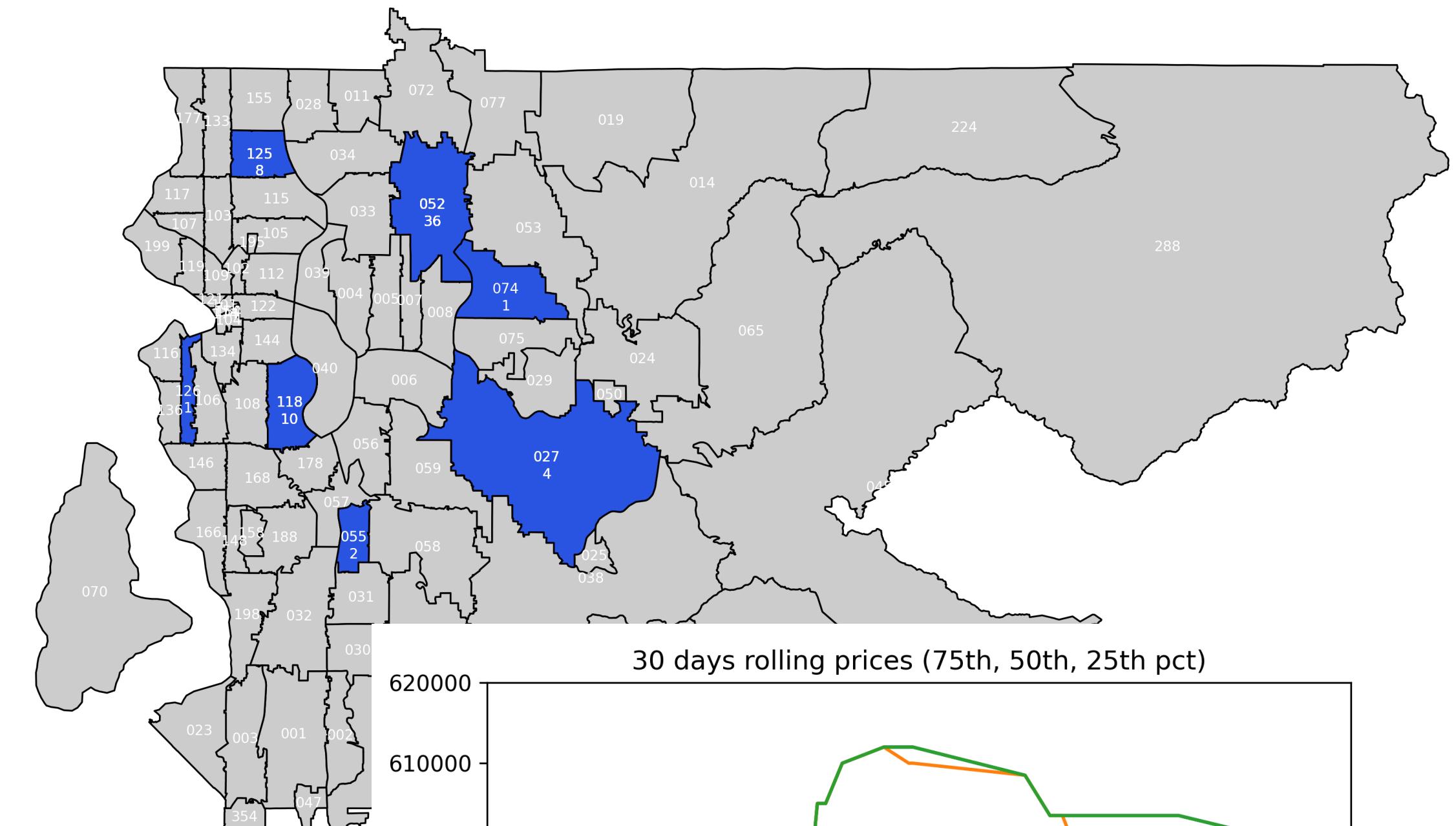


# B - Residences in Low Profile Neighborhoods

## Analysis

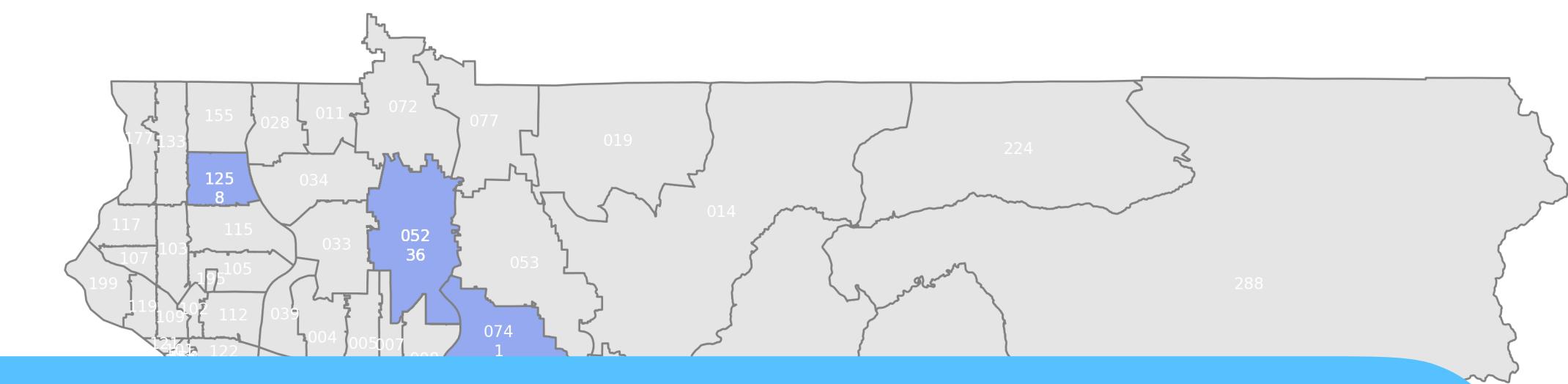
- Recommended neighborhoods:  
Issaquah (98027)  
Redmond (98052, most volatile)  
Renton (98055)  
Sammamish (98074)
- Neighborhoods located on Seattle isthmus not recommended:  
98125, 98126, 98118
- Expected price: ~ 600,000 \$

Suitable neighborhoods by ZIP Code in King County, WA



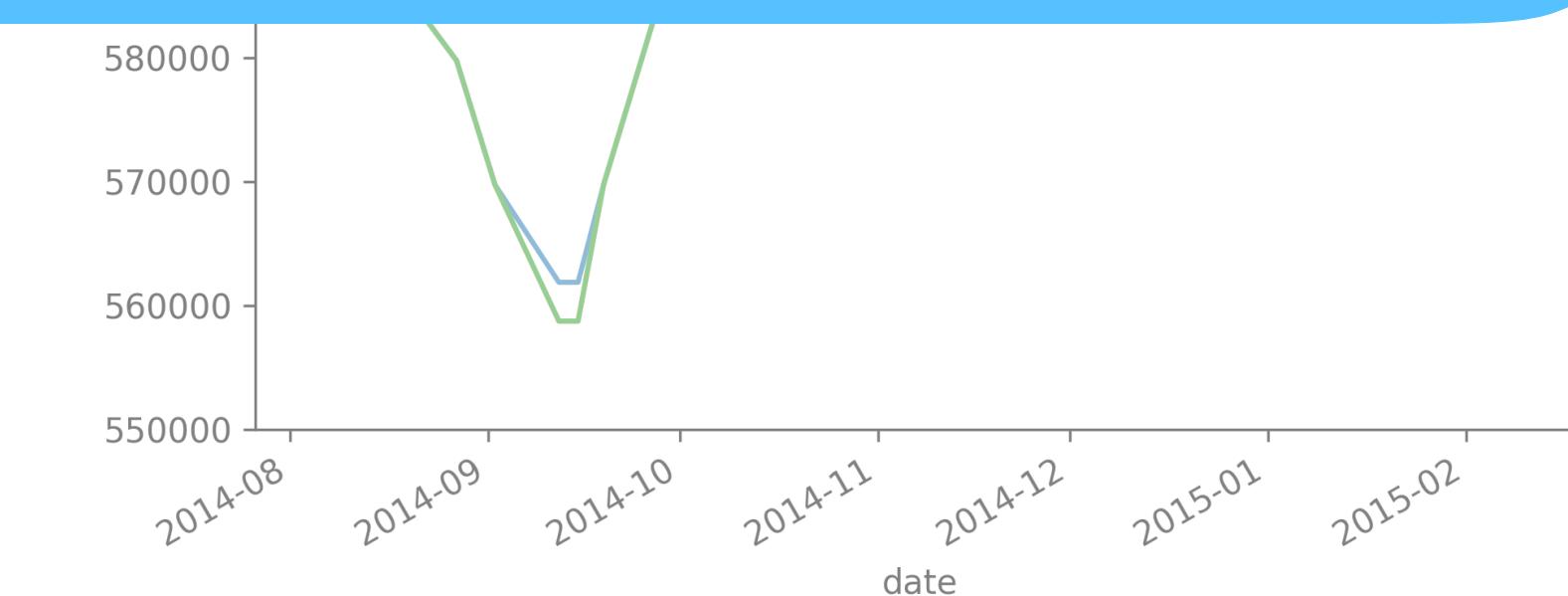
# B - Residences in Low Profile Neighborhoods

# Suitable neighborhoods by ZIP Code in King County, WA



H3: There is a sufficient set of suitable houses after considering location, accessibility and public surveillance.

# PROOVED!



# Summary

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- **B - Residences in Low Profile Neighborhoods:**
  - Suitable low-profile houses in the outskirts of Seattle with high accessibility and low public surveillance can mainly be found in sub-urban cities like Sammamish, Redmond, Renton, and Isshequah for expected prices around 600,000 \$
  - Redmond is especially interesting due to its high volatile housing market