Housing Opportunity Mapping Methodology

This analysis was designed to show where there is space for development of new housing stock. This analysis does not consider cost, desirability, or availability of the land in the private market.

Datasets Used:

- GRANIT Public and Conservation Land 2021
- FEMA Flood Hazard Areas
- 2015 Land Use
- NHDOT 2022 Roads
- RPC Political Boundary Layer
- NRCS - Steep Slopes (greater than 15%)
- NHDES – Water and Sewer Lines
- USGS - Lakes and Rivers

Methodology:

1. To start, the total acreage of the Rockingham Planning Commission's region was calculated using the *RPC Political Boundary* layer. This total acreage was also broken down by municipality.
2. Wetlands, waterbodies, and steep slopes were roved from the RPC's total acreage using the *2015 Land Use* layer, *USGS – Lakes and Rivers* layer, and the *NRCS – Steep Slopes (greater than 15%)* layer.
3. The FEMA floodplain was removed using the *FEMA Flood Hazards Area* layer.
4. Land use extents that contain infrastructure—both consumed and non-consumed—were also removed from the RPC's total acreage using the *2015 Land Use* layer, and the *GRANIT Public and Conservation Land 2021* layer.
    a. Consumed land use: transportation systems, industrial/commercial land use, mixed urban land use, and residential land use.
    b. Non-Consumed land use: agriculture, farmsteads, forests, and open recreational space.

Steps 1-4 allowed for the calculation of *Total Land Mass After Constraints* for the Rockingham Planning Commission region.

5. Using the *NHDOT 2022 Roads* layer, the roads were queried to contain major roads only (state road classification and higher).
6. Buffers of 0.5-miles,1-mile, and 3-miles were created around the Major Roads layer created in step 5.
7. Similarly, buffers of 500-feet and 1000-feet were created around the *NHDES – Water and Sewer Lines* layer.
8. Then using the *Total Land Mass After Constraints* dataset, along with the three road buffers and the two water and sewer line buffer datasets, a weighted score was given to each of the buffer polygons created. This allows the datasets to be combined to see where they co-occur or overlap.
    a. The weights for co-occurrence were as follows:

Weights for Co-occurrence

Dataset	Weight
Landmass after constraints	2
Major Roads within 0.5 miles	3
Major Roads within 1.0 miles	2
Major Roads withing 3.0 miles	1
Within 500' of Water and Sewer Line	2
Withing 1000' of Water and Sewer Line	1

b. The maximum score a polygon could achieve was 7 in the instance that: it is located over landmass after constraints (2 points), is within 0.5-miles of a major road (3 points) and is within 500-feet of a sewer or water line (2 points).

This methodology can be repeated for similar datasets or additional datasets where the weights of co-occurrence can be altered to accommodate.