Contents:
1- Webmap
2- GIS data sources
3- Steps taken
4- Disclaimers
5- Recommended next steps

Link to Web Map files:

https://drive.google.com/file/d/1GayvnP3st0lN-pHPta5dG87X9P1GgEVd/view?usp=sharing

How to access the web map:
1) Download the file labeled *Qgis Vermont housing map.zip*
2) Unzip (do not move files into different folders!)
3) Open the HTML document called *index*

READING THE MAP:

1 - The *title* of the map

2 - *Measure distance tool*

3 - *County search bar*. You can jump to any county in Bennington or Windham by typing in the name. Names are only recognized when you type in ALL CAPS.

4 - *Layers*. This shows what layers you are currently able to view. Clicking on the blue check mark will make the layers invisible. All layers merged refers to the housing (1) vs the no housing (0) parcel chunks throughout the map—>
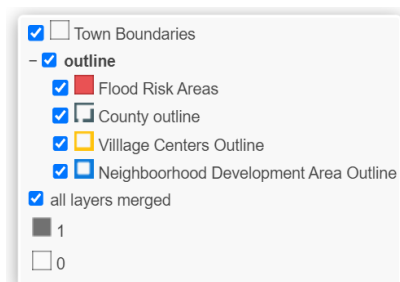
5- *Info popup*. It will open when you hover over a parcel.
Will tell you if the parcel has housing, the owners and mailing address of
owners (if available), and the parcel type: (category)—>
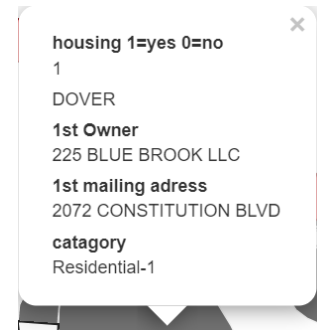
GIS data Sources:

Village center boundaries:
https://geodata.vermont.gov/datasets/accd::vt-designated-village-centers-boundary/about
Designated Neighborhood Development:
https://geodata.vermont.gov/datasets/accd::vt-designated-neighborhood-development-area/about
FEMA flood layer Vermont:
https://geodata.vermont.gov/datasets/VTANR::flood-hazard-areas-only-fema-digitized-data/about
Vermont parcel data:
https://geodata.vermont.gov/datasets/09cf47e1cf82465e99164762a04f3ce6_0/explore?location=42.89
1711%2C-73.227088%2C14.29
Wastewater lines:
https://geodata.vermont.gov/datasets/VTANR::wastewater-infrastructure-linear-features/about
Vermont Town boundaries:
https://geodata.vermont.gov/datasets/3f464b0e1980450e9026430a635bff0a_0/explore?location=43.85
2918%2C-72.459771%2C8.31

Steps:

CLEANING-
1) Trim all data to fit the Bennington and Windham county boundaries
2) Create a 300 ft buffer for the wastewater lines (how far away a building can be from the line and still connect to it)
3) Remove polygons from the FEMA layer that Are not "High-risk areas" specifically FLD_ZONE == X.

MANIPULATING THE DATA-
4) Create a new column in the parcel data that has two options "housing" or "no housing" using the Category (CAT) column in the parcel data. This is to make sure you aren't going to build in areas that already have housing. If CAT == Residential-1 or Residential-2 or Mobile Home/la or Mobile Home/un
5) For the Village Center, Neighborhood Development, and Wastewater line layers, join with the parcel data.
6) With these newly joined layers, categorize them to show the "housing" vs "no housing" parcels.
7) Make layers semi-transparent to see where the layers overlap (overlaps will be darker).
8) Create outlines for each of the Village Center, Neighborhood Development, and Wastewater line layers to differentiate between them.

WEB-MAP-

9) Using the QGIS2Web create a leaflet web map

Disclaimers:
- FEMA data is not recent enough to accurately show where danger areas are. FEMA is hoping to update this data soon, perhaps even in 2025.
- The parcel data CAT column is for real estate use which might mean there are issues with the housing categorization.
- Village centers and designated neighborhood development areas are set to be folded into a new Vermont tier system that will be applied automatically across the state in the next five years or so.
- Wastewater instead of drinking water was chosen because drinking water maps are not readily available across the state, and wastewater infrastructure is harder to join than drinking water infrastructure.

Recommended next steps:
- Troubleshoot problems with the search bar
- Update the map with any new information that is due soon (FEMA, Tier system)
- Host web map (may make the map work better)
- Make sure the "housing" binary is correct (there may be more classifications in CAT that are "housing")