Using GIS Site Suitability Analysis to Identify Vacant Lots for Equitable and Affordable Housing Development in St. Johns

Problem Statement
What vacant properties should the St. Johns Center for Opportunity prioritize for affordable housing development? Given the existing racial and socioeconomic disparities in the neighborhood, an equitable lens will be applied to prioritized sites that will provide access to essential neighborhood services like bus stops, grocery stores, schools, and more.

Project Summary
In October 2019, the Portland and Clackamas County Housing Authority conducted a housing escape of emergency that has been extended through October 2021. The Portland region consists of six counties, residents born across the country and one born in 1984 and 1985. In 2015 across the 11 zip codes and city limit areas contained by approximately $50 per week. In 2015 the average home price in Portland under $100,000, an increase of nearly 10%. In 1984, a result of the development and economic values. Portland has experienced large scale housing loss due to lower income residents at a step rate in the number of vacant and foreclosed properties.

In the north Portland neighborhood of St. Johns, the St Johns Center for Opportunity has launched an affordable housing initiative in partnership with neighborhood residents and Portland Housing Bureau. The neighborhood currently experiences severe housing related social issues, where only 10% of Portland’s median income households are able to afford a rental unit of any size (Studio and 1, 2, 3 Bedroom).

When combined with other approaches, the creation of more affordable housing units can help stabilize housing costs in area. This GIS analysis identifies and prioritizes suitable sites for the construction of new housing.

Methodology
A site suitability model was used to identify vacant lots within an equity zone that should be prioritized for affordable housing development in St. Johns. Seven criteria were used in the weighted analysis model including environmental and socio-economic criteria and proximity to amenities. The City of Portland’s Buildable Lands inventory was used to identify low value lands that were vacant and held residential development potential.

Appropriate criteria were selected and assigned to emerging urban planning principles. Portland is a grid, star, and radial townships with blocks, single and double family homes, and public transportation access. The neighborhood being studied is a typical example of mixed income and socio-economic status.

Within the equity zone, the current stock of vacant land includes the land for development of 15 single family residential and 3 multi-family residential units. The number of suitable lots within this equity zone ranges from 1 to 7 units. Within the equity zone development potential for single family residential development is concentrated along N. Columbia Blvd.

Finding
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Suitable Sites for Affordable Housing

Criteria for site suitability analysis

Raterized Reclassified Input Sources

Legend

Findings

Table 2

Sources:

- Portland City of Portland, Buildable Lands Inventory
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