

DATE: March 18, 2016
TO: Peg Malloy, Portland Housing Center
FROM: Lorelei Juntunen, Mike Wilkerson, and Lizzie Gooding
SUBJECT: PORTLAND HOUSING CENTER HOUSING AFFORDABILITY TOOL

Project Understanding

The Portland Housing Center (PHC) has asked ECONorthwest to assist with the creation of a housing affordability tool to assess and spread awareness of housing affordability issues in the Portland Metro area and celebrate the organization's 25th anniversary. The goal of the project is to allow users to explore housing affordability in order to better understand the Portland Region's housing challenges and how they have changed and will change over time and geography. The product of this project will be an interactive, web-based mapping tool to be linked to the Center's website consisting of three maps: home ownership rates, resident displacement vulnerability, and single-family affordability.

Approach

ECONorthwest will work with PHC's Executive Director, Peg Malloy, as well as other PHC staff to create an interactive mapping tool showing housing affordability within the Portland Region from 2000 to 2020 (where data availability allows) to include three separate pages of the following maps:

- Home ownership rates in 2000 and 2005 to 2014 from the US Census. ECONorthwest will project home ownership forward to 2020.
- An index measuring vulnerability to displacement in 2000 and 2005 to 2014 based on the Portland Gentrification and Displacement Study's methodology and data from the US Census. The index is composed of the following demographic factors: racial/ethnic composition, educational attainment, tenure, and household income. ECONorthwest will project vulnerability from 2016 to 2020.
- Single-family affordability from 2000 to 2015 and projected affordability from 2016 to 2020 measured as the percentage of regional median family income spent on housing (see Exhibit 1). Housing data will come from Metro RLIS and median family income will come from the Department of Housing and Urban Development's estimates for the Portland-Vancouver-Hillsboro OR-WA MSA.

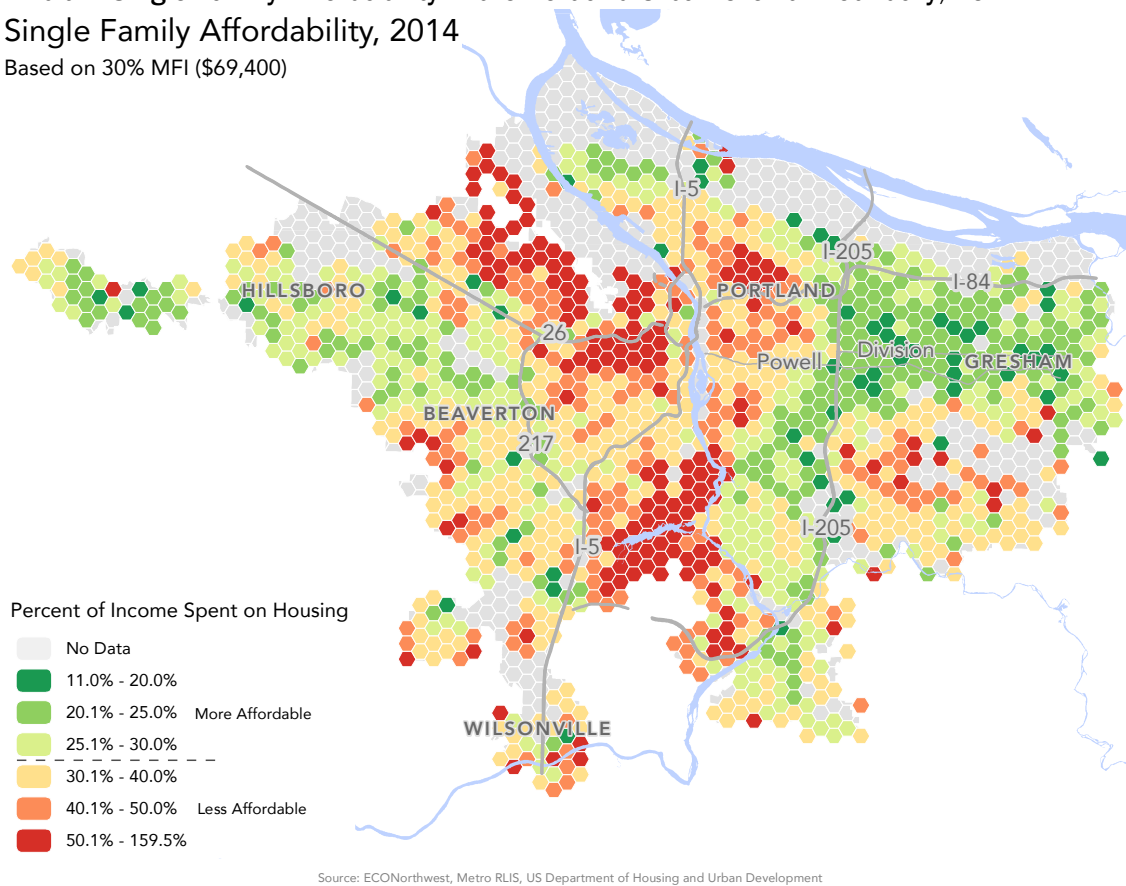
All projections will be calculated as a simple year over year change applied five years into the future. All data will be aggregated to hex bin geographies and emulate the cartography and design aesthetic of Exhibit 1. The tool will allow users to:

- Hover over any data point and see its value
- "Play" through all available years to see change over time
- Switch between available years to examine specific points in time

Exhibit 1. Single Family Affordability in the Portland Urban Growth Boundary, 2014

Single Family Affordability, 2014

Based on 30% MFI (\$69,400)



ECONorthwest will develop and host the tool on Mapbox, a web mapping service, and take full responsibility for managing and paying any monthly fees associated with the service. ECONorthwest will work with PHC to set up the tool on their website and provide any necessary technical assistance. Finally, ECONorthwest will provide PHC with a methodology memorandum outlining project assumptions and methods.

Scope

The tasks below outline ECONorthwest's expected process for creating the housing affordability tool:

Task 1: Methodology Development

ECONorthwest will develop a memo that outlines the assumptions, definitions, data sources, and technical methods that will be used to create the tool. All data will come either from publically available sources or from ECONorthwest's housing database and Metro RLIS subscription. The Portland Gentrification and Displacement Study will inform the vulnerability index methodology.

Products: Methodology Memo
Meetings: Phone call with client to review
Budget: \$1,000
Schedule: April 1, 2016

Task 2: Data analysis

ECONorthwest will gather and analyze data over the 2000 to 2015 period for the three map products listed in the approach. We will also project affordability forward to 2020. When possible, this analysis will be done programmatically to allow for increased efficiency and replicability. There is no product for this task; it serves as a direct input to task 3 and the final tool.

Products: None
Meetings: None
Budget: \$3,500
Schedule: April 15, 2016

Task 3: Web development

ECONorthwest will visualize the data from task 2 using open source tools including but not limited to Mapbox. When possible, this visualization will be done programmatically to allow for increased efficiency and replicability. The product of this task will be a prototype of the three maps described in the approach for the client to review. Once the client has reviewed and approved the prototype, ECONorthwest will make any final changes to the design and functionality of the tool.

Products: Tool prototype
Meetings: In person
Budget: \$4,000 for prototype, \$1,000 for review
Schedule: Prototype to be presented during in-person meeting on April 27th, final changes by May 2nd

Task 4: Web implementation

ECONorthwest will assist PHC in hosting the tool on their website and will work directly with staff to ensure it is in the appropriate format.

Products: Fully functional web tool on PHC website
Meetings: As needed with IT staff at PHC
Budget: \$500
Schedule: By May 6, 2016

Summary of Schedule and Budget

The project is expected to run from the middle of March, 2016 through May, 2016. Research and analytical work will be mostly completed by mid April. Visualization will mostly be completed by the end of April (see below). A proposed budget is listed above and is not to exceed a fixed fee of \$10,000.

