Did you know?

Washington County and the cities of Beaverton and Hillsboro are committed to investing in community development and housing projects that promote access to opportunity for the region's low income residents.

Consolidated Plan Maps

This Consolidated Plan builds upon the concept of Washington County's geography of opportunity introduced through the Opportunity Maps utilized for the first time in the 2010-2015 Consolidated Plan. Since the Opportunity Maps were generated in that Plan, the Coalition for a Livable Future released the Regional Equity Atlas 2.0 in June 2013, which also maps indicators in an effort to promote a greater understanding of how opportunity is spatially distributed across the region. Due to the challenges presented in replicating the Opportunity Maps for this Consolidated Plan, it was determined that the Regional Equity Atlas 2.0 could serve as the major source and mapping tool in the 2015-2020 Consolidated Plan. The Equity Atlas not only includes similar indicators to the Opportunity Maps, but also includes additional indicators and utilizes more recent regional data than the Opportunity Maps. Given the nature of consolidated planning, Washington County and the cities of Beaverton and Hillsboro, with assistance from the Mapping Subcommittee and Consolidated Plan Work Group, felt it was appropriate to utilize maps from the Regional Equity Atlas 2.0 for this Consolidated Plan, as well as the CPD Maps mapping tool from the U.S. Department of Housing and Urban Development (HUD) to analyze areas of opportunity for the 2015-2020 Consolidated Plan.

To provide context, the Coalition for a Livable Future is a nonprofit agency uniting over seventy private, nonprofit and public agencies dedicated to promoting healthy, equitable and sustainable communities in the Portland-Vancouver metropolitan region. The Coalition and its members work to create and preserve affordable housing, ensure clean water, protect open space and wildlife habitat and farmland, create living wage jobs, provide real transportation choices and end hunger in our community. The Coalition stresses the interdependence of our region in helping to improve the economic, social, and environmental health of the metropolitan region as a whole.

Washington County and the cities of Beaverton and Hillsboro are still committed in determining where funds could best be invested to promote access to opportunity for the region's low income residents. Funding the construction of new affordable housing is an important public investment. Ideally, that investment should be targeted to places that provide good opportunities for low income residents to connect with resources that enhance their life chances, such as places with good schools and connections to transportation, jobs and everyday goods and services. In using the Regional Equity Atlas 2.0 for this Consolidated Plan, Washington County and the cities of Beaverton and Hillsboro do so with the knowledge that an Affirmatively Furthering Fair Housing Assessment Tool will be released for jurisdictions to use that will enhance our ability to make important public investments using a lens of affirmatively furthering fair housing. This Consortium is excited by the opportunity to utilize that tool when it is released to make such decisions.

Funding the construction of public facilities (e.g., senior centers, health centers) also represents an important public investment. Mapping information could also be used to strategically locate these investments in places where they are most needed, such as neighborhoods where there is a concentration of affordable housing. This new focus on location and linkages is seen as being a way to promote the social sustainability of Washington County's communities.

The concept of Opportunity Maps pioneered by the Kirwan Institute based at the Ohio State University is still embedded in this approach utilizing the Regional Equity Atlas 2.0.

In fact, the Opportunity Maps of the last Consolidated Plan used the Regional Equity Atlas as a model for how to use maps to inform the allocation of public resources. The model is built on related approaches in community health, geography, and planning. The Kirwan Institute (http://kirwaninstitute.org/research/gismapping/opportunity-mapping/) describes Opportunity Maps as follows:

> Opportunity mapping is a research tool used to understand the dynamics of "opportunity" within metropolitan areas. The purpose of opportunity mapping is to illustrate where opportunity rich communities exist (and assess who has access to these communities) and to understand what needs to be remedied in opportunity poor communities…

> Mapping opportunity in the region requires selecting variables that are indicative of high (and low) opportunity. In this context, high opportunity indicators would be the availability of sustainable employment, high performing schools, a safe environment, access to high quality health care, adequate transportation, quality child care, safe neighborhoods, and institutions that facilitate civic and political engagement. These multiple indicators of opportunity are assessed in a comprehensive manner at the same geographic scale, thus enabling the production of a comprehensive "opportunity map" for the region20.

There is a distinction in how opportunity mapping is being used in the 2015-2020 Consolidated Plan. The focus is not on scoring opportunity, but rather on presenting areas of opportunity according to the indicators. One of the benefits of using the Regional Equity Atlas 2.0 is that the recommended maps exist as base maps but can also be customized by adding other layers as applicable. This gives a potential applicant to Washington County or the City of Beaverton for public investment dollars the ability to be creative in customizing maps to state their case for the need and location of their particular project.

This new approach moves away from the concept of a comprehensive opportunity map that represents the sum of the values of each of the underlying areas of opportunity. Instead, applicants will be able to construct their own analysis and case of why a particular location is suitable for a particular project, based on indicators that they deem relevant to their population, larger community development purpose, and proposed use. Thus, the maps become more of a resource to make a case for public investment that can be evaluated subjectively rather than decided by a single numerical value associated with a map. This approach better takes into account the nuances involved in evaluating areas of opportunity and acknowledges that scores may be useful but fail to capture the full story.

THE APPROACH IN WASHINGTON COUNTY

The Washington County Mapping initiative was conducted from August through December 2014. Washington County convened a special subcommittee comprised of representatives from legal aid, a local jurisdiction's public works department, public health, an affordable housing developer, fair housing, land use and transportation, a nonprofit social services agency, planning, housing, community development, a private development consultant and Community Action to help inform and guide this process. Additionally, representatives from Washington County's Department of Health and Human Services' Epidemiology/ Communicable Diseases Division, Washington County's Information and Technology Division and the Coalition for a Livable Future attended and presented at some of the meetings regarding available mapping tools in the community, as well as the Opportunity Maps used in the 2010-2015 Consolidated Plan Opportunity Maps Project. There was also a presentation from the Grants Manager from the City of Eugene on the HUD Sustainable Communities Initiative effort in Lane County to create Livability Lane and the indicators used and created in that effort to provide some context to the Washington County effort.

The first step was to select a variety of indicators that would identify areas of high opportunity for low to moderate income families, seniors, and those with disabilities. These were largely indicators used in the 2010-2015 Opportunity Maps project, although the Regional Equity Atlas 2.0 indicators did not correspond directly to the 2010-2015 Opportunity Map indicators Nonetheless, the majority of the indicators were carried forward to this Consolidated Plan due to their importance and relevance.

The subcommittee selected the following eight indicators to be included in this effort:

- Proximity to Public Transportation
- Proximity to Hospitals and Community/ Intermediate Care Clinics
- Density of Services
- Access to Parks and Trails
- Availability of Sidewalks
- Density of Grocery Stores, Produce Markets and Farmers' Markets
- School Performance
- Free or Reduced Lunch Eligibility

In addition, the committee decided to include not just information about opportunity-related indicators, but also information about the distribution of populations that traditionally have had a higher need for services. These maps could be used to help justify the location of public services or promote access to opportunity through investing in housing in areas outside racially or ethnically concentrated areas of poverty. They could also be used to justify the location of affordable housing in areas of high housing cost burden. Maps showing where there was an increase in immigrant communities and potential limited English proficiency could be used to justify services that increase outreach and provide public materials in languages other than English. These indicators, which include maps based on American Community Survey (ACS) data, 2010 Census data and data provided through HUD's CPD Maps Tool are as follows:

- Low-Income Concentration (Locally generated using 2006-2010 ACS data)
- Low-Moderate Income Concentration (Locally generated using 2006-2010 ACS data)
- Minority Concentration (Locally generated using 2010 US Census Data)
- Housing Cost Burden (CPD Maps)
- Populations of Color (Regional Equity Atlas)
- Immigrants (Regional Equity Atlas)

Subcommittee members recommended that the values associated with the maps not be used as a basis for scoring access to opportunity as a funding application criterion, but instead that the project sponsor make a case using the maps as evidence justifying a public investment, and that access to opportunity be rated subjectively, based on this case. A project sponsor should be allowed in the narrative of their application to use any combination of indicators and any combinations of maps from the Consolidated Plan or information from other sources to address why a particular investment in a particular place serving a particular population in a certain way is a good public investment.

OVERVIEW OF THE MAPS

This This section provides an overview of the maps that the committee found to be particularly useful in addressing access to opportunity. All maps are found in the Regional Equity Atlas 2.0, and all but one can be found as static, pre-made Scenario Maps that are easily accessed. The Atlas has two kinds of maps:

• Maps based on Shape Files: These maps assign a value to a pre-set geographic unit, such as a census tract, neighborhood or city. The same value applies to all addresses within that geographic unit. Data which refer to a single point, such as the location of a senior center, are also mapped as shape files, with the geographic unit being a single point instead of a polygon.

• Heat Maps: Heat maps display gradations in change instead of assigning the same value to all addresses within a preset area. The data are shown as raster cells (or pixels). The data in heat maps can be aggregated and displayed in "analysis units," where the values of the pixels within a geographic area (such as a Census tract or neighborhood) are summed and averaged, thus generating a value applicable to the analysis unit as a whole.

The committee recommended that applicants use shape files or heat maps that employ analysis units, as they found these easier to view and understand.

Table 5-1 provides an overview of the eight indicators and the Regional Equity Atlas 2.0 maps used to depict them.

Table 5-1:   **Primary Access to Opportunity Indicators for 2015-2020 Consolidated Plan**

Primary Indicators	Map Used and Data Sources for the Map
Proximity to Public Transportation	**Transit Access Neighborhood Map:** This map is available as a pre-made Scenario Map on the Regional Equity Atlas 2.0.website. The darker the neighborhood, the higher the transit access rating. *Data Source: Metro RLIS (2012) and Clark County GIS (2012)* **Transit Access in Relationship to Schools with 75% or More of Students Eligible for Free and Reduced Price Lunch:** This map can be viewed as a pre-made Scenario Map. It layers the Percent Students Eligible for Free and Reduced Price Lunch by school point layer on top of the Transit Access Heatmap, thus enabling you to see relationships between transit access and childhood poverty. *Data Source: Oregon Department of Education & Washington Office of the Superintendent of Public Instruction (2011-2012); Metro RLIS (2012); Clark County GIS (2012)*
Proximity to Health Care Providers	**Proximity to Primary Care Facilities:** Because it is not available as a pre-made Scenario Map on the Regional Equity Atlas 2.0 website, it is a map that users must create themselves using the Equity Atlas Mapping Tool. This indicator is found under Heatmaps/Healthcare, and can be displayed either as a heatmap or with the data aggregated at the neighborhood or census tract level by using the analysis units feature. Additionally, users can add points that show the location of community, public and school-based health clinics (found under Shapes/Healthcare). Two related maps can be created using the Equity Atlas Mapping Tool to show either health care providers that accept Medicaid by Zip Code or health care providers that accept Medicare by Zip Code. These Shape File indicators are found under Shapes/Healthcare.
Proximity to Public and Human Services	**Proximity to Public and Human Services Composite Neighborhood Map:** This map is available as a pre-made Scenario Map on the Regional Equity Atlas 2.0 website. The darker the neighborhood, the shorter the distance to key services (and the higher the proximity score), Public services include city halls, fire stations, hospitals courts, police protection facilities, fire protection facilities, government executive offices, and postal services, Human and social services include individual and family services, child and youth services, services for seniors and persons with disabilities, temporary shelters, and other community housing services. This map aggregates the data by neighborhood. *Data Source: ESRI Business Analyst (2010); Metro RLIS (2012)*

Table 5-1: Continued

Primary Indicators	Map Used and Data Sources for the Map
Proximity to Parks and Natural Areas	**Proximity to Publicly Accessible Parks and Natural Areas Composite Neighborhood Map:** This map is available as a pre-made Scenario Map on the Regional Equity Atlas 2.0 website. The data includes parks that are open to public use, regardless of whether they are publicly owned. Parks are defined as active or passive recreation areas where facilities exist that are primarily intended for recreational uses by the public. Proximity is measured based on street grid access to park entrances. This map aggregates the data by neighborhood. The darker the neighborhood, the higher its proximity score. *Data Source: Metro RLIS (2012) and Clark County GIS (2012)*
Availability of Sidewalks	**Walkability (Sidewalk Density) Neighborhood Map:** This map is available as a pre-made Scenario Map on the Regional Equity Atlas 2.0 website. This map depicts the density of sidewalk coverage in a particular area. Neighborhoods with the most complete sidewalk coverage in the entire neighborhood appear darker than those with less complete coverage. *Data Source: Metro RLIS (2012).* **Walkability in Relationship to Percent Minority Students by School:** This map layers the Percent Minority Students by School point layer on top of the Walkability (Sidewalk Density) Neighborhood Map. *Data Source: Metro RLIS (2012); Oregon Department of Education & Washington Office of the Superintendent of Public Instruction (2011-2012).* **Walkability in Relationship to Schools with 75% or More of Students Eligible for Free and Reduced Price Lunch:** This map layers the Percent Students Eligible for Free and Reduced Price Lunch by school point layer on top of the Walkability (Sidewalk Density) Neighborhood Map. *Data Source: Metro RLIS (2012); Oregon Department of Education & Washington Office of the Superintendent of Public Instruction (2011-2012).*
Proximity to Supermarkets, Grocery Stores, Produce Stands and Farmers' Markets	**Proximity to Supermarkets, Grocery Stores and Fresh Food Composite Neighborhood Map:** This map is available as a pre-made Scenario Map on the Regional Equity Atlas 2.0 website. This map shows proximity to food retailers that are identified as supermarkets and grocery stores and also produce stands, fruit and vegetable markets, and farmers' markets. It aggregates the data by neighborhood. The darker the neighborhood, the higher the proximity. *Data Source: ESRI Business Analyst (2010), U.S. Department of Agriculture (2012); Portland Farmers' Market (2012); Oregon Environmental Council (2012) ESRI Business Analyst (2010)*
School Performance	**Schools with 75% or More of Students Eligible for Free or Reduced Price Lunch in Relationship to Adequate Yearly Progress:** This map is available as a pre-made Scenario Map on the Regional Equity Atlas 2.0 website. This map provides a way to assess the relationship between student achievement levels and socioeconomic status by comparing school achievement data with the demographics of the student population. Adequate Yearly Progress means whether or not schools have met Adequate Yearly Progress (AYP) standards as required by the No Child Left Behind Act. There are many critiques to the AYP model, but AYP data are the only student performance data currently available in a consistent format across schools, which is why these data are included in the Atlas. While the data provide some useful information, any interpretation of the data should be informed by the following caveats: (1) The standardized tests that are the basis for the AYP assessment have been criticized for various reasons including cultural bias and providing an insufficient measure of student learning; (2) Test scores are as much a reflection of the socioeconomic status of the students in a school as they are of teaching quality; (3) The AYP model itself has been criticized as flawed. *Data Source: Oregon Department of Education and Washington Office of the Superintendent of Public Instruction, 2011-12*
Free or Reduced Lunch Eligibility	**Percent Students Eligible for Free or Reduced Price Lunch:** This map is available as a pre-made Scenario Map on the Regional Equity Atlas 2.0 website. It shows the percentage of K-12 students eligible for the free or reduced price lunch program, by school, for the 2011-2012 academic year. This indicator is often used as a proxy for childhood poverty. *Data Source: OR Department of Education & WA Office of the Superintendent of Public Instruction, 2011-2012*

Table 5-2 presents maps used to depict demographic information about Washington County's population. The data come from the Low and Moderate Income Summary Data (LMISD) from the 2006-2010 American Community Survey. 2010 US Census data, CPD Maps and two maps from the Regional Equity Atlas 2.0:

Table 5-2:   **Demographic Indicators for 2015-2020 Consolidated Plan**

Demographic Indicators	Map Used and Data Sources for the Map
Low-Income Concentration	**Concentrations of Households At or Below 50% AMI (in Washington County):** This map shows the 18 Census Tracts in Washington County where the percentage of persons earning at or below 50% of the Area Median Income (AMI) is at least 10 percentage points higher than the County average percentage of persons earning at or below 50% AMI (19.03%) across all 104 Census Tracts in Washington County. Washington County uses the Census Tract as the defined geographic area for determination of low-income concentration. Washington County defines a low-income concentration's geography as a Census Tract due to the lower margin of error. *Data Source: Low and Moderate Income Summary Data (LMISD) released by HUD in June 2014 using the 2006-2010 American Community Survey (ACS).*
Low-Moderate Income Concentration	**LMI Block Groups in Washington County:** This map shows the 80 Census Block groups in Washington County where the percentage of persons earning at or below 80% of the Area Median Income (AMI) is at least 50.44% or higher within the Census Block group. This map is used to help applicants in federally funded community development programs determine low and moderate income neighborhood eligibility for future public facility or infrastructure projects. *Data Source: Low and Moderate Income Summary Data (LMISD) released by HUD in June 2014 using the 2006-2010 American Community Survey (ACS).*
Minority Concentration	**Areas of Minority Concentration (in Washington County):** This map comes from the 2012 Fair Housing Plan and shows the 9 Census Tracts in Washington County that have a concentration of ethnic or racial minority populations. A minority concentration in Washington County is defined as a percentage of any ethnic or racial minority population within the Census Tract that is 20% greater than the percentage of that ethnic or racial minority group across the entire jurisdiction. *Data: US Census Bureau's 2010 Census*
Housing Cost Burden	CPD Maps from the U.S. Department of Housing and Urban Development (HUD) allows jurisdictions to create maps for their jurisdiction using HUD's access to data from a variety of HUD and federal sources. Washington County was able to generate over five maps for the Consolidated Plan reviewing cost burden and severe cost burden at the extremely low-income, low-income and moderate income levels. These maps are each included in Volume 2 as Supplementary Maps.
Populations of Color	**The Percent Change in Populations of Color (2000-2010):** This map shows the rate of change between the 2000 and 2010 Census for populations of color, as defined above. The rate of change was calculated by subtracting the 2000 populations of color number from the 2010 populations of color number, with the resulting number then being divided by the original 2000 populations of color number to obtain the mapped rates. The geometries of some census tracts in the greater Portland area changed from 2000 to 2010 (due to tract splits or, in a few cases, merges). The values were also split or merged prior to calculating the change over time based on a value proportion. *Data Source: U.S. Census 2000 and 2010 (QT-P6 Race Alone or in Combination and Hispanic or Latino); Universe = Total Population*
Immigrants	**Percent Households with Low English Proficiency:** This map shows the percent of the population over 5 years old with low levels of English-language proficiency. Low English proficiency is determined through a ranked question that asks whether a person can speak English very well to none at all. The Percent Households with Low English Proficiency map shows the population over age 5 that answered that they speak English "not at all" or "less than very well" on the American Community Survey questionnaire. *Data Source: American Community Survey (ACS); DP02 Selected Social Characteristics; Universe = Total Population over 5 Years Old, American Community Survey 5-Year Estimates (2006-2010)*

Volume 2 of this Consolidated Plan will include Supplementary Maps generated in CPD Maps and through the Rural Communities Explorer Tool from Oregon State University. These were not selected as depicting areas of opportunity, but they do include additional information which may be useful for public investment and policy analysis over the next five years. The main unit of analysis is the Census Tract, as it provides information with a lower margin of error than the geographically smaller- Census Block Group.

LIMITATIONS OF THIS APPROACH

These maps further the goal of identifying potential areas of opportunity in Washington County. They are intended to be a tool to help inform decisions about public investments. While they represent important considerations, it is important that one consider the nuances included in each map. Thus, this section provides an overview of the major limitations that users should keep in mind as they utilize these maps.

- The maps do not provide a comprehensive opportunity score or a composite score across all indicators as was done in the Comprehensive Opportunity Map in the last Consolidated Plan.

- This approach assumes that the relative importance of indicators depends upon the population and purpose of the project. Each indicator is not equally important in all cases.

- Applicants can choose to use the recommended maps for indicator or develop customized maps using the mapping tool associated with the Regional Equity Atlas 2.0.

Applicants do not have to address all indicators included in Table 5-1, but instead can choose and justify using the ones most relevant to their project. Applicants can also use indicators, maps and other data not included in Table 5-1.

- This approach recognizes that not all applicants will have the same level of training or education in how to use the maps or the mapping tool. Workshops and one-on-one assistance will be needed to help applicants navigate this new territory.

- The maps do not show all data that was considered important to subcommittee members. Subcommittee members also mentioned several indicators at meetings and in their completed surveys that could be important in the County's public investments for low- and moderate-income residents. However, the indicators did not yet have reliable data sources from which the maps could be generated.

- These maps show proximity to specific resources; they do not address whether individuals actually use the resources that are near them. In particular, these maps are not culturally-specific, age-specific, or disability-specific. These factors, as well as others, can make a significant difference in whether people actually access available resources.

- Due to their interactive capabilities, the print quality of some of the maps generated at the end of this Chapter do not provide the level of sharp quality we intended to use in this plan. How are included in order to demonstrate the type of maps that applicants of CDBG and HOME projects will be expected to consider when determining areas of opportunity for siting of their projects.

- Lastly, while helpful in depicting a birds-eye view of conditions, maps do not replace the on-the-ground knowledge associated with knowing a site and the surrounding area well.

The maps referenced in Table 5-1 and Table 5-2 represent the best and most accessible data that were available at the time that the mapping subcommittee members developed its recommendations. It is anticipated that, over the course of the five years during which implementation of the Consolidated Plan occurs, new data sources and mapping applications may become available and may provide even better resources for applicants seeking to make the case for their project. The list below is not intended to limit the use of new information, and thus changes to recommended maps and data sources shall not be considered to require a formal amendment to the Consolidated Plan. Such changes may be made by county staff as part of routine annual updates to application forms and presentation materials.